

ASPECTS OF EX-NUPTIALITY IN NEW ZEALAND: TOWARD
A SOCIAL DEMOGRAPHY OF MARRIAGE AND THE
FAMILY SINCE THE SECOND WORLD WAR

by

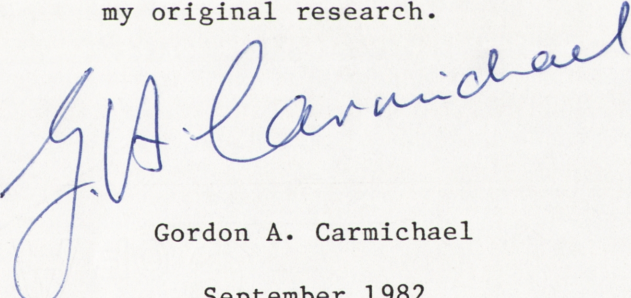
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A thesis submitted for the degree of
Doctor of Philosophy
in the Australian National University

Department of Demography

September 1982

Except where specifically
acknowledged the analysis
in this thesis represents
my original research.



Gordon A. Carmichael

September 1982

ACKNOWLEDGEMENTS

In completing a research project of the scale of a Ph D thesis one becomes indebted to many people. I owe the greatest debt to my wife, Gloria. She has been understanding and supportive throughout, has accepted the severe constraints on our family life without complaint, and has been of considerable practical assistance both in relation to preparation of the thesis and, latterly, as the family breadwinner. I am appreciative, too, of the contribution my children, Rebecca and Joshua, have made toward maintaining my sanity. I look forward to spending more time with them in the future.

My chief supervisor, Dr Lincoln Day was always willing to discuss aspects of my work and was prompt in his reading of drafts of the various chapters. His comments were often perceptive and his editorial contribution was invaluable. Dr Lado Ruzicka, who also supervised me during the data processing and writing up stage, was particularly helpful in the resolution of methodological problems and was always encouraging. Likewise Dr Peter McDonald frequently allowed himself to be used as a sounding board for my methodological ideas, and I am grateful for his willingness to perform this informal supervisory function. Professor W.D. Borrie was an interested and encouraging interim supervisor at one point, and I appreciated help given me by Drs S.K. Jain and S. Krishnamoorthy.

Many of the data I collected could not have been collected without the cooperation of those who controlled access to them. Mr Mel Smith, Director of the Research and Planning Division, Department

of Justice was, along with two of his senior officers, Ms Pru Oxley and Mr Graeme Simpson, extremely helpful in arranging access to divorce files. I am also grateful to the various court registrars and their staffs for their cooperation, and to Mike Keeton for his assistance with the collection of data from divorce files located in Auckland. A number of good friends accommodated me, and in some cases my entire family, as I travelled New Zealand collecting my data, and I say thankyou to them for their hospitality.

Mr David Fergusson willingly agreed to my request for access to data from the Christchurch Child Development Study, and arranged for a special data set to be compiled. Messers John Jensen and Ross Mackay were similarly helpful in providing data held by the Department of Social Welfare, and I appreciated as well the advice of Gavin Tiplady and Dave Jamieson in relation to the processing of sample data from the 1976 census. I received good cooperation from various officers of the Vital Statistics, Social Statistics, Demographic Specialist Studies, and Census and Population sections or divisions of the Department of Statistics, and would like to thank them for their help.

I drew frequently on the computing expertise of Mrs Jenny Widdowson and Ms Bernadette Derrick, and was grateful for their good humour when I interrupted their work as and when it suited me. Mr Theo Baumann drew most of my diagrams with great skill, Mrs Carol Casey typed many of the tables in Chapters 5 and 8, and Mrs Wendy Cosford proof read the final draft. I thank them for their contributions, as I do my parents and parents-in-law for assistance with the coding of occupations from divorce files.

Finally, I am indebted to the Australian National University for the award of a scholarship and the provision of funds for fieldwork which enabled me to undertake the research reported in this thesis.

Gordon Carmichael

Canberra, September 1982

ABSTRACT

Traditionally in most Western countries religiously based social norms have held that sexual activity should be engaged in only within formally celebrated marital unions, which in turn should be regarded as lifelong. Nowhere have these norms ever been universally adhered to, especially by men, but in the last two to three decades they have been rejected on an unprecedented scale. Rising levels of nonmarital pregnancy, marital breakdown, and, more recently, informal cohabitation have been held in some quarters to greatly endanger the institutions of marriage and the family.

Recognising the ease with which they can be misinterpreted, this thesis provides a comprehensive analysis of socio-demographic data pertaining to changing patterns of nonmarital sexual behaviour and changing attitudes to marriage and the family in New Zealand since the Second World War. Trends in nonmarital (and in particular premarital) pregnancy and childbearing, marriage and coresidence at marriage, and divorce are examined in detail. The study also explores changes in the pattern of placement of children born ex-nuptially, some of the personal consequences of childbearing following ex-nuptial conception, factors associated with divorce, and trends in the involvement of children in divorce. The drawing together of these phenomena within a single conceptual framework emphasises their joint reflection of forces for social change which have been operating in New Zealand.

The evolutionary character of social change is stressed at several points. The wresting of control over courtship, mate

selection, and the decision when to marry from parents by young people of the affluent 1950s is seen as having in many ways initiated the process. Among the forces recognised as having built on this foundation are the assumption of further generational independence by the young, pressure for, and achievement of, greater equality and independence by women, major improvements in women's ability to control their fertility, and arising out of these things a much more individualistic central set of values.

Evidence presented suggests that by the latter half of the 1970s the more permissive sexual morality which successive youth cohorts have developed had acquired a certain maturity. It was being practised more openly and with greater ideological conviction. It was also leading less frequently to unplanned parenthood and early marriage. Indeed marriage was generally being approached much more cautiously, and had possibly been rejected altogether in some quarters. The former tendency may augur well for marital stability in the future, and due allowance must be made for the fact that recent instability has been partly the product of a unique, and temporary, combination of circumstances. On the other hand values and priorities which have assumed increased importance in domestic relations have in the process rendered marriage and the family inherently more fragile institutions.

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GLOSSARY OF TERMS

Several terms are used repeatedly throughout this thesis in discussing sexual activity, pregnancy, and childbearing outside of marriage. As some of them are accorded inconsistent meanings in the literature and as distinctions between them may not be clear the interpretations placed on them are set out now.

EX-NUPTIAL - Ex-nuptial conceptions and pregnancies are those which occur to women by men to whom they were not legally married at the time of the relevant coital act. Ex-nuptial confinements and births are those which occur to women who were not legally married to the fathers of their children at any time between conception and confinement. Thus it is quite possible for these events/conditions to occur to legally married women in the context of relationships with men other than their legal husbands.

NONMARITAL - This phrase is used interchangeably with the phrase 'ex-nuptial'.

PREMARITAL - It is common for the concept of 'premarital pregnancy' to refer to pregnancies which commence with conceptions by never married women and which terminate in marital confinements; that is to the pregnancies of pregnant brides. In this thesis these pregnancies are generally referred to as BRIDAL pregnancies, and unless the context of the discussion clearly indicates otherwise premarital pregnancies embrace all pregnancies resulting from conceptions by never married women (premarital conceptions), irrespective of whether they result in nuptial or ex-nuptial confinement.

EXTRAMARITAL - An extramarital conception or pregnancy is one which occurs to a woman who is currently married, but not to the man responsible for her pregnancy. Similarly an extramarital confinement or birth is one which occurs to a legally married woman by someone other than her legal husband.

CHAPTER 1

INTRODUCTION

... we are now going through a period of change in demographic patterns that undoubtedly reflects basic, underlying attitudes toward conformity with traditional behavior, especially as such conformity comes in conflict with the development of the full potentiality of each member of the family. (Glick, 1975: 16)

1.1 RESEARCH GENESIS AND PERSPECTIVE

The institution of marriage has long held special interest for demographers. The study of patterns of nuptiality - that is of the formation and dissolution of marital unions - has attained the status of an important specialty within the discipline. Reasons for its prominence are not difficult to isolate; they relate to the constellation of norms and values which in most societies traditionally have bound most sexual activity and procreation to the marital state. While there has unquestionably been demographic interest in marriage patterns per se, the major stimulus to research has been their perceived importance in explaining fertility levels, patterns, trends, and differentials.

In most Western societies, religiously based social norms have historically proscribed sexual activity outside of formal marital unions, and have strongly favoured the regularisation of any nonmarital relationship which resulted in conception. It would be misleading to pretend that the modern era was preceded by centuries during which levels of nonmarital sexual activity were uniformly low

in the extreme across national, regional, social class, religious, and ethnic boundaries, and during which no variations in levels occurred through time. Historical accounts of nonmarital fertility in Europe dispel any such notion. [1] Nevertheless, it is probably a reasonable generalisation to state that, at least for females, and especially those outside the working classes, age at first marriage has tended to be synonymous with age at first coitus.

Within marriage early childbearing has generally been encouraged, while the projection of marriage as a life-long commitment, backed by restrictive or non-existent divorce laws and an acceptance by women that they should defer to their husbands, seems to have restricted visible marital discord. In short, the Western middle class tradition, again following the teachings of the established church, has been that marriage is a permanent institution within which sexual activity and the bearing and rearing of children should be confined. Against this normative backdrop the demographer's interest in nuptiality, and more precisely in the formation of legal marital unions is readily appreciated.

Over the post-war period, however, and particularly since 1960 there has been a growing and ever more strongly voiced rejection of conventional standards. As the 1960s progressed rapid increases in levels of illegitimacy created alarm in several countries. Research into premarital sexual behaviour proliferated (Cannon and Long, 1971; Clayton and Bokemeier, 1980), and a number of papers tracing national

[1] See, for example, Hair (1966, 1970), Knodel (1967, 1970), Shorter (1971, 1973, 1975), Shorter et al (1971), Laslett and Oosterveen (1973), Laslett (1977), Sklar (1977), and Laslett et al (1980).

trends in ex-nuptial fertility were published. [2] Teenage illegitimacy was singled out for special attention with the realisation that, numerically, the upsurge was concentrated at ages below twenty, that adolescent fertility was rising while fertility at older ages was falling, and that the social consequences of teenage nonmarital childbearing were especially severe. Somewhat later substantial increments in national divorce rates began to be reported, suggesting that the permanence of marriage had begun to be seriously undermined. [3] Later still informal cohabitation, which to varying degrees in different societies seems to have become at least an integral part of the courtship process, emerged as a new frontier for socio-demographic research. [4]

Collectively these trends suggest that students of Western demography should pay rather more attention to non-marriage than they have in the past. Clearly the model which sees childbearing and family composition in terms of the traditional Judaeo-Christian

[2] See, for example, Hartley (1966), Basavarajappa (1968), Clague and Ventura (1968), Illsley and Gill (1968), Simpson (1971), Cutright (1972a, 1972b), and Sklar and Berkov (1974).

[3] The recent experience of most of the larger countries of Western Europe is reported in Chester (1977a). On the U.S. see Glick and Norton (1973, 1977) and Norton and Glick (1976); on Canada see Kalbach (1975), Pike (1975), and Peters (1976b); and on Australia see Burns (1974) and McDonald (1980).

[4] The IUSSP conference on Economic and Demographic Change: Issues for the 1980s held in Helsinki in August 1978 included an informal session on nonmarital cohabitation (see Hofsten, 1979). The rapidity of the upsurge in cohabitation among the never married, especially in Sweden and Denmark, and the difficulty of knowing to what extent courtship systems were being revised and to what extent formal marriage was being rejected were among the main points to emerge. A more recent IUSSP seminar, this time on Nuptiality and Fertility and held in Bruges in January 1979, also discussed at some length the rising incidence of nonmarital cohabitation in the West (see Ruzicka, 1981).

prescription for marriage and sexuality is no longer a tolerable over-simplification; instead it has become quite misleading (Festy, 1980a; Bumpass, 1981b). Although studies of illegitimacy, divorce, and, more recently, informal cohabitation have appeared from time to time a central claim of this thesis is that common denominators linking these phenomena warrant treating them within a single conceptual framework. Trends in their levels jointly reflect many of the forces for social change operating in contemporary Western societies. Moreover, there are connections between them with respect to social realities which flow from them. Solo parenthood, for example, may be either an end result of the chain of decisions which follow nonmarital conception or a consequence of marital breakdown. [5] Similarly all three phenomena reflect the impermanence of human relationships today compared to those in the past.

A further reason for adopting the integrative perspective proposed concerns forecasts of imminent doom for marriage and the family which emanate variously from politicians, academics, spokespersons for religious and family welfare groups, self-appointed guardians of public morality, and 'concerned citizen'. Assertions on this theme, if supported at all, tend to be backed by 'evidence' pertaining to one or more of ex-nuptial childbearing, divorce, or informal cohabitation. Typically in the New Zealand context indices cited have been crude, and the interpretations placed on them at times so naive as hardly to seem worthy of serious debate. But because the arguments built around them attract publicity, and thereby help to

[5] Solo parenthood may also, of course, result from the death of one's spouse. However, this path to solo parenthood, because of its involuntary nature, is not responsive to changes in social climate.

mould public opinion, they cannot be taken lightly. [6] A comprehensive analysis of relevant socio-demographic trends since World War 2 should provide a more satisfactory basis on which to assess what is happening to marriage and the family.

In summary, two lines of thinking lie behind the conception of the research reported here. The first emphasises the re-evaluation of those behavioural norms which hitherto permitted demographic analysis to proceed on the assumption that, for most people, sex was for marriage and marriage was forever. It argues for a more complete and more integrated analysis than is yet available for New Zealand of those categories of socio-demographic behaviour which represent deviations from the traditionally normative pattern. The second highlights the need to base assessments of the current and impending statuses of marriage and the family as institutions on a comprehensive examination of relevant socio-demographic data.

It is not intended that the latter orientation should strangle the thesis. Rather the study should be seen as pitched at two distinct levels. Analytically the objective will be to obtain as complete an understanding as possible of the 'aspects of ex-nuptiality

[6] In New Zealand, for example, a common error has been to confuse the illegitimacy ratio with the illegitimacy rate, and to interpret rapid increases in the former without recognising that they mainly reflect declining marital fertility (see Chapter 3). Similarly the Domestic Purposes Benefit Review Committee (1977: 12) managed to infer a rise in New Zealand's divorce rate from '... 1 divorce per 12 marriages in 1965 (to) 1 per 5 in 1975, and an expected 1 per 3 in 1976 ...' by relating decrees absolute granted in the respective years to marriages celebrated in those years. Clearly it is nonsense to pretend that divorces occurring in any year equate the number of marriages in that year which ultimately will end in divorce, yet these cohort divorce 'rates' were widely publicised following their incorporation into speeches made by the then Minister of Social Welfare (Swain, 1977, 1979).

in New Zealand' which are addressed. It is this objective, derived from the belief that trends in nonmarital pregnancy and the formation and dissolution of conjugal unions are parts of the same story, rather than any overriding formal hypotheses that guide the investigation. Broader considerations of marriage and family will be incorporated at a more general level. A review of forces which have been reshaping marriage and the family in Western countries will be the point of departure. Thereafter discussion will only return to that plane in the final chapter, which will focus specifically on New Zealand.

1.2 MARRIAGE AND THE FAMILY IN THE WEST: FORCES FOR CHANGE

Change is not a new theme in Western family sociology. Generations of social commentators have debated the future of marriage and the family, their prognoses varying between extreme gloom and guarded optimism. The foundation on which more recent views of family change have been built is the work of Ogburn (Ogburn, 1922, 1929; Ogburn and Tibbitts, 1933), who argued that because of industrialisation and urbanisation the family was losing many of its functions to outside agencies (Vincent, 1966; Elder, 1978a). During the 1930s and early 1940s this thesis was incorporated by Sorokin and Zimmerman into scenarios which emphasised disorganisation, decay, and deterioration. [7] Thereafter a less fatalistic appraisal, stressing the emergence of a more egalitarian institution based on the affections, loyalties, and intimate associations of family members rather than on compulsion and contract, began to dominate mainstream

[7] Sorokin's Social and Cultural Dynamics was published in four volumes during 1937-41 and reprinted in 1962. See also Sorokin (1941), Zimmerman and Frampton (1935), and Zimmerman (1947, 1949).

sociological thought (Burgess and Locke, 1945).

Debate during the 1950s centred on the ideas of Parsons, who argued that the family was being progressively freed to concentrate on two main functions - the socialisation of children and the exchange of emotional and affectional support among members (Parsons, 1949, 1965; Parsons and Bales, 1955). The 1960s brought a reorientation toward historical research on the family as the empirical fit of Parsonian and earlier ideas was questioned. Goode's (1963) writings in particular were seminal in 'puncturing a fictional image of family change' (Elder, 1978a: 9). [8]

Longer-term Forces for Change

What has happened to marriage and the family in Western societies since World War 2 is the product of both longer-term social change and more specifically post-war trends. The former story is not one of transition from a residentially extended to a nuclear family structure; demographic realities preclude pre-industrial societies having conformed to the former stereotype (Laslett, 1973; Demos, 1976). Shorter (1975) sees it rather in terms of a 'surge of sentiment' in three areas: romantic love displaced considerations of property and lineage as the basis of courtship; children came to assume absolute priority in their mothers' hierarchy of values; and

[8] Among the wealth of studies and collections of readings on historical family patterns to have emerged since Goode's denouncement of the 'classical family of Western nostalgia' are those by Laslett (1969, 1971, 1977), Laslett and Wall (1972), Demos (1976), Goody (1976), Goody *et al* (1976), Stone (1977), Demos and Boocock (1978), Hareven (1978), Hareven and Vinovskis (1978), Seward (1978), Flandrin (1979), and Wrigley and Schofield (1981).

thirdly, intent on reinforcing affectionate bonds between its members the family erected a 'shield of privacy' to prevent the surrounding community intruding at will.

Interlinked with these trends was a decline in the intensity of extended kinship ties. It has been argued that extended kin relations persist in Western societies (Sussman, 1959; Litwak, 1960a, 1960b; Sussman and Burchinal, 1962) and that they remain especially strong among the working class (Young and Willmott, 1957; Komarovsky, 1964), but they are more optional. Goode (1963) saw a conjugal family developing, the main feature of which was that kin had few rights and obligations in respect of each other. Geographical distance increasingly prevented kin 'routinely intermesh(ing) their routine tasks' (Weiss, 1970: 53), but above all extended kin relations could not possibly retain their former importance given the evolution of a decidedly secular, competitive, and individualistic central set of values.

Industrialisation and urbanisation created this value set. They also transformed the family from a productive to a distributive unit (Ross and Sawhill, 1975). Land lost its former significance; consequently parents lost the control over mate selection they had enjoyed by virtue of their control over inheritance (Goode, 1963). Romantic love became the basis of courtship, and parental influence was restricted to controlling the social circles within which children mixed. The scope for discordant in-law relations was increased, aided by strict sex role differentiation which meant that wives could maintain contact with kin more easily than could husbands.

Aries (1962) insists that discovery of the child as a separate social category predates the Industrial Revolution. Be that as it may industrialisation reversed the previous wealth flow from children to parents throughout the social hierarchy, necessitating revision of the rationale for having children (Caldwell, 1976, 1978, 1980a, 1980c). The response was to define them as intrinsically valuable. Separation of home from workplace saw women become the primary socialisers and discipliners of children, and encouraged them to view motherhood as central in their lives. Reinforced by media elevation of the housewife-mother role to professional status (Laslett, 1973; Lasch, 1977), this trend saw women undermine the bond between husbands and their parents by arguing that the children must come first (Caldwell, 1980a). Arbitrary and coercive parental authority was replaced by a more seductive, egalitarian, and, ultimately, permissive approach, leading eventually to children becoming the core of the marital relationship (Weiss, 1970; Geddes, 1971).

Mass schooling was an important stimulus to these trends, providing targets for children with which mothers could identify and thus compete with their husbands' goal-seeking in the marketplace (Caldwell, 1980a). Compulsory schooling was also crucial for the impetus it gave to peer group influences during adolescence and for its role in reducing parental autonomy (Smelser and Halpern, 1978). In the latter respect, according to Lasch (1977), it complemented intrusions made by mass media and the emergence of 'experts' on childhood. Regular peer group contact was institutionalised, and became a progressively more potent force as the average period of schooling lengthened (Goldberg, 1971). Ultimately a distinctive youth culture, capable of challenging parental values and authority, became

discernible. Carried into marriage, this heightened generational consciousness complemented other forces making for more optional extended kin relations.

Weakening of extended kinship ties can also be seen in the transfer of responsibility for care of the aged to non-familial agencies. The trend has been double faceted, involving an element of chosen independence on the part of the elderly (Goode, 1963; Parsons, 1965), but sweeping changes to the social and demographic realities of old age dependency have been crucial to it. Under industrialisation old age dependency became a function of age, not of declining productive capacity. Coupled with increased longevity, smaller families, and uneven distribution of filial responsibility among geographically dispersed siblings, this meant fewer children to support aged parents over much longer periods. The obligation to interact emotionally became more burdensome, making it prudent to keep other forms of interaction optional (Pollak, 1967).

Pre-industrial marriages being above all life-supporting in their goals, the husband-wife emotional link was quite weak (Chesser, 1974). As mate selection came to emphasise choice and mutual affection, so courtship came to stress emotional gratification and to cultivate the anticipation that this would continue into marriage. Geographic and social mobility and the impersonality of extrafamilial life increased the mutual dependence of spouses (Ramey, 1972). So did emergence, in consequence of greater longevity, smaller families, and earlier marriage, of the phenomenon of the 'empty nest' (the period after the last child leaves home). Concentration of women's attention on domestic matters, allied with an advertising industry which sided with

women against men and with children against parents (Lasch, 1977), also undercut husbands' monopoly of family decision making.

However, the progress made by these trends before World War 2 varied from country to country and can be exaggerated. Phrases used to describe the marital relationship that developed - 'friendship', 'companionship', 'democracy', 'mutual consideration', etc - hardly convey intense intimacy. Rather they suggest a measure of equality, tempered by husbands' retention of the final say in major decisions. Women acquired a sexual identity of sorts as sex became a means of cementing the marriage bond, and there was undoubtedly freer discussion and use of the existing contraceptive technology (Caldwell, 1980a). But many marital relationships remained sufficiently awkward to hinder real warmth.

Post-war Forces for Change

The post-war history of marriage and the family in Western countries is one of stark contrast between the comparative tranquillity and familism of the 1950s, and the turbulence of the period since. One interpretation sees the 1950s as reflecting nostalgia for a return to normality among a young adult generation which had experienced both depression and war (Hobart, 1972; Elder, 1974). A second is Easterlin's (1962, 1968, 1973, 1976) argument that fertility swings reflect the relationship between the material aspirations of successive generations and the affluence, relative to these, of the periods when they are forming their families. Young adults of the 1950s, raised very frugally, responded to the prosperity of the period by marrying sooner and in greater numbers, and by having

larger families.

Another idea was alluded to by Mead (1968) when describing the post-war marriage boom as an 'escaping from mother' phenomenon. Extending this line of thought Caldwell (1980a) accepts the Easterlin hypothesis as descriptively sound, but argues that a strong element of generational revolt was also involved. In his view World War 2 was a decisive force moving young people to seek independence. It enabled them to demand greater autonomy from a grateful older generation. It exposed them on an unprecedented scale to the horrors of war, fostered cynicism over the careful way their parents had planned their lives, and made parents hesitant to counsel imitation of their example. It took young men especially away from home and thrust young women into the labour force, convincing them that they could stand on their own feet. Finally, it deprived the young of the normal courting and career-building period of their lives. Prevailing morality still said that nice girls were virgins at marriage, but the contraceptive revolution had proceeded far enough for the ability to control marital fertility to be taken for granted. The result, given economic prosperity, was a compromise between traditional morality and the desire for independence; that is, earlier marriage.

The appeal of Caldwell's argument lies in the ideological continuity that it implies over the post-war period. Interpreted as embracing a concerted attempt to assert generational independence the 1950s become not a mystifying retrogression into domesticity, but a unique step in the destruction of the morality tying sex to lifelong marriage.

Changing Values

Values are rather elusive phenomena. Despite this, post-war changes in marriage and the family cannot be understood apart from a new behavioural significance which certain abstract propositions have acquired. Few of these propositions are new, but they have been pursued with unprecedented vigour (Frankel, 1976). In Nye's (1967) terminology they have moved from being intrinsic, or desirable to being instrumental, or almost indispensable.

Sociologists have for some time perceived an increased egalitarianism in marriage. Bernard (1972) dubs this the 'egalitarian fallacy', thereby highlighting the transition in values just noted. The slow structural and functional adaptation to changes in outside institutions characteristic of the accommodative family has given way to more rapid change deriving from a concerted attack on prevailing ideology by the innovative family (Cavan, 1974). What distinguishes the innovative period is the explicit manner in which the concept of equality has been used to challenge the morality of traditional husband-wife and, more generally, male-female relations.

A second value set which has become more instrumental has at its core the notion of individuality. Various terms falling under this rubric have been used, but basically four concepts are embraced: autonomy, or the maintenance of individual identity; self-realisation, or personal growth; personal happiness and pleasure; and freedom. Aspects of family life formerly controlled by the Church or the wider society have become personal prerogatives (Eshleman, 1969). This has led to family life becoming increasingly organised around the marital relationship rather than around parenthood, with

the former inevitably becoming more fragile (Weiss, 1970; Giele, 1972; Duberman, 1977).

The rise of individualism is partly an outgrowth of a 'culture of change' (De Burger, 1977). The roots of a trend toward a more ad lib arrangement of one's life lie in the prosperity of the 1950s (Modell et al, 1978), but it gathered real momentum in the 1960s as the Vietnam War, the threat of nuclear conflict, and debates on world population and the environment caused the young to doubt the wisdom of planning too far ahead, at least on a personal level.

The great goal in the past was fixity, stability. The marital relationship was not to be tampered with. Young people today are moving toward the other extreme. Security, stability, fixity is the last thing they want; it is freedom, not security, that has to be built into the (marital) commitment. (Bernard, 1972: 105)

In justifying this approach to life, young people have advocated spontaneity, openness, tolerance of others, and rationality. Their openness especially has facilitated social change. By promoting discussion and the formation of new reference groups it has undermined norms which formerly were taken for granted as 'sacred'. Even more damage has been caused to these norms by the young's flaunting of unconventional behaviour (Packard, 1968; Skolnick and Skolnick, 1974).

Collectively, then, the egalitarian, individual, and live-for-the-moment ethics have become a source of increased marital and family instability. Utopian expectations of marriage are not new (Lederer and Jackson, 1968), but whereas formerly a 'mutually actualising' relationship was merely hoped for, nowadays it is increasingly demanded (Olson, 1972; Savells and Cross, 1978). More generally,

recent changes in Western value structures have destabilised marriage and the family in three ways. First, relationships which stress idealistic goals are inherently less stable than those which have more pragmatic foundations. A bond which combines affection with functional economic interdependence cannot, if affection disappears, be severed as easily as one based mainly on affection (Abernethy, 1976). Second, the recent past has been a period of social transition, and instability is inseparable from transition. As Keller (1971: 6) writes:

Like most social institutions in the throes of change ... the modern family is beset by numerous internal contradictions engendered by the conflict between traditional patterns of authority and a new egalitarianism between husbands and wives and parents and children. ... The voluntary harness of love chafes under the constraint of numerous obligations and duties imposed by marriage, and dominance patterns by sex or age clash with new demands for mutuality, reciprocity, equity, and individualism.

Finally, the mercenary values of the marketplace have penetrated the supposed refuge from such values. Self-interest and the interests of others cannot always be compatible. Yet an ideology of marriage and the family has developed which actually embodies this value conflict, previously held to make family life and life in the outside world antithetical.

Generational Conflict and the Independence of Youth

Recent shifts in Western values can be largely understood as the product of two principal agents operating within the context of a series of contributory mechanisms. The two main forces are generational friction, which has led to the emergence of an unprecedentedly autonomous youth subculture, and changes in the status

of women. Underpinning these have been such factors as post-war prosperity, accelerated decline in the influence of the Church, increased demands for formal education, more influential and less inhibited mass media, and advances in contraceptive technology.

Generational friction is not peculiarly a post-war phenomenon (Davis, 1940). Nevertheless, few would dispute that from about 1960 Western youth became openly hostile toward established attitudes and codes of conduct as never before. It is possible to explain this development partly in terms of longer-term trends already discussed. Mass education and the designation of childrearing as women's work undermined parental control over adolescents and substituted parental influence. Indeed, the impetus compulsory schooling gave to peer group identity was also instrumental in creating adolescence. But to understand the urgency of generational conflict in the 1960s one must look to the unique circumstances in which children of the 1940s and early 1950s were raised.

It is no coincidence that the new youth culture surfaced as war babies came of age. Chickering (1967) identifies four key elements in the new environment. First, parents were 'peculiar'. Mothers as never before dominated their children's lives. Fathers had been absent at, or killed in the War, and had been preoccupied after it with establishing careers whilst mothers strove to maintain a sense of worth in expanding suburbias. All of this took place in a climate of abundance, so that children came to take economic security for granted. Boys, especially, rejected their fathers' values, while both sexes resented the close scrutiny to which mothers in particular subjected their lives.

The second element was mass communications. Television in particular exposed children to values discrepant with their parents' (Keniston, 1977) and taught them how to be critical.

The postwar child was surrounded, as no other generation before, by messages. Signs, billboards, store displays, supermarkets, the traditional media, and finally the new, all-consuming substitute environment, television, enveloped us in a cocoon of sensory information. ... Experience rather than knowledge became the wellspring of our motivation. ... The world as a global village taught us to see people in the nakedness of deeds that contradicted words. ...we learned to distinguish thought from action in others, and learned to mesh thought and action in our own lives. (Chickering, 1967: 604)

Thirdly, post-war affluence bred more classless societies, and with them the absence of tomorrow. Parents raised during the Depression saw their role as ensuring that their children were not similarly deprived (Newson and Newson, 1970). Fathers, especially, discharged their duties financially, so that by the time children reached late adolescence the economic and status incentives to embrace the Protestant Work Ethic were weak. Parents bemoaned the ingratitude of offspring to whom every material advantage had been given, failing to grasp that their children had every reason to take money, and hence their future wellbeing, for granted (Flacks, 1971).

Chickering's fourth element is the atomic bomb, alongside which might be placed the environmental debate and the Vietnam War. Besides helping justify an ad lib approach to life, these established that those in authority were often misguided. Thus, the generational revolt was a revolt in the widest sense. Indeed the element of specifically parent-child conflict involved has probably been exaggerated (Flacks, 1971; Foner, 1978). Certainly many parents interpreted their children's behaviour more personally than they were

ever intended to.

Extending Chickering's inventory, several other points can be made. One concerns the prolonging of adolescence through earlier physical maturity (Tanner, 1962, 1968; Short, 1976; May, 1978) and extended education (Goldberg, 1971). The latter phenomenon, which left parents more remote than ever from the education process (Pollak, 1967), was the more important, facilitating by the 1960s the articulation of new philosophies on a broad generational plane. Normal youthful idealism also went unchallenged by experiences in the wider world until later in life. But the most crucial consequence was that fundamental choices in life remained for many uncrystallised well into their twenties (Weiss, 1970). Combined with affluence, daily mixing with peers of the opposite sex, and knowledge that highly reliable contraception was available, this rendered intolerable the norm that sex should wait until marriage.

The incoherence of the adolescent's world in the 1960s also encouraged development of a more flexible and internally consistent value system (Flacks, 1971). Parents, schools, churches, peers, and the media preached such a variety of lifestyles that going it alone was attractive. Greater access to motor vehicles than any previous generation had enjoyed was a further stimulus to contact and identity with peers, and was especially important in the development of the sexual dimension of the youth revolt. Finally, one must remember the rapidity of post-war social change. Except in static societies the young often view their elders as old-fashioned (Davis, 1940), but in the 1960s 'old-fashioned' was altogether too mild a term.

What were the implications of this generational revolt? Value changes it engendered and their consequences for marriage and the family have already been outlined. Beyond this, two points warrant emphasis. Many of the myths surrounding parenthood were laid bare. Childbearing and childrearing were stripped of much of their false glamour, and the young, realising that in rapidly changing societies parents could not expect to be too definite role models, determined to approach them more objectively. Secondly, the sexual dimension of the revolt completely revamped courtship systems, patterns of entry into marriage, and priorities within marriage.

The Changing Status of Women

Arguably the key to recent changes in the status of women has been their greater involvement in paid employment. World War 2 started the trend. The scale of the conflict, the disruption it caused to marriage and childbearing plans, and acceptance following the Depression that male breadwinners could not always be relied on caused women to respond to the call for their labour less ambivalently and in much larger numbers than during World War 1 (International Labor Office, 1946; Nottingham, 1947, Chafe, 1972; Ryan and Conlon, 1975).

Following the War the facade of familism hid a 'silent revolution' (Caldwell, 1980a). Expanding economies generated a considerable demand for female labour, but the traditional source of supply, the young and never married, was affected by the low fertility of the 1930s and the post-war marriage boom. Increasingly employers looked to older married women, and after 1960 this trend gathered real

momentum. Re-entry to the work force after completing childbearing became increasingly the norm (Wander, 1976; Carmichael, 1979b; Young, 1979). Aided by the advent of the pill women also began to play a greater economic role early in marriage, and simultaneously family sizes began to drop and the period devoted to childbearing to shrink. To what extent fertility trends were caused by rising labour force aspirations is still debated (Ware, 1976), but they certainly facilitated quicker resumption of employment. Perhaps conscious tailoring of reproductive behaviour to employment intentions became more common during the 1970s as the youth of the 1960s passed through their twenties.

Such an hypothesis is consistent with the argument that only in the middle and late 1960s did the ideological justification for the female employment revolution begin to be argued (Caldwell, 1980a). New extremes of behaviour became accepted, allowing women to resume work sooner after birth of the last child and to work between births (Sweet and Lowe, 1974; Bumpass and Sweet, 1977; Glick and Norton, 1977; Young, 1979). Feminists argued that voluntary childlessness offered the ultimate freedom to enjoy a career. [9] On top of this, easier access to abortion and a sharp trend to voluntary sterilisation on attaining desired family size (Westoff and Ryder, 1977; Green, 1978; Caldwell, 1980b; Trlin and Perry, 1981) increased women's ability to plan the childbearing and career phases of their lives.

[9] See, for example, Jones (1970), Limpus (1970), Rollin (1970), Peck (1971), Silverman and Silverman (1971), Veevers (1973), Peck and Senderowitz (1974), and Movius (1976).

Taken alone the female employment revolution's main impact on the stability of marriage and the family has been through the greater economic independence, and hence bargaining power, it has given to wives (Ramey, 1972; Duberman, 1977). Security is no longer bound up with marriage, which has become more a means to personal fulfilment (Bernard, 1972, 1974; Ross and Sawhill, 1975). Add the wider scope both sexes now have for meeting new mates (Duberman, 1977) and husbands' recognition that their wives can support themselves (Keniston, 1977), and greater marital instability is to be expected.

Besides these more direct consequences, however, the female employment revolution was central to the resurgence of feminism which has sought a more genuine equality within marriage. The Women's Movement, launched by Betty Friedan's (1963) expose of the realities of life for the 1950s suburban American housewife, and deriving much of its impetus in the view of Heer and Grossbard-Shechtman (1981) from the pill and a female marriage squeeze, quickly identified with the trend as the key to its objectives. Fragmentation has often impeded the Movement (Clavan, 1970). But despite this, sufficient unity has inhered in a common opposition to the traditional household division of labour, sexual discrimination in the labour force, and the exploitation of women by men, and in a common advocacy of community child care facilities for the broad spectrum of women to be touched (Clavan, 1970; Duberman, 1977).

Other factors, too, assisted the spread of feminist ideology: improved female educational levels, contraception that gave women control of their reproduction, a prosperity compatible with idealism, and media promotion that exaggerated the advances already made

(Bardwick, 1979). Progress on the employment front led during the 1970s to greater emphasis on derivative issues, especially the tendency for wives to merely add employment to their domestic duties (Bell, 1975). Women were also entreated to appraise motherhood more objectively. Assessments vary as to the likely emergence of the 'symmetrical family' (Young and Willmott, 1973) as the norm, but it is generally agreed that Western families currently are struggling to adapt to the role-sharing model women are demanding (Giele, 1972, 1976, 1978). As to whether more women are choosing to remain childless, the evidence so far is inconclusive. Nevertheless, the more important effect of the call to re-evaluate motherhood has been to convince many women not to allow it to dominate their lives in the way it did those of earlier generations.

This section has endeavoured to identify the major forces that have affected marriage and the family in Western societies since 1945. Much of the literature cited is American, but most of the trends noted have been apparent throughout the West, albeit stronger and starting earlier in some countries than in others. They will be examined in New Zealand context in Chapter 10.

1.3 EX-NUPTIALITY AS AN ORGANISING CONCEPT: THE THESIS IN OUTLINE

The title of this thesis incorporates the phrase 'ex-nuptiality' to embrace the variety of socio-demographic phenomena with which the study is concerned. As the notion of ex-nuptiality as a state in which people live is unfamiliar, some discussion of what is meant by the concept is in order. It obviously has to do with being not married, but there seems no point defining the ex-nuptial population

as including all children. Rather it consists of persons who are of marriageable age but are not living in sexually exclusive formal marital unions, together with those who are not of marriageable age but are capable of procreating.

It follows from this definition that individuals become part of the ex-nuptial population at puberty or on attaining the minimum legal age for marriage, whichever occurs earlier. More specifically they become part of the prenuptial component of that population, of which they remain members until marrying or, if never marrying, until death. Having married it is possible to rejoin the ex-nuptial population, either as a member of its voluntary post-nuptial component or as a member of its involuntary post-nuptial component. The latter consists of widows and widowers who were not members of the former when their spouses died. The voluntary post-nuptial component consists of ever married persons who are not living with legal spouses because of marital breakdown, or who, though doing so, are engaged in extramarital sexual relationships. To leave the ex-nuptial population a widow or widower must remarry or die. Someone who is separated must resume sexually exclusive cohabitation with their legal spouse, be widowed and remarry, or die; someone who is divorced must remarry or die; and someone who is being extramaritally intimate whilst living with their legal spouse must resume sexually exclusive marital cohabitation, be widowed and remarry, or die.

Among other things it follows from these principles that one partner to a legal marriage could be a member of the ex-nuptial population whilst the other was not, and that passage into and out of that population could be extremely rapid, as in the event of a

'one-night stand'. Clearly, though, rigid application of the model requires very detailed data, such as the sources on which this thesis draws do not provide. [10] Thus the model must be regarded as a theoretical construct which identifies a series of categories of individuals and status transitions, not all of which are of interest here (hence the phrase 'aspects of' in the thesis title), which can be focused on with varying degrees of rigour depending on the data available.

Primarily this study is concerned with the prenuptial and voluntary post-nuptial components of the ex-nuptial population, along with their children. Chapters 2 and 3 examine trends in nonmarital pregnancy and ex-nuptial fertility using a variety of period indices, the former placing post-1945 trends in historical perspective and the latter focusing on the post-war period in more detail. In Chapter 4 particular attention is paid to the fertility of the prenuptial component of the ex-nuptial population. Using multiple decrement techniques the childbearing experience following premarital conception of successive synthetic and real female birth cohorts is studied from a life cycle perspective. Then, in Chapter 5, the fact that the social implications of childbearing following nonmarital conception are not just a function of demographic rates is recognised. Trends in the placement of children born ex-nuptially are traced, and the literature on the determinants and consequences of placement

[10] For example, there are no New Zealand data on the puberty status of young people below the minimum legal age for marriage (sixteen for both sexes), nor on the numbers of formal marital cohabitants who are extramaritally sexually active. Neither do official statistics tabulate the legal marital statuses of mothers of ex-nuptial children, to say nothing of ambiguities surrounding census data on marital status (see Chapter 2, footnote 7).

decisions, and the consequences of bridal pregnancy is reviewed. Finally, the personal consequences of adolescent, nonmarital, and early marital childbearing for mother and child are explored. [11]

In Chapter 6 the transition out of the prenuptial component of the ex-nuptial population comes under scrutiny. Post-war first marriage patterns and trends are analysed, with particular emphasis being placed on trends since 1971. These are linked in part to changing attitudes to the need to formalise cohabiting unions, the chapter concluding with an analysis of patterns and levels of coresidence at marriage for the 1961 and 1976 marriage cohorts.

Two further transitions - those into and out of the voluntary post-nuptial component of the ex-nuptial population - are the subject of Chapter 7, which deals with trends in formal divorce and in the remarriage of divorced persons. In Chapter 8 correlates of divorce and changes in their strength over the post-war period are investigated with the dual objectives of furthering understanding of factors predisposing to divorce in New Zealand and of ascertaining whether, as divorce has become more common, some of these associations have become more muted. Finally, in Chapter 9, the involvement of children in divorce is examined. Attention is paid to the hypothesis that children act as a deterrent to marriage dissolution, to trends in the probability of children experiencing a parental separation culminating in divorce, and to the custody of children who are dependent when their parents divorce. The chapter concludes by

[11] Adolescent childbearing obviously overlaps nonmarital and early marital childbearing. The latter two categories are the ones of primary concern, but much of the relevant literature specifically addresses the former category.

focusing on one of the two main family types created by marital breakdown - solo parent families. Unfortunately no data are available with which to study stepfamilies, the second of the two family types.

1.4 SOURCES OF DATA

A number of data sources are exploited in carrying through the research programme just outlined. [12]

Official Statistics

Extensive use is made of published and unpublished vital statistics. Chapters 2-4 rely heavily on tabulations of ex-nuptial live confinements by age of mother in single years and of live nuptial confinements occurring within one year of marriage by age of mother in single years and marriage duration in single months. These have been published annually (except in 1942) since 1913. For the period 1913-61 they pertain to non-Maori confinements only, since it was not until 1962 that birth registration procedure first permitted the nuptiality status of Maori confinements to be determined. Thereafter they pertain to all confinements.

This discontinuity in the data set is of some inconvenience, especially as it occurs at a time of rapid change in nonmarital sexual behaviour. For 1965-71 separate unpublished Maori and non-Maori tabulations are available, and using these as a basis for estimating 1962-64 tabulations it is possible to extend the non-Maori series

[12] It should be noted at this point that all demographic rates computed from these data are expressed per 1000 persons at risk unless otherwise specifically indicated.

right through the 1960s. However, to examine trends in nonmarital pregnancy and ex-nuptial fertility throughout the post-war period one must rely first on non-Maori data and then on total population data. An unfortunate consequence of this is that it is not possible to separate analysis of general trends cleanly from analysis of trends by ethnic origin.

A second set of vital data of which considerable use is made comprises published marriage statistics. The analysis of marriage trends in Chapter 6 is based on these as, to a more limited extent, is the analysis of trends in the remarriage of divorced persons in Chapter 7. They also provide most of the risk populations for the calculation of divorce rates specific to marriage cohort subgroups in Chapter 8. Some estimation is required over the period 1941-44, when detailed marriage statistics were not compiled, although work by Jain (1973) fills some of the gaps. There is also again a problem of discontinuity, with Maori marriages being tabulated separately from non-Maori ones until 1951, whereafter the two groups are combined. Aside from annual numbers of marriages celebrated, pre-1952 tabulations of Maori marriages consist only of annual tables showing brides and grooms by age and marital status for the period 1948-51. As divorce data collected cannot be broken down by ethnic origin, it was necessary to adjust certain pre-1952 non-Maori marriage statistics upward for Maori marriages.

Published divorce statistics are the major source for the analysis of divorce trends in Chapter 7, and also yield some data used in tracing trends in children's involvement in divorce in Chapter 9. The analysis of divorce trends, however, owes much to the work of

Dickinson (1979) in refining annual divorce statistics by duration of marriage to single-year duration categories.

Study of trends in the placement of ex-nuptial children (Chapter 5) is in part facilitated by data derived from Department of Social Welfare ex-nuptial birth enquiries. This unique source of information exists because of a legal requirement that registrars of births and deaths notify a government welfare officer of the names and addresses of mothers of ex-nuptial children. The officer is then obliged 'to ascertain the condition of the child and its mother' with a view to initiating any necessary welfare action. [13] Further data on the placement of ex-nuptial children are furnished by published and unpublished adoption statistics.

The Department of Statistics maintains annual series of population estimates by sex, ethnic origin (Maori and non-Maori), and single years of age. Mean annual estimates are available from 1937 onward, and estimates as at 31st December from 1936 onward. In addition, non-Maori estimates as at 31st December are available for the period 1921-35. The data are compiled by adopting the most recent census distribution as base and adjusting forward for births, deaths, and external migration. They exhibit evidence of age heaping, discontinuity across junctions marking the replacement of one base distribution by another, and underenumeration of adolescents and young

[13] The requirement was first included in the Child Welfare Act 1925. It later was incorporated temporarily into the Status of Children Act 1969, before being inserted in the Children and Young Persons Act 1974. Until the Status of Children Act was passed, registrars were required to notify all ex-nuptial live births. That Act added the proviso that a birth need not be notified if the parents were married to each other at any time between conception and registration.

adults at more recent censuses. Adjustments are made for these defects (Appendix 4), and the resulting data used to estimate risk populations used in computing a variety of demographic indices.

Published census data are not a major source for this thesis. They are, however, used from time to time, most notably as the basis for estimating proportionate breakdowns of female age groups by marital status for application in the estimation of populations at risk of ex-nuptial conception and confinement.

Data Extracted From Vital Registers

Besides using vital data prepared by the Department of Statistics, manual searches were made of several vital registers to obtain information not otherwise available. The 1961 and 1976 marriage registers yielded, first, data on coresidence at marriage by age and marital status of bride and groom, second, data on remarriages of divorced persons by sex, age of bride and groom, marital status of partner, and duration of divorce, and third, data on the ethnic status (Maori or non-Maori) of marriages based on the names of marriage partners and their parents. The first data set utilises comparisons of residential addresses of brides and grooms at the time of applying for a marriage licence and is used to examine trends in coresidence at marriage in Chapter 6. The second set is the main input for the analysis of trends in the remarriage of divorced persons in Chapter 7. Finally, the third set is used in Chapter 3 in making a rough comparison of Maori and non-Maori bridal pregnancy levels.

Searches were also made of the 1966 and 1976 birth registers. Here the objective was to collect information on adoptions and

placements with cohabiting parents of ex-nuptial children which would allow analysis of trends in the placement of ex-nuptial children (Chapter 5) to be refined by age of mother and ethnic origin of child. Data on adoptions as at the time searches were made (September, 1979) are complete, since all formal adoptions result in cancellation of the original birth entry and its replacement by one in the names of the adoptive parents. Those on placements with cohabiting parents are not complete, excluding children whose parents were cohabiting but who chose not to register the father's particulars. [14]

Selections of the marriage and birth registers to be searched were based on two criteria. The years chosen were to be census years, and they were to be years defining periods suspected of having seen major change in the phenomena of interest.

Data Extracted From Divorce Files

The major data collection exercise undertaken involved sampling systematically every fifth divorce file housed in New Zealand Supreme Courts which contained a petition for divorce filed between 1st January 1940 and 31st December 1978. Strictly speaking the sampling design was a systematic cluster one. Divorce files are located at eighteen Courts and at each are assigned sequential code numbers based on the date the petition for divorce was filed. The basic sampling method was to take at each Court the third file for 1940 and every fifth file thereafter. As all Courts were covered and as there is no

[14] Under New Zealand law particulars of the father of an ex-nuptial child can only be registered at the joint request of himself and the child's mother.

reason to suspect any cyclic pattern in the filing of divorce petitions the sample may be treated as a simple random one.

As it was intended to carry out most analyses of divorce file data by marriage cohort a basic condition of the sampling method was that only files relating to marriages which took place after 1938 were to be coded. Thus, if a file pertained to a couple married before 1939, or if it related to a 'divorce' which had not proceeded to decree absolute by 31:12:78 it was not coded. In this way, assuming random distributions of files falling into each 'reject' category, the final sample was effectively a twenty percent simple random sample of all divorce files pertaining to post-1938 marriages which were formally dissolved in New Zealand before 1979.

This sample will hereafter be called the divorce file sample. It was recognised, however, that there would be some call for cross-sectional analysis of divorce patterns where the date of marriage would be immaterial. To accommodate this type of analysis all files sampled where the divorce petition was filed in one of the census years 1951, 1956, 1961, 1966, 1971, and 1976 and which related to divorces which had been finalised by 31:12:78 were coded. Thus, one also obtained six cross-sectional divorce file samples, each of which substantially overlapped the main sample and each of which was effectively a twenty percent simple random sample.

Ideally the cross-sectional samples would have comprised files where the decree absolute was granted in a census year rather than those where the petition was filed in such a year. The reason for proceeding in the latter manner was that it was possible to check relatively easily that those files which normally would have been

rejected as affecting pre-1939 marriages had in fact been coded. Given the fatigue associated with coding twelve hours a day, six-and-a-half days a week it was vital to be able to make such a check once coding for each Court had been completed.

A total of 15023 divorce files were coded. The main divorce file sample consisted of 14673 cases, while the six cross-sectional samples comprised 323, 321, 379, 415, 749, and 1075 cases respectively. Problems with missing files were encountered only at the Wellington Supreme Court, where some files for both the early 1940s and the early 1960s could not be located. It is estimated that at the outside this meant a net loss of ten cases to the main divorce file sample, while no cross-sectional sample was affected. Items coded from divorce files are listed in Table 1.1.

Survey Data

Access was gained to data from two special surveys. One was the Department of Social Welfare's Ex-nuptial Birth Survey, conducted during 1970-71 in conjunction with its statutory obligation to follow up ex-nuptial births. [15] This survey collected data from all traceable mothers of ex-nuptial children born live in 1970 who were referred by registrars of births, deaths, and marriages. Just under ten percent of registered ex-nuptial live births were not referred, and in about seven percent of referred cases the mother could not be traced. Non-referrals in particular are suspected of having biased

[15] In point of fact the survey was carried out by the Child Welfare Division of the Department of Education, which was incorporated into the Department of Social Welfare when that Department came into being in April 1972.

Table 1.1

ITEMS CODED FROM DIVORCE FILES

Husband's occupation at marriage
 Husband's occupation at time petition for divorce filed
 Date of marriage
 Country of marriage
 Ages at marriage of husband and wife
 Marital statuses at marriage of husband and wife
 Date of termination of previous marriage (widowed and divorced persons)
 Countries of birth of husband and wife
 Type of marriage ceremony (church, registry, or other venue)
 Denomination of officiating clergyman (often taken to be that of the church in which the marriage took place)
 Sex of petitioner for divorce
 Ground on which decree absolute granted
 Date of 'marriage breakdown' (being the date of separation or an alleged matrimonial offence cited in the statement of the ground on which a decree absolute was sought)
 Date of decree absolute
 Pregnancy status of wife at marriage (deemed to have been pregnant if a child was born within eight months of marriage)
 Illegitimacy status of marriage (coded according to whether an ex-nuptial child of either or both parties was taken into the marriage)
 Number of children of the marriage
 Number of children of the marriage affected by custody proceedings (i.e. aged under sixteen at the date of the decree absolute)
 Custody arrangement made
 Manner of settling custody (embraces such considerations as the type of Court making the custody order, whether or not the order was made by consent, and whether custody was contested in the Supreme Court)
 Date of birth of each child of the marriage
 Status of each child of the marriage (whether issue of the marriage, adopted into the marriage, child of a previous marriage, ex-nuptial issue of one or both parties, deceased, or placed for adoption)

Source: Divorce file sample.

the sample, since they involved mainly children whose parents had married by the time their births were registered or whose parents were known to be in stable cohabiting unions (O'Neill *et al*, 1976). Only fifty percent of responses, randomly selected, were ultimately coded, yielding a sample size of 3665.

Limited use is made of the Ex-nuptial Birth Survey, it having been already extensively analysed by O'Neill et al (1976). It is resorted to in Chapter 4, though, as the only source from which some idea of the age-specific proportions of mothers of ex-nuptial children who are never married and of first parity could be gained.

The second set of survey data derives from the Christchurch Child Development Study (CCDS). This is a longitudinal study of a cohort of 1262 children born live in Christchurch maternity units between 15th April and 5th August 1977. Data were available from interviews conducted with mothers at birth and at ages four months, one year, and two years. Items of interest were selected from the numerous questionnaires used, and a special data set containing these items was supplied. Because of their bulk, questions are not appended to this thesis. However, their nature generally can be gauged quite readily from variable labels used in tables based on the survey data.

The CCDS data provide the basis for the latter part of Chapter 5, in which various early health and developmental characteristics of children, health characteristics of mothers, and socio-economic indicators are compared as between children born ex-nuptially, to teenagers, and nuptially following premarital conception and those born nuptially, to 20-29 year-olds, and following nuptial first conceptions respectively.

1976 Census Sample Data

Following agitation for freer access to census data produced to users' specifications, the Department of Statistics introduced after the 1976 census a system permitting cross-tabulations to be produced

from various sized systematic samples of households and their members. This system, known as CENTS-AID II, required users to write their own computer programmes, to have their jobs processed on Government Computer Centre equipment, and to pay for that processing. The last requirement especially imposed some constraints on the use made of the system in this thesis (Chapter 9).

The largest sample size available was a ten percent household sample, and at this level a special tape had been prepared on which individual records within households were arranged by family groups and in the order parents, then children, then other persons within families. This permitted analysis by families, and is used in Chapter 9 to compare characteristics of solo parent families of different types and families with both parents present. Parental absences on census night were coded as temporary or permanent, so the de facto nature of the New Zealand census is not an impediment. However, some difficulty is created by the fact that never married solo parents living in their households of origin were not classified, along with their children, as separate families. Such solo parent families can only be identified by searching for families which include a grandchild of the household head and a never married child who could be its parent. This procedure may incorrectly classify a child as a solo parent, and further problems arise when more than one potential solo parent is present.

CHAPTER 2

NONMARITAL PREGNANCIES AND EX-NUPTIAL BIRTHS IN HISTORICAL PERSPECTIVE

Things were different then. It took us longer to understand the things we felt. (Hermie in the epilogue to the film Summer of '42)

2.1 INTRODUCTION

Since the late 1960s illegitimacy, or ex-nuptial fertility, in New Zealand has attracted considerable attention. The earliest reports concerned with the trends, causes, and consequences of ex-nuptial births emanated mainly from government departments and committees (Department of Statistics, 1967; Interdepartmental Committee on Ex-nuptial Births, 1969; Jensen, 1969). They reflected official concern over the rapid increase during the mid-1960s in both the number of ex-nuptial births and the proportion they formed of all births.

As these simple indices, and especially the second of them, continued to climb, further research was forthcoming. [1] Most of this recognised that women who give birth ex-nuptially are but a subset of those who give birth following nonmarital conception, but it was variable in quality and coverage. The analysis reported in this chapter and the following two is easily the most comprehensive yet presented. It is the first to consider in depth trends in nonmarital

[1] See Sears (1969), Simpson (1971), Werry *et al* (1974), Department of Social Welfare (1975), O'Neill *et al* (1976), Smyth (1976), Trlin and Ruzicka (1977), O'Neill (1979), and Pool and Crawford (1980).

pregnancy and ex-nuptial fertility through the 1970s, and pays closer attention to the ethnic variable than earlier studies have managed to. [2] It also boasts methodological originality in introducing a technique for measuring nonmarital pregnancy levels in a way which allows partitioning into components terminating in ex-nuptial and nuptial confinement, and, in Chapter 4, in the application of multiple decrement principles to the study of premarital pregnancy.

The period of main interest is that since World War 2. Preparatory to examining it in detail, this chapter sets out to provide a historical perspective on nonmarital pregnancy and ex-nuptial fertility. Since the legitimacy of Maori births cannot be determined prior to 1962 (Chapter 1), data used are for the non-Maori population only.

2.2 METHODOLOGICAL ISSUES

Classification of Individuals and Vital Events by Ethnic Origin

Since the passing of the Births and Deaths Registration Amendment Act 1912, births have been defined as non-Maori if the child had less than half Maori ancestry. Previously, mixed race births had been classified according to whether the parents were living as members of a Maori tribe. Legislation has, however, always prohibited

[2] Pool and Crawford (1980) provide some insights into the changes which have occurred in nonmarital reproductive behaviour since 1970. However, they deal only with the admittedly crucial adolescent age group, and fail, because of the cohort method of analysis they employ, to fully expose the period influences of the past decade. Other than that, O'Neill (1979) incorporates a very brief discussion of these changes into a general overview of past, present, and likely future New Zealand fertility patterns.

registration of the details of the father of an ex-nuptial child, except at his and the child's mother's joint request. Thus, since 1913 when detailed data on both ex-nuptial births and premaritally conceived nuptial births commence, ex-nuptial births where the father was unknown have been classified by ethnic origin assuming that the child's and the mother's degrees of Maori ancestry were identical.

In addition to these inconsistencies, the census definition of a non-Maori has not remained constant. Between 1874 and 1921, non-Maoris were persons of less than half Maori extraction or 'half castes living as Europeans'. Then, at the 1926 census, all who claimed exactly half Maori, half European ancestry were classified as Maoris, and all with lesser proportions of Maori blood or mixed Maori - other non-European blood as non-Maoris. Subsequently there were only minor changes in classification procedure until 1976 (Pool, 1977). The unintended change made at that date resulted from an attempt to supplement the usual question on degree of Maori ancestry by one asking whether people considered themselves to be Maori, or of Maori descent. Many respondents answered only one of these questions. Thus, the Maori population at the 1976 census comprised 204453 persons who claimed half or more Maori ancestry, plus 65582 who indicated only that they identified as Maori. [3]

Compatibility of registration and census data classified by ethnic origin poses a further problem, one aspect of which is category

[3] Assuming that persons classified as Maori by self-identification only followed the same distribution by degree of Maori ancestry as those who both claimed to be Maori and specified their degree of Maori ancestry, the official 1976 census total of 270035 Maoris is inflated compared to earlier census totals by 19547 persons, or 7.8 percent.

jumping between the vital registration system and the census (Pool, 1977). The other aspect is that 'non-Maori' women may bear 'Maori' children, and vice versa. This anomaly arises out of the practice of classifying births by ethnic origin of the child. Almost certainly a cancelling effect reduces incongruity between the numerators and denominators of vital rates specific for ethnic origin. Fortunately, too, when dealing with ex-nuptial births non-registration of the father's particulars often forces classification by the mother's ethnic origin. But bias remains. [4]

Finally, the distinction between Maori and non-Maori marriages should be noted. Until 1 April 1952, Maori marriages consisted only of those where both parties were at least part Maori. Thereafter, separate Maori and non-Maori marriage statistics lapsed, although the official definition is preserved in annual estimates of non-Maori marriages by age of bride which Jain (1973) has prepared for 1952-67 (and which were updated to 1970 for present purposes). The point to be emphasised from all of this is that all intermarriages involving full Europeans were classified as 'non-Maori', even though where the spouse was a full Maori any offspring would be 'Maori'. This implies that percentages of non-Maori brides who were pregnant which are presented in this chapter are conservative.

The problems outlined potentially have much more serious consequences for the study of nonmarital pregnancy and ex-nuptial fertility among Maoris than among non-Maoris. The reason is the

[4] Data for 1968-78 allow this bias to be investigated more closely. These will be introduced when attention is turned in Chapter 3 to the Maori population, in respect of which, because of its minority status, the bias potentially has far more serious implications.

comparative sizes of the two ethnic groups. This century, the Maori population did not exceed six percent of the total population until the 1956 census, and it was still below nine percent in 1976.

Measures of Nonmarital Pregnancy and Ex-nuptial Fertility

In any analysis of trends in ex-nuptial fertility, three fundamental measures are likely to be used: the number of ex-nuptial live births, the illegitimacy ratio, and the illegitimacy rate. The first measure is affected by population size and structure, so that changes in its value through time cannot be readily interpreted. The illegitimacy ratio, expressing ex-nuptial live births as a percentage of all live births, is a popular index because it requires only registration data and is thus easy to calculate for non-census years. However, it, too, is affected by changes in population structure. Moreover, its value is partly dependent on the level of marital fertility. These extraneous sources of variation mean that time series of illegitimacy ratios are apt to mislead unless it is clearly understood that they indicate not changes in the prevalence of childbearing among unmarried women, but rather changes in the prevalence of ex-nuptial live births among all live births. [5]

The illegitimacy rate is defined here as the number of ex-nuptial live births per 1000 never married, widowed, divorced, or legally separated women aged 15-44 at mid-year. [6] Because it relates ex-nuptial births to an estimate of the population at risk of bearing

[5] Others who have stressed this point include Hartley (1969, 1975), Kumar (1969), Roberts (1969), Cutright (1972b), Cutright and Galle (1973), and Sklar (1977).

a child ex-nuptially, the illegitimacy rate is the most satisfactory of the basic indices for measuring trends in ex-nuptial fertility. But two things mean that it tends to overstate the risk of ex-nuptial confinement: multiple ex-nuptial confinements, and the occurrence of ex-nuptial births to women who are either married or outside the age range 15-44, and who therefore contribute to its numerator only. [7] A closely related measure, the ex-nuptial fertility rate, is defined as the number of ex-nuptial live confinements of women aged 15-44 per 1000 never married, widowed, divorced, or legally separated women aged 15-44 at mid-year. It modifies the illegitimacy rate only slightly, and is introduced mainly because available data dictate that it can be refined by age over a longer period than can the illegitimacy rate.

The notion of ex-nuptial conception, as distinct from birth or confinement, may be introduced by defining as due to premarital

[6] For years prior to 1926 the denominator excludes legally separated women either completely or in part. This marital status category was first introduced at the 1926 census, and the method by which annual risk populations were estimated (Appendix 1) spreads the relatively minor effect of the change in definition evenly over the 1921-26 intercensal period.

[7] Anachronistic though it may seem, married women do give birth ex-nuptially. Any child born to a legally married woman by someone other than her legal husband is registered as ex-nuptial unless her husband falsely claims paternity. Also, the 'married' women excluded from the denominator of the illegitimacy rate and similar indices are women classified as married at censuses. In New Zealand they include an unknown number of women living in consensual unions who legally belong to other marital status categories, it having been the practice of the Department of Statistics to reclassify as married any person apparently living in a stable consensual union but returning themselves as of some other marital status. Such women contribute to the numerators of measures like the illegitimacy rate (which derive from registration data classified according to the legal relationship between a child's parents) without contributing to the denominators. How extensively reclassifications by marital status have been made, and how consistently from census to census, is unclear. However, quite apart from this problem it is likely that many women living in consensual unions have always described themselves as married on census schedules, irrespective of their legal marital status.

conceptions those live nuptial confinements taking place at marriage durations 0-7 completed months. The adoption of an arbitrary criterion such as this inevitably means that some confinements are wrongly classified as stemming from either premarital or marital conceptions. It nonetheless is standard practice in the absence of direct information on pregnancy status at marriage, although the critical marriage duration adopted varies. [8] The limit of exactly eight months, or 243 days, settled on here was fixed having regard to the consensus of recent studies and to the facts, first, that the mean period of uterogestation in the human female is 266 days (Christensen, 1960; Benson, 1974), and second, that there is less than a twelve percent chance of confinement within 243 days of conception (Guttmacher, 1962).

By expressing the sum of live nuptial confinements at marriage durations 0-7 months and live ex-nuptial confinements as a percentage of all live confinements, one obtains the ex-nuptial conception ratio. It is analogous to the illegitimacy ratio, and has the same deficiencies. One may also derive an ex-nuptial conception rate, which measures the number of nonmarital conceptions by women aged 15-44 which subsequently terminate as live confinements per 1000 never married, widowed, divorced, or legally separated women aged 15-44. [9]

[8] Basavarajappa (1968) notes the variety of cut-off points used in studies previous to his. He himself fixes the critical marriage duration at exactly nine months, but Spencer (1969) has criticised this as too liberal. More recently, Prioux-Marchal (1974b), Ruzicka (1975, 1976a, 1977), and Trlin and Ruzicka (1977) have accepted an eight month limit, and this is also the criterion used for official statistical purposes in New Zealand. Pratt (1965) uses a more sophisticated method, utilising data on both marriage duration at confinement and birth weight, to classify couples by bridal pregnancy status. However, the data required by this method were not available for New Zealand.

So far as is known, the ex-nuptial conception rate is a new index. It has several features which commend it. It allows nonmarital pregnancies terminating within and outside marriage to be jointly related to a single risk population. Second, it has the desirable feature, especially when refined by age, that it focuses on the moment of conception, and hence the crucial act of coitus. Finally, it may be partitioned according to whether confinement occurs nuptially or ex-nuptially, simply by applying the equation in footnote 9 twice, once with $C'(x,y)$ taken to represent ex-nuptial confinements and once with it taken to represent nuptial confinements at marriage durations 0-7 months. Having done this the legitimation ratio, expressing nonmarital conceptions which result in nuptial live births as a percentage of all nonmarital conceptions which lead to live births for women aged 15-44, can be calculated.

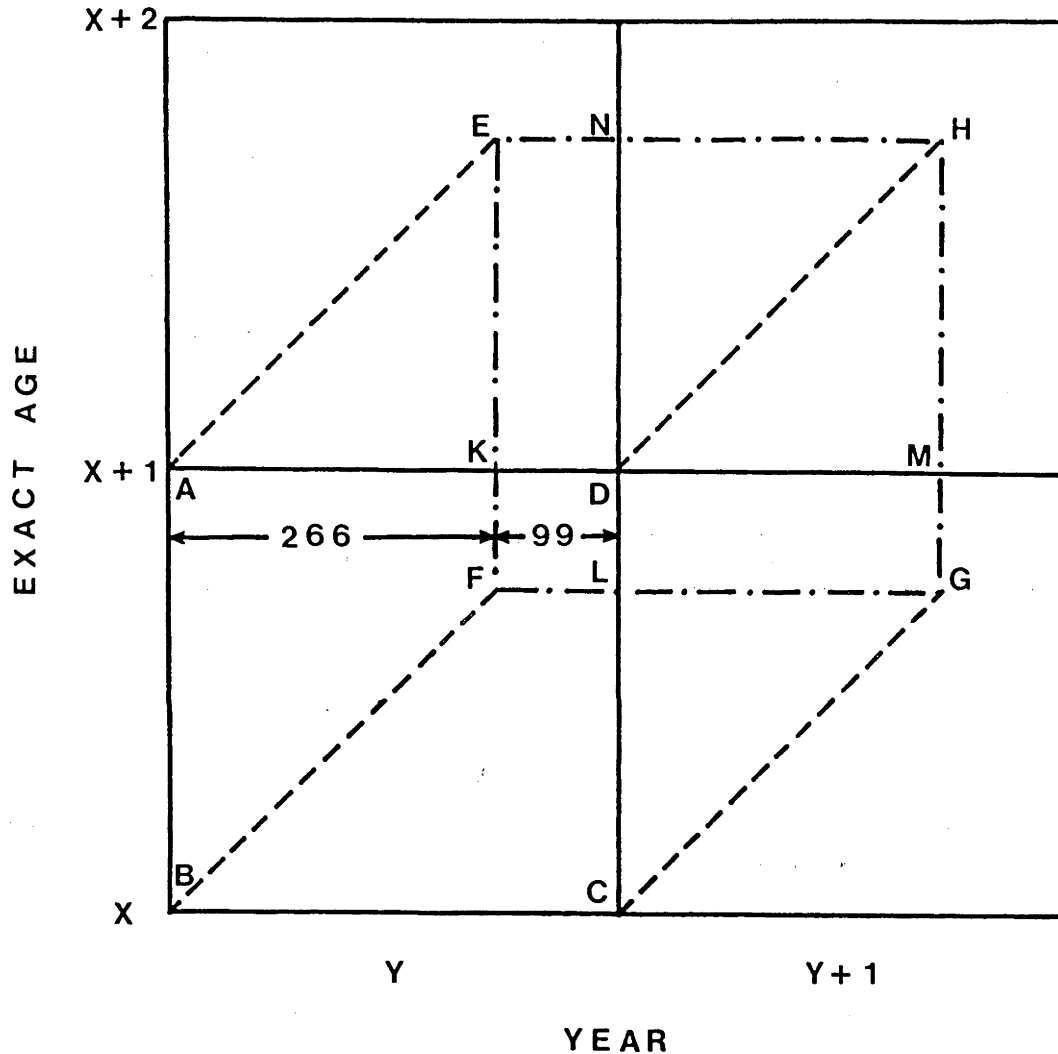
[9] Consider the lexis diagram shown as Figure 2.1. The square ABCD represents ex-nuptial conceptions of women aged x (a single-year age group) during calendar year y which resulted in live births, whether outside or within marriage. Denote these conceptions by $C(x,y)$ and assume that each results in confinement after a gestation period of exactly thirty-eight weeks. Under this assumption those confinements are represented by the square EFGH, which is the sum of the rectangles EKDN, KFLD, DLGM, and NDMH. If the sum of live ex-nuptial confinements and live nuptial confinements at marriage durations 0-7 months of women aged x during year y is denoted by $C'(x,y)$, and if it is further assumed that these confinements are evenly distributed through year y and by exact age between exact ages x and $x+1$, then $C(x,y)$ is given by:

$$C(x,y) = 0.1977C'(x+1,y) + 0.0736C'(x,y) + 0.1977C'(x,y+1) + \\ 0.5311C'(x+1,y+1)$$

Coefficients of $C'(x,y)$ in this equation are the proportions the rectangles EKDN, KFLD, DLGM, and NDMH constitute of their respective squares of the lexis grid. The ex-nuptial conception rate is found by summing $C(x,y)$ over the age range 15-44 and dividing by the mean (or mid-year) number of never married, widowed, legally separated, or divorced women in that age range. Age-specific rates may be computed by summing over smaller age ranges.

Figure 2.1

LEXIS DIAGRAM SHOWING DERIVATION OF THE EX-NUPTIAL CONCEPTION RATE



Studying trends in nonmarital pregnancy in Australia Ruzicka (1975) developed a method for estimating, at a census, the prevalence of pregnancy leading to nuptial and ex-nuptial confinement among unmarried women. Seemingly his technique has similar attributes to the ex-nuptial conception rate. It is flawed, however, in that it ignores women pregnant on census night following nonmarital conceptions who had already 'regularised' their pregnancies through

marriage. It thus understates both the overall level of pregnancy following nonmarital conceptions and the incidence of nuptial compared to ex-nuptial confinements resulting from these conceptions. Further, Ruzicka's ex-nuptial pregnancy rate changes in response to changes in the proportions of nonmarital pregnancies that are regularised and the pattern of regularisation by duration of gestation, as well as in response to changes in the level of nonmarital conception leading to confinement at term.

Reference to marriage between conception and confinement raises the issue of bridal pregnancy. A method for calculating the percentage of brides aged 16-44 who were pregnant at marriage, hereafter called the bridal pregnancy ratio, is outlined by Basavarajappa (1968). He rejects a second index - the percentage of live nuptial first confinements which occur within marriage durations 0-7 months - on the ground that it is sensitive to changes in the distribution by duration of marriage of women of zero parity. This measure has other deficiencies, too, and can be quite misleading. [10]

[10] Such phenomena as involuntary sterility, voluntary childlessness, and marriage dissolution at zero parity cause the measure to take on higher values than the bridal pregnancy ratio, creating the impression that bridal pregnancy is more common than it is. More importantly, severe distortions occur when the index is refined by age. These arise from the fact that, for any age-at-marriage group, a bride who is pregnant is less likely to have progressed to an older age group by the time of her first nuptial confinement than one who is not pregnant. The problem is especially acute for the age group 16-19. Non-pregnant teenaged brides have always been concentrated at the upper end of this age range, so that a large proportion have turned twenty before becoming mothers. As a result during 1913-71 the annual percentage of nuptial first confinements of non-Maori women aged 16-19 which have occurred within eight months of marriage has been anything from twenty to over forty percentage points higher than the bridal pregnancy ratio for the same age group and year. Moreover, the disparity has tended to narrow and widen as the mean first birth interval of non-pregnant brides has, respectively, decreased and increased. These points may be verified by comparing Tables A2.1 and A2.2 in Appendix 2.

All of the indices discussed above have been defined in their most general forms. Without exception they are amenable to standardisation for age and to calculation for specific age groups, provided that suitable data are available.

2.3 TRENDS IN EX-NUPTIAL FERTILITY

Column (1) of Table 2.1 shows that ex-nuptial live births increased steadily during the late nineteenth and early twentieth centuries. After 1910, their number remained remarkably stable until the early 1940s, except for a modest increase during the 1920s which tapered off again as the Depression took hold. Conditions during World War 2 were less conducive than those during peacetime to the regularisation of nonmarital pregnancies by marriage (Table 2.2, column (2)). Furthermore, large numbers of American servicemen on leave from the Pacific were present in New Zealand during 1942-44. [11] Thus, ex-nuptial live births increased by almost eighty percent between 1939 and 1944.

As the likelihood of nonmarital pregnancy leading to marriage increased again after 1945, non-Maori ex-nuptial live births fell slightly. However, from the early 1950s a steady upward trend set in. Births doubled during the 1960s, not surprisingly arousing considerable public disquiet.

[11] These servicemen were accommodated at several camps in and near the cities of Auckland and Wellington, and at Masterton. The first intake of seventeen thousand arrived in June 1942. By May 1943 there were 43487 in the country, the number dropping thereafter to 24048 in May 1944, and to 3055 in August of that year (Baker, 1965).

Table 2.1

SELECTED MEASURES OF EX-NUPTIAL FERTILITY: NON-MAORI POPULATION 1873-1980¹

Year ²	Ex-nuptial Live Births (1)	Illegitimacy Ratio (2)	Illegitimacy Rate (3)	Ex-nuptial Fertility Rate (4)	Standardised Ex-nuptial Fertility Rate (5) ³	Year ²	Ex-nuptial Live Births (1)	Illegitimacy Ratio (2)	Illegitimacy Rate (3)	Ex-nuptial Fertility Rate (4)	Standardised Ex-nuptial Fertility Rate (5) ³
1873-74	163	1.4	8.7								
1875-79	351	2.1	12.5								
1880-84	534	2.8	12.6								
1885-89	608	3.2	10.5								
1890-94	642	3.5	8.8								
1895-99	825	4.4	9.0								
1900-04	957	4.6	9.0								
1905-09	1140	4.5	9.9			1950	1768	4.0	12.8	12.6	13.2
1910-12	1139	4.3	9.4			1951	1935	4.3	14.3	14.1	15.0
						1952	2104	4.5	15.7	15.5	16.6
1913	1181	4.2	9.6	9.5	9.2	1953	1997	4.3	15.0	14.7	16.0
1914	1302	4.6	10.5	10.3	10.2	1954	2100	4.3	15.8	15.5	17.3
1915	1152	4.1	9.3	9.1	8.9	1955	2264	4.5	17.0	16.7	19.1
1916	1146	4.0	9.1	9.1	8.9	1956	2310	4.6	17.2	16.9	19.9
1917	1159	4.1	9.1	8.9	8.7	1957	2549	4.9	18.6	18.3	21.9
1918	1179	4.6	9.1	9.0	8.9	1958	2689	5.0	19.4	19.1	23.1
1919	1138	4.7	8.6	8.5	8.5	1959	2792	5.1	20.0	19.6	24.0
1920	1424	4.8	10.5	10.4	10.4	1960	2911	5.3	20.6	20.3	24.6
1921	1258	4.4	9.1	9.0	8.9	1961	3332	5.8	23.1	22.7	27.8
1922	1224	4.2	8.7	8.5	8.6	1962	3734	6.5	24.8	24.4	29.8
1923	1260	4.5	8.7	8.7	8.7	1963	4066	7.2	25.8	25.5	31.0
1924	1338	4.8	9.1	8.9	9.0	1964	4452	8.2	27.3	26.8	32.3
1925	1332	4.7	8.9	8.8	8.9	1965	4713	9.0	28.1	27.8	32.8
1926	1473	5.2	9.7	9.4	9.5	1966	4969	9.5	29.0	28.6	32.8
1927	1387	5.0	8.9	8.8	8.9	1967	5577	10.5	32.1	31.5	35.4
1928	1383	5.1	8.8	8.6	8.7	1968	5812	10.8	33.2	32.7	36.4
1929	1327	5.0	8.3	8.1	8.2	1969	5674	10.5	32.1	31.7	35.3
1930	1371	5.1	8.4	8.3	8.3	1970	5830	10.8	32.4	31.9	35.2
1931	1315	4.9	7.9	7.8	7.8	1971	6299	11.2	34.3	33.9	37.8
1932	1262	5.1	7.5	7.4	7.4	1972	6723	12.2	35.5	35.1	38.2
1933	1119	4.6	6.6	6.6	6.5	1973	6633	12.4	33.8	33.2	35.6
1934	1161	4.8	6.8	6.8	6.7	1974	6804	13.0	33.4	32.9	34.9
1935	1046	4.4	6.1	6.0	5.9	1975	6700	13.4	31.5	31.1	33.0
1936	1126	4.5	6.6	6.5	6.4	1976	6704	13.8	30.7	30.2	32.1
1937	1210	4.7	7.2	7.0	7.0	1977	7147	15.1	32.0	31.6	33.9
1938	1164	4.3	7.0	6.9	6.8	1978	7041	15.8	31.1	30.6	32.9
1939	1133	3.9	6.9	6.8	6.9	1979	7596	16.6	33.3	32.8	35.1
1940	1284	3.9	8.0	7.8	8.0	1980	7371	16.7	32.0	31.5	33.9
1941	1281	3.7	8.1	8.1	8.2						
1942	1339	4.0	8.4	8.4	8.5						
1943	1467	4.8	9.2	9.0	9.1						
1944	2020	6.0	12.5	12.3	12.3						
1945	1824	4.9	11.4	11.3	11.3						
1946	1824	4.4	11.8	11.5	11.7						
1947	1727	3.9	11.6	11.4	11.8						
1948	1686	3.8	11.7	11.4	11.9						
1949	1671	3.8	11.9	11.7	12.1						

Source: Statistics of the Colony of New Zealand 1873-1906; Statistics of the Dominion of New Zealand 1907-20; New Zealand Vital Statistics 1921-80.

- 1 See Appendix 1 for a description of the procedure followed in deriving annual mid-year estimates of the numbers of non-Maori females not currently married by five-year age groups. Risk populations required in calculating columns (3)-(5) were obtained from these estimates.
- 2 Columns (1) and (3) for the various periods identified between 1873 and 1912 give annual average figures. For the years 1942 and 1962-64 ex-nuptial live births and live ex-nuptial confinements by age of mother were estimated (see Appendix 3).
- 3 Standardised to the age structure of unmarried non-Maori females as at 30 June 1945.

Table 2.2

SELECTED MEASURES OF NONMARITAL PREGNANCY: NON-MAORI POPULATION 1913-1971

Year	Ex-nuptial Conception Ratio (1)	Legitimation Ratio (2)	Standardised Legitimation Ratio (3)	Ex-nuptial Conception Rate (4)	Standardised Ex-nuptial Conception Rate (5)	Bridal Pregnancy Ratio (6)	Standardised Bridal Pregnancy Ratio (7)
1913	11.2	60.2	60.2	25.3	24.9	21.8	22.4
1914	11.3	59.9	60.0	23.4	23.1	19.6	20.4
1915	10.3	58.4	58.3	21.7	21.5	16.5	17.0
1916	9.5	55.6	55.7	20.0	19.9	18.1	18.9
1917	8.9	51.6	51.7	18.6	18.6	20.3	20.1
1918	9.2	51.6	51.7	18.0	18.1	19.3	20.3
1919	9.7	57.9	57.6	23.7	23.9	16.8	18.3
1920	11.7	61.5	61.4	24.5	24.8	16.9	18.2
1921	11.7	61.8	61.9	22.8	23.2	19.1	19.8
1922	10.9	61.1	61.1	22.3	22.7	20.3	21.1
1923	11.5	60.5	60.7	22.6	23.1	19.7	20.2
1924	12.0	60.7	60.9	22.7	23.1	20.0	20.1
1925	12.0	60.3	60.0	23.6	23.9	20.4	20.4
1926	12.9	61.6	61.1	23.6	23.8	20.7	20.1
1927	13.2	61.5	61.0	22.6	22.8	21.3	20.8
1928	13.0	62.4	61.8	22.2	22.2	20.9	20.0
1929	13.3	62.8	62.1	22.4	22.4	20.7	19.9
1930	13.7	63.3	62.5	21.8	21.8	20.8	20.1
1931	13.5	63.9	63.1	20.8	20.8	23.2	22.0
1932	14.0	65.3	64.5	19.6	19.5	22.4	21.3
1933	13.5	65.2	64.1	19.2	19.1	20.5	19.8
1934	13.6	66.1	64.8	18.2	17.9	18.8	18.5
1935	12.9	66.1	65.0	18.6	18.3	17.4	17.3
1936	13.2	65.3	64.8	19.6	19.3	16.1	16.0
1937	13.2	66.0	65.1	20.0	19.8	15.7	15.6
1938	12.6	66.6	65.5	20.0	20.0	14.9	14.8
1939	11.7	65.5	64.7	21.5	21.7	13.7	13.3
1940	11.1	61.0	60.5	20.3	20.7	12.4	11.8
1941	9.0	56.6	56.2	19.1	19.5	13.5	13.0
1942	9.0	50.8	50.5	18.0	18.6	12.7	12.3
1943	9.5	46.0	45.6	21.0	21.3	13.3	12.9
1944	10.9	47.2	47.0	21.7	21.7	12.9	12.6
1945	9.5	53.7	53.7	23.9	23.9	12.2	12.2
1946	9.7	59.3	59.2	27.0	27.1	11.9	11.6
1947	9.8	59.2	59.0	26.7	26.9	13.7	13.0
1948	9.1	57.9	57.8	26.5	26.9	13.7	12.8
1949	9.0	56.6	56.1	27.6	28.2	13.6	12.5
1950	9.1	54.5	54.0	29.5	30.5	13.9	12.5
1951	9.4	52.9	52.5	31.8	33.5	14.1	12.7
1952	9.5	54.0	53.6	32.4	34.5	14.7	13.2
1953	9.4	54.9	54.4	33.6	36.3	14.9	13.2
1954	9.6	54.9	54.2	36.3	39.6	15.8	13.9
1955	10.0	54.6	53.5	37.2	41.3	16.1	13.8
1956	10.0	53.5	52.3	38.6	43.7	16.8	14.2
1957	10.4	53.8	52.0	40.7	46.0	17.9	14.7
1958	10.8	54.6	52.3	42.8	47.8	18.6	14.8
1959	11.2	54.5	52.0	44.2	48.9	19.4	15.3
1960	11.4	54.0	51.3	48.3	53.3	20.1	15.7
1961	12.4	52.9	49.6	51.8	57.4	21.1	16.3
1962	13.6	52.2	48.3	53.8	59.6	22.6	16.9
1963	14.9	51.0	47.3	55.0	60.5	23.5	17.7
1964	16.4	50.5	46.6	56.3	60.8	23.7	17.5
1965	18.1	51.0	46.2	58.0	60.3	23.8	16.9
1966	19.3	49.5	44.3	60.5	61.1	23.9	16.6
1967	20.4	48.4	43.5	61.7	62.1	23.4	16.2
1968	20.5	48.4	43.4	60.9	61.6	23.0	16.1
1969	20.1	47.8	42.5	60.4	60.5	22.0	15.4
1970	20.4	47.7	42.8	63.3	63.9	21.9	15.5
1971	21.3						

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-66; unpublished data supplied by the Department of Statistics.

- Note that columns (3), (5), and (7) are respectively standardised to the age structures of mothers of non-Maori children born live during 1945 following ex-nuptial conception, unmarried non-Maori females as at 30 June 1945, and non-Maori females marrying at ages 16-44 in 1945.
- For the years 1942 and 1962-64 live ex-nuptial confinements by age of mother and live nuptial confinements occurring at marriage durations 0-7 months by age of mother and duration of marriage were estimated (see Appendix 3).

Illegitimacy Ratio and Illegitimacy Rate

In Figure 2.2, trends in the non-Maori illegitimacy ratio and illegitimacy rate (Table 2.1, columns (2) and (3)) are plotted as index numbers (1945 base = 100) on a semilogarithmic scale. [12] Clearly the trend lines do not tell the same story. Between the mid-1870s and the early 1890s they move in opposite directions. [13] This reflects the structural imbalance which characterised New Zealand's non-Maori population during the colonial pioneer phase, and the rapid elimination of that imbalance during the latter decades of the nineteenth century (Neville, 1979). The non-Maori sex ratio at the census of 1874 was 133, and only 34.7 percent of females aged 15-44 were not married. Comparable figures at the 1891 census were 112 and 51.9 percent.

In 1874, New Zealand society was heavily male dominated and characterised by transience, harsh economic conditions, and a much lower regard for domestic virtues, moral standards, and religious principles than conservative myth assumes (Sutch, 1966a, 1966b; Oliver, 1977; Kirkwood, 1979). Unmarried women, being substantially of immigrant origin, were perhaps a comparatively adventurous group. Moreover, restrictive divorce laws (Chapter 7) did not prevent

[12] Note that in several instances throughout Chapters 2 and 3 series of indices presented graphically end a year or two earlier than tabular presentations of the same data. This reflects last minute incorporation of the most recent available data. As graphs had already been drawn it was decided to update tables only.

[13] Substantial increases in both the illegitimacy ratio and the illegitimacy rate between 1875 and 1876 are undoubtedly spurious. They reflect the passage of the Registration of Births and Deaths Act 1875, which first stipulated that ex-nuptial births should be endorsed 'illegitimate'.

Figure 2.2

ILLEGITIMACY RATIO AND ILLEGITIMACY RATE: NON-MAORI POPULATION 1873-1978



Source: Statistics of the Colony of New Zealand 1873-1906; Statistics of the Dominion of New Zealand 1907-20; New Zealand Vital Statistics 1921-78; 1871-1921 censuses; unpublished data supplied by the Department of Statistics.

'wholesale desertion of women and children' (Kirkwood, 1979: 284), and lack of reliable public support for deserted wives undoubtedly saw some enter de facto unions. All of these factors were conducive to a high illegitimacy rate, whereas the illegitimacy ratio was kept in check by the heavy predominance of married women among those of reproductive age.

The subsequent movement of women born in New Zealand into late adolescence and early adulthood radically altered both the age structure and the composition by marital status of the female population of reproductive age. Society became more 'normal' in all respects, with the transient male element far less prominent. The illegitimacy rate fell, but the illegitimacy ratio rose because of the changed balance between the populations respectively at risk of giving birth inside and outside marriage.

From the early 1890s until the mid-1920s, both measures suggest general stability in the level of nonmarital fertility (Figure 2.2). From the mid-1920s the illegitimacy rate began to decline, and it continued to do so until after the worst years of the Depression. By contrast the illegitimacy ratio remained stable during 1926-32, then fell irregularly until 1941. Commencement of this last trend was delayed because, in the years leading up to the Depression, marital fertility declined to approximately the same extent as did ex-nuptial fertility (O'Neill, 1979). It was eventually set in motion by the more profound effect that the Depression had on ex-nuptial fertility, and persisted for as long as it did because of upturns in marital fertility and first marriage rates during the late 1930s.

Substantial increases occurred in both the illegitimacy ratio and the illegitimacy rate during World War 2. Following the War, however, the ratio plummeted again, affected once more by rising marital fertility and first marriage rates. By contrast the rate fell only marginally before stabilising briefly. Then, beginning in 1950, both measures turned sharply upward. With few interruptions, the non-Maori illegitimacy ratio has climbed ever since. Until 1972, the

illegitimacy rate followed suit. It then peaked, at more than three times its 1945 level.

Standardised and Age-specific Ex-nuptial Fertility Rates

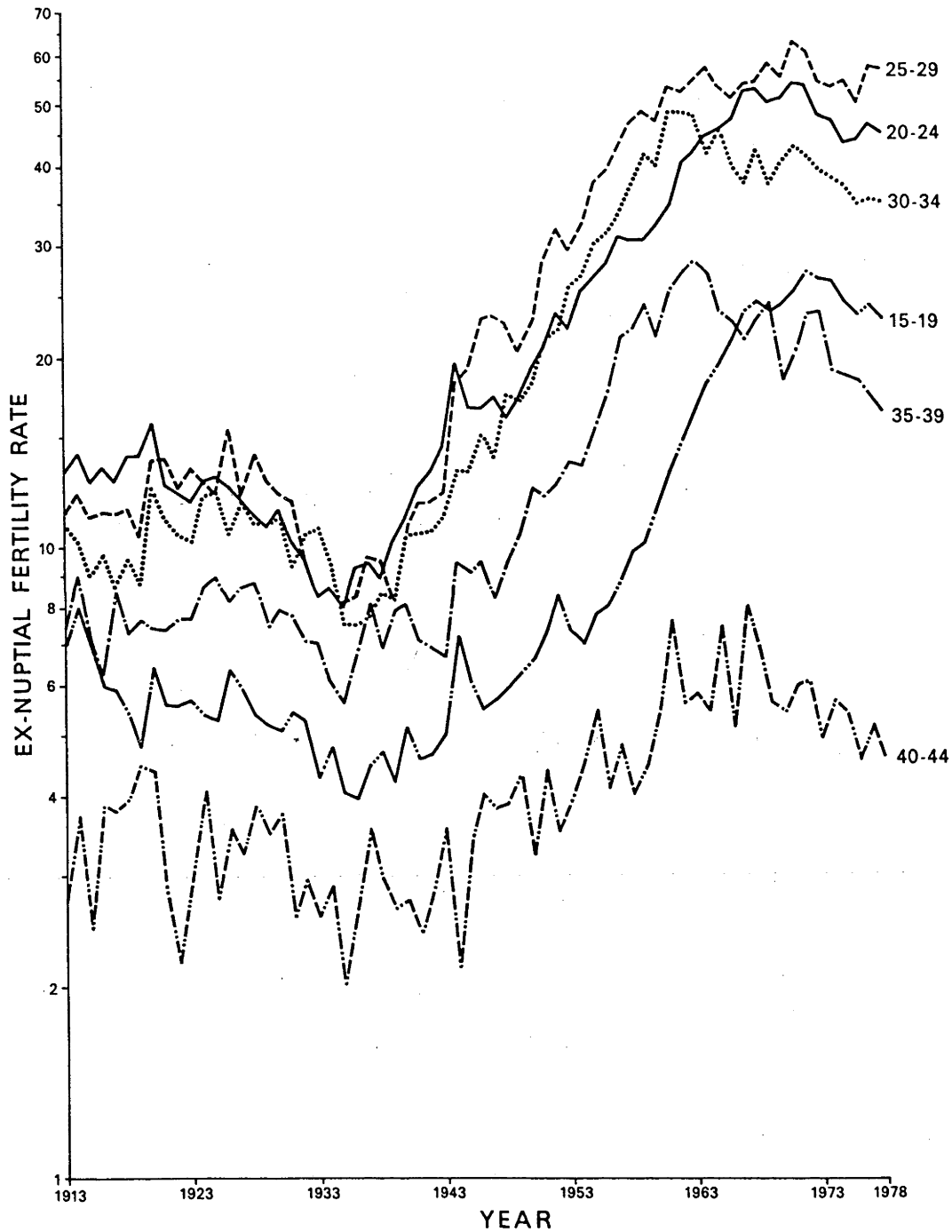
As anticipated, the ex-nuptial fertility rate (Table 2.1, column (4)) follows a similar trend to the illegitimacy rate. Standardisation of this index for age (column (5)) has negligible impact on pre-1945 rates. However, for the post-war period it results in some marked increments. The gap between the standardised and unstandardised ex-nuptial fertility rates widens between 1945 and the early 1960s, until the former is some twenty percent higher. Thereafter it narrows again.

Two things explain this pattern: a persistent trend toward earlier marriage during 1945-71 (Chapter 6) and entry into the reproductive age group of large post-war birth cohorts from about 1960 onward. As a result the percentage of 15-19 year-olds among unmarried females aged 15-44 rose from 38.5 in 1945 to 60.3 in 1966, before dropping to 56.4 in 1976. The significance of these statistics is that although the 15-19 age group accounts for a large number of ex-nuptial confinements in any year, it has a relatively low ex-nuptial fertility rate (Figure 2.3). [14] Increasing dominance of

[14] Part of the reason for this is that defects in the risk population used in calculating ex-nuptial fertility rates (see footnote 7) have more severe consequences at ages 25-29 and above than they do at ages 15-19 and 20-24. The problem of women contributing only to the numerator of an ex-nuptial fertility rate (or an illegitimacy rate or an ex-nuptial conception rate) becomes greater as maternal age increases, especially in the range 15-29 years. Comparison of rates for different age groups is thus rendered extremely problematic (Illsley and Gill, 1968; Spencer, 1969).

Figure 2.3

AGE-SPECIFIC EX-NUPTIAL FERTILITY RATES: NON-MAORI
POPULATION 1913-1978



Source: Statistics of the Dominion of New Zealand 1913-20;
New Zealand Vital Statistics 1921-66; unpublished
data supplied by the Department of Statistics.

the unmarried female population by this age group thus tends to lower both the ex-nuptial fertility rate and the illegitimacy rate.

Age-specific ex-nuptial fertility rates (Figure 2.3 and Table A2.3, Appendix 2) provide more detail on trends in ex-nuptial childbearing. That involving teenagers fell the most during World War 1. Immediately the War ended, rates for the four youngest age groups all jumped sharply, but they soon dropped again as recession set in. The 1920s were not prosperous years in New Zealand. In the 1920-21 and 1921-22 production seasons there were massive declines in prices received for pastoral exports. [15] Prices recovered a little in mid-decade, but unemployment, industrial unrest, insecurity, and personal hardship were characteristic right through until the Depression (Sutch, 1941, 1966a, 1966b; Oliver, 1960; Sinclair, 1969). The 1920s in the United States have been painted as a decade of sexual revolution. [16] However, life in New Zealand at that time was far from carefree, and there is no hint in Figure 2.3 that sexual activity among unmarried females increased significantly.

All age groups contributed to the downturn in the illegitimacy rate which commenced in the mid-1920s and accelerated as the

[15] The value of wool exported fell by 56 percent in the 1920-21 season over the previous season, while in 1921-22 the value of meat, butter, and cheese exported fell by 25, 19, and 43 percent respectively (Sutch, 1966a).

[16] Findings reported for a United States sample by Terman (1938) and later confirmed by Kinsey *et al* (1953) suggest a sharp rise in the level of female nonvirginity at marriage for the birth cohorts of 1900-09. More recently both Ehrmann (1964) and Reiss (1966; 1972) have concluded that the 1920s in America were indeed a decade of radical change in premarital sexual behaviour. Reiss even argued for some time, as did Cutright (1972c), that behavioural change during the 1950s and 1960s did not warrant the description 'sexual revolution' when compared to change during the 1920s.

Depression took hold. Likewise, all trend lines bottomed out in the mid-1930s and set upward courses that were to persist for three to four decades. Increments in ex-nuptial fertility rates at ages 20-34 during World War 2 are a reminder that conditions were not favourable to marriage. The effect of the American presence is also evident in rates for most age groups, but it shows up as a temporary phenomenon only at ages 15-19 and 20-24. The reason may be that rates at older ages were affected immediately after the Americans left by the spate of divorce which followed the War (Chapter 7). Married women then in their late twenties and early thirties were especially likely to have been separated during the War, and to have become pregnant by new partners before divorce formalities could be completed.

Dominant features of the post-war period are naturally the magnitude and relentlessness of the upward trends in ex-nuptial fertility rates (Figure 2.3). All age-specific rates increased throughout the 1950s, but from the early 1960s trend lines began to follow different paths. Ex-nuptial fertility declined at ages thirty and over, just as did marital fertility (Basavarajappa, 1969; Zodgekar, 1980). The advent of the pill, changing attitudes to employment among women (Carmichael, 1975, 1979b), and the onset of rapid fertility decline among the Maori population (Pool, 1974, 1977; Khawaja and Rolleston, 1975; Zodgekar, 1975; Douglas, 1977a, 1977b) largely account for both these trends. The ex-nuptial fertility rate for 25-29 year-olds might also have declined had it not been for a rising divorce rate (Chapter 7). New Zealand divorce law undoubtedly 'forced' many women in this age group into ex-nuptial childbearing by preventing remarriage reasonably quickly after separation. But rates for the 15-19 and 20-24 age groups continued to climb steeply. These

are the critical age groups, because they account for the overwhelming majority of ex-nuptial confinements (Table 2.3).

Table 2.3

LIVE NON-MAORI EX-NUPTIAL CONFINEMENTS BY AGE OF MOTHER: MEAN
ANNUAL DISTRIBUTIONS 1913-14 TO 1975-78

1 Period	Age of Mother						Total
	<15	15-19	20-24	25-29	30-34	35+	
Numbers							
1913-14	6	328	447	229	126	97	1233
1915-19	2	270	446	212	110	104	1144
1920-24	5	309	457	257	143	118	1289
1925-29	6	344	480	258	146	132	1366
1930-34	3	320	434	225	138	117	1237
1935-39	6	274	415	211	112	109	1127
1940-44	4	338	572	279	158	116	1467
1945-49	6	352	646	387	186	150	1727
1950-54	7	423	700	411	240	178	1959
1955-59	9	632	813	487	315	233	2489
1960-64	22	1314	1224	502	332	269	3663
1965-69	32	2326	1843	600	275	230	5306
1970-74	35	2891	2117	805	350	207	6405
1975-78	38	2983	2152	1038	414	213	6838
Percentages							
1913-14	0.4	26.6	36.3	18.6	10.2	7.9	100.0
1915-19	0.2	23.6	39.0	18.5	9.6	9.1	100.0
1920-24	0.4	24.0	35.5	20.0	11.1	9.1	100.1
1925-29	0.4	25.2	35.2	18.9	10.7	9.7	100.1
1930-34	0.3	25.9	35.1	18.1	11.2	9.5	100.1
1935-39	0.5	24.3	36.8	18.7	9.9	9.7	99.9
1940-44	0.3	23.0	39.0	19.0	10.8	7.9	100.0
1945-49	0.3	20.4	37.4	22.4	10.8	8.7	100.0
1950-54	0.4	21.6	35.7	21.0	12.2	9.1	100.0
1955-59	0.4	25.4	32.7	19.6	12.6	9.4	100.1
1960-64	0.6	35.9	33.4	13.7	9.1	7.3	100.0
1965-69	0.6	43.8	34.7	11.3	5.2	4.3	99.9
1970-74	0.5	45.1	33.1	12.6	5.5	3.2	100.0
1975-78	0.6	43.6	31.5	15.2	6.1	3.1	100.1

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-66; unpublished data supplied by the Department of Statistics.

1 Data for the years 1942 and 1962-64 were estimated (see Appendix 3).

2.4 TRENDS IN BRIDAL PREGNANCY

Apart from ex-nuptial births, interest in this chapter centres on nuptial births which follow ex-nuptial conception. One way of examining them is by studying trends in the probability of a woman being pregnant at marriage.

Bridal Pregnancy Ratio

The most conspicuous finding to emerge from the historical series of non-Maori bridal pregnancy ratios (Table 2.2, column (6)) is that the incidence of bridal pregnancy during the 1960s was only marginally higher than it had been in the 1920s. During the earlier decade about one in five brides of reproductive age were pregnant. After rising briefly as the Depression began, this ratio fell to one in eight by 1940. It then stabilised until 1949, before climbing steadily to almost one in four by 1963.

When standardised for age (Table 2.2, column (7)), neither the level nor the trend of the bridal pregnancy ratio is altered significantly over the period 1913-45. However, post-war resurgence of the index is much more subdued, so that it peaks some twenty-five percent below its unstandardised level, and below the standardised level recorded for all years but one between 1913 and 1934.

The inescapable conclusion is that there is nothing new about brides being pregnant. High bridal pregnancy ratios during the 1920s must be set against two facts. In a period of recession, first marriage rates were much lower than they were in the 1960s. Jain (1972) calculates non-Maori female first marriage rates of between

61.1 and 64.8 per 1000 never married women aged sixteen and over for the period 1922-29, whereas for the years 1960-67 he obtains rates of between 110.9 and 124.9 per 1000. Second, marriage was much more likely to prevent a nonmarital pregnancy from resulting in an ex-nuptial birth in the 1920s than in the 1960s (Table 2.2, column (3)). [17] It is clearly folly to regard the bridal pregnancy ratio as in any sense an index of the level of nonmarital sexual activity. At the same time, premarital sexual abstinence was far from a universal norm among past generations of non-Maori New Zealanders.

The rise and then decline of the bridal pregnancy ratio during the 1930s occurred mainly in response to an exactly opposite trend in the non-Maori female first marriage rate (Jain, 1972). It is something of a paradox that the bridal pregnancy ratio should have fallen during 1931-40, because legitimization ratios at that time were the highest on record (Table 2.2, column (2)). The paradox is explained by the strength of the upward trend in the first marriage rate (from 53.1 per 1000 in 1932 to 94.9 per 1000 in 1940), and also by the fact that small World War 1 birth cohorts dominated the 16-19 age group in which bridal pregnancy is most common.

In spite of the female first marriage rate being depressed, two factors, diminished opportunities for premarital coitus and difficulty in regularising premarital pregnancies by marriage, kept the bridal pregnancy ratio stable and low during World War 2. Continued stability immediately following the War reflects a rough cancelling of

[17] This reflects more rigid adherence to norms regarding the socially acceptable response to nonmarital pregnancy. In addition it is probable that in adverse economic conditions, women who do not become pregnant are the most likely to postpone marriage.

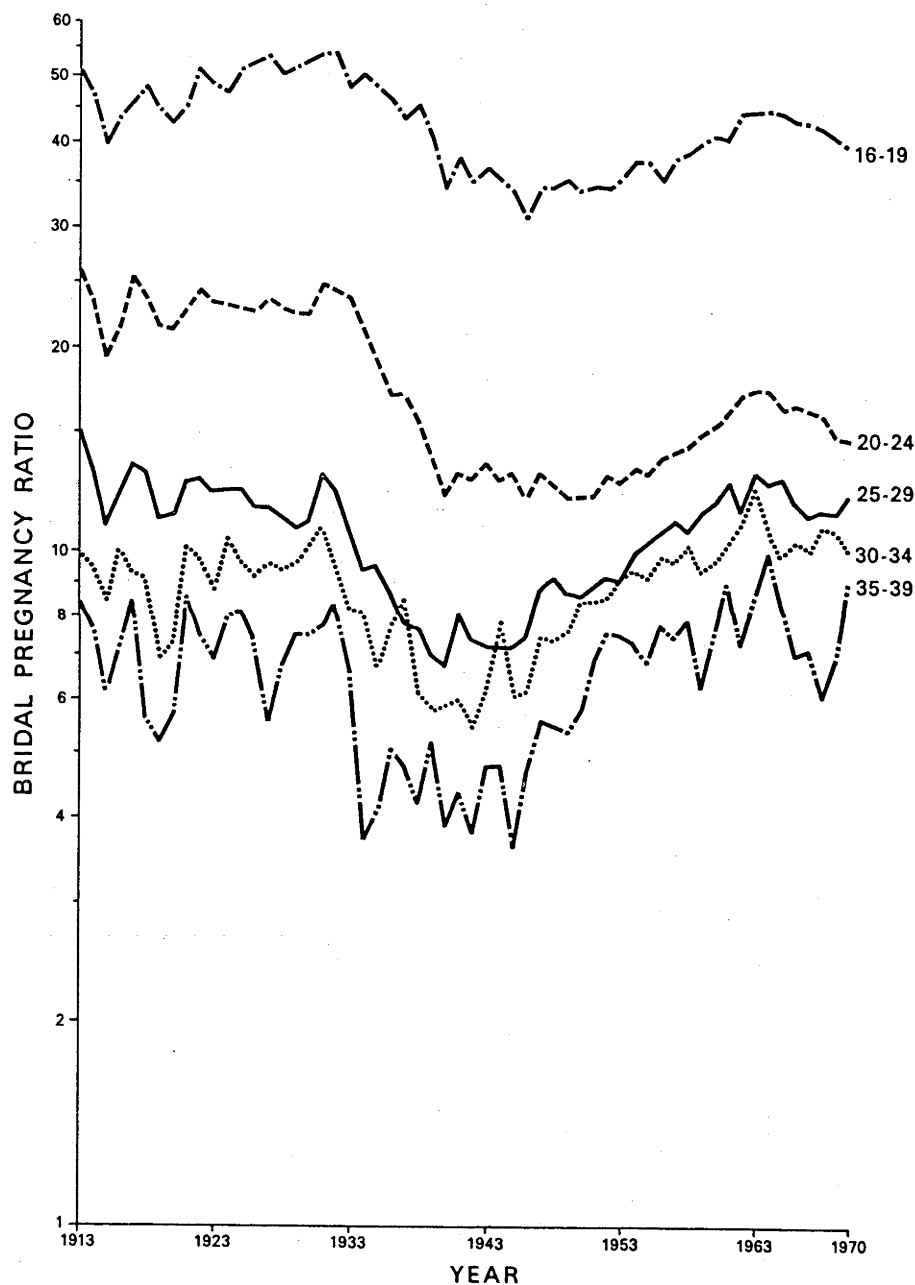
forces tending to depress the ratio (principally the substantially increased first marriage rate) by those tending to raise it (a higher ex-nuptial conception rate coupled with a return to 'normal' of the legitimation ratio (Table 2.2, columns (4) and (2))).

The combination of rapid increase in the non-Maori bridal pregnancy ratio through the 1950s and early 1960s, and the much gentler upward trend it follows when standardised for age highlights two things: the post-war trend toward earlier marriage, and a tendency for the non-Maori female age structure to become more youthful within the range 16-29 years. [18] The concurrence of a decline in age at first marriage and an increase in bridal pregnancy suggests that never married females became sexually active younger, became more active age for age, or both. This conclusion follows from bridal pregnancy being most common at younger ages (Figure 2.4). There is nothing about an early age at marriage which causes a bride to be pregnant. However, Figure 2.4 does not bear out the thought that with proportionately more women marrying at ages 16-19, bridal pregnancy among them might have fallen. This finding does not reflect an increase in premaritally pregnant teenagers' propensity to marry (Table 2.4), nor can it be plausibly accounted for in terms of decreased premarital fertility control. The only reasonable conclusion is that the pattern of sexual behaviour before marriage changed.

From about 1963 the non-Maori bridal pregnancy ratio began to level off until, by 1970, it was showing signs of gradual decline. The trend toward earlier marriage was by this time slowing, and the

[18] At the 1951 and 1966 censuses, 16-19 year-olds accounted for 25.9 and 35.4 percent respectively of non-Maori females aged 16-29.

Figure 2.4
 AGE-SPECIFIC BRIDAL PREGNANCY RATIOS: NON-MAORI
 POPULATION 1913-1970



Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-70; unpublished data supplied by the Department of Statistics.

Table 2.4

AGE-SPECIFIC LEGITIMATION RATIOS: NON-MAORI POPULATION 1913-1970

1 Year	Age at Conception					2 40-44
	15-19	20-24	25-29	30-34	35-39	
1913	55.5	67.7	61.9	46.2	37.3	24.8
1914	55.0	67.7	60.2	47.5	36.3	38.2
1915	54.4	66.0	56.9	47.3	30.2	32.7
1916	51.2	64.4	53.0	42.2	33.9	23.9
1917	51.1	58.3	49.9	34.7	26.8	18.7
1918	51.6	57.6	51.2	35.4	22.0	22.2
1919	54.1	66.1	57.9	39.7	26.3	24.6
1920	58.2	70.2	58.3	45.2	37.1	26.5
1921	60.3	69.9	57.1	46.2	37.6	38.3
1922	60.4	69.4	56.8	40.9	34.3	29.7
1923	61.3	69.1	55.3	38.8	32.4	24.2
1924	61.3	68.3	57.9	40.4	31.1	23.3
1925	61.6	68.4	52.8	37.7	33.4	16.1
1926	63.0	70.1	54.9	34.7	29.3	17.9
1927	64.2	70.3	52.1	35.2	24.1	20.3
1928	65.3	71.2	51.4	37.2	29.6	20.5
1929	65.3	71.6	52.5	36.7	26.8	20.6
1930	65.0	71.3	55.2	39.0	25.3	25.0
1931	65.2	72.4	57.8	34.1	27.7	20.1
1932	67.1	74.4	58.6	33.2	25.5	18.3
1933	66.3	74.4	56.8	37.3	22.8	16.2
1934	68.1	73.5	60.0	37.2	19.8	22.5
1935	69.1	71.7	62.1	40.0	23.9	20.2
1936	68.3	71.5	59.2	49.5	23.7	16.4
1937	68.4	73.8	56.1	46.2	24.8	18.0
1938	71.0	72.5	60.2	38.9	25.1	22.3
1939	70.3	71.6	57.2	39.4	27.6	28.5
1940	67.2	66.2	53.7	34.1	25.0	39.1
1941	62.8	61.5	49.9	30.4	22.0	38.3
1942	56.5	55.6	43.8	28.3	19.9	28.8
1943	51.8	49.1	38.4	29.1	23.3	29.4
1944	52.6	51.4	39.0	32.9	19.3	22.9
1945	59.8	59.2	43.9	37.6	22.3	21.3
1946	65.0	65.0	49.4	39.7	31.4	32.7
1947	66.7	65.2	46.7	37.1	30.6	30.0
1948	65.8	63.5	46.4	35.8	28.6	25.3
1949	65.5	61.7	43.1	34.6	23.8	25.8
1950	64.7	59.1	38.2	32.8	27.7	25.9
1951	61.9	58.2	38.0	29.5	27.2	27.8
1952	64.0	60.0	37.5	27.1	29.8	18.9
1953	66.4	59.2	39.6	28.2	27.5	24.4
1954	66.3	59.6	38.0	29.0	26.3	18.9
1955	66.4	59.0	36.6	25.7	24.6	20.2
1956	64.5	57.8	36.4	25.8	22.6	20.7
1957	65.3	57.5	34.9	23.3	21.7	20.4
1958	66.1	58.6	33.5	22.1	19.9	14.8
1959	63.8	59.0	34.5	21.2	19.7	24.2
1960	62.5	58.7	33.7	21.5	21.6	15.5
1961	60.7	56.7	32.3	21.0	19.2	14.9
1962	58.9	55.9	29.8	21.6	16.4	23.2
1963	56.5	54.1	30.9	22.5	20.8	24.8
1964	55.3	53.3	33.5	19.0	20.0	13.4
1965	55.9	52.4	31.6	19.3	18.4	24.3
1966	54.5	50.0	29.4	19.7	18.7	14.7
1967	53.0	49.3	29.1	20.7	15.5	11.8
1968	53.8	48.4	27.0	24.4	17.1	22.7
1969	53.2	47.1	27.8	20.9	18.6	19.6
1970	52.9	47.7	28.7	21.2	17.2	18.2

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-66; unpublished data supplied by the Department of Statistics.

1 Calculations for the periods 1941-42 and 1961-64 are affected by the need to estimate the distributions by age of mother of live ex-nuptial confinements and live nuptial confinements occurring within marriage durations 0-7 months for the years 1942 and 1962-64 (see Appendix 3).

2 Ratios for this age group are generally based on fewer than twenty nonmarital conceptions leading to confinement within marriage.

previous tendency for teenagers to constitute an ever larger proportion of marriageable females had reversed. More significantly, the legitimation ratio declined, especially at younger ages (Table 2.4).

Age-specific Bridal Pregnancy Ratios

Refinement of the bridal pregnancy ratio by age (Figure 2.4 and Table A2.1, Appendix 2) adds one or two details to the analysis just completed. There is evidence that during the 1920s, when the overall ratio was quite stable, economic conditions increasingly discouraged teenaged women from marrying unless pregnancy was a factor. There is also evidence that pregnancy became less common among women marrying at ages 25-29 as the decade progressed, perhaps as couples despaired of conditions improving. However, the marriage boom of the 1930s, and following it World War 2, affected bridal pregnancy levels similarly at all ages.

All age groups participated in the post-war resurgence of the bridal pregnancy ratio. The lead here was taken by brides aged 25-39, whose prime childbearing years were rapidly passing them by. Peak post-war ratios at these ages equalled or exceeded those of the inter-war period, but ratios at ages 16-19 and 20-24 never regained their levels of around 1930. Herein lies the mechanical explanation for the finding that, when standardised for age, the bridal pregnancy ratio was higher during the 1920s than ever subsequently. Again this says nothing about how widespread nonmarital sexual activity was in the 1920s compared to later. What it does say is that for first-born non-Maori children to have parents faced with adjusting simultaneously

to both marriage and parenthood is not the recent phenomenon one might have assumed. Is the dual adjustment more stressful today than it was in the past, when at least short first birth intervals were normal and premature parents were older? [19] Was bridal pregnancy more or less of a handicap in the past than research suggests it is today? [20] These are the pertinent questions.

2.5 TRENDS IN NONMARITAL PREGNANCY

Having dealt separately with the two categories of births which result from nonmarital pregnancies, the analysis now turns to measures which treat them together.

Ex-nuptial Conception Ratio

Being unaffected by deterioration in the prospects for regularising nonmarital pregnancies through marriage, the ex-nuptial conception ratio (Table 2.2, column (1)) declined more noticeably during the two world wars than did the illegitimacy ratio (Table 2.1, column (2)). Through the inter-war period a fairly stable 13-14 percent of pregnancies leading to live births began outside marriage.

[19] During 1920-29, 33.5 percent of non-Maori live nuptial first confinements taking place at least eight months after marriage took place at marriage durations of 8-11 months. In 1961, the equivalent datum was 30.9 percent, but by 1970 it had fallen to 13.5 percent. As to the ages of premature parents, 22.7 percent of women delivering live nuptial non-Maori children within eight months of marriage during the 1920s were aged less than twenty, compared to 48.1 percent during the 1960s.

[20] See, for example, Pratt (1965), Freedman and Coombs (1966a, 1966b), Coombs and Freedman (1970), Coombs *et al* (1970), Coombs and Zumeta (1970), Bumpass and Sweet (1972), Bacon (1974), Bumpass *et al* (1978), Trussell and Menken (1978), Freedman and Thornton (1979), and McCarthy and Menken (1979a).

Following World War 2 this figure was not reached again until the early 1960s, mainly because of the marriage and baby booms but also because the smaller 1930s birth cohorts were passing through the high risk 15-24 age group. However, as children born immediately after the War began to reach reproductive age, the non-Maori ex-nuptial conception ratio rose rapidly to over twenty percent.

Ex-nuptial Conception Rate

In its various forms (unstandardised, standardised, and refined by age) the ex-nuptial conception rate is the most important index discussed in this chapter, since it comes closest to measuring changes in levels of sexual activity outside marriage. It falls short of doing this with precision mainly because it is sensitive to changes in the level of nonmarital fertility control.

Both the unstandardised and the standardised ex-nuptial conception rates declined by more than one-quarter during World War 1, recovered to their pre-war levels soon afterwards, and remained stable through the 1920s (Table 2.2, columns (4) and (5)). Both measures fell by about one-fifth during the Depression, but had almost regained their levels of the late 1920s when World War 2 broke out. The wartime trend of the ex-nuptial conception rate reflects the impact on opportunities for nonmarital coitus of movements of service personnel. By mid-1942, more than fifty thousand New Zealanders were serving overseas, and by September of that year another one hundred and seven thousand were serving in New Zealand. There followed the influx of American servicemen, this coinciding with an appreciable fall in the size of New Zealand's armed forces, although their overseas component

continued to increase (Baker, 1965).

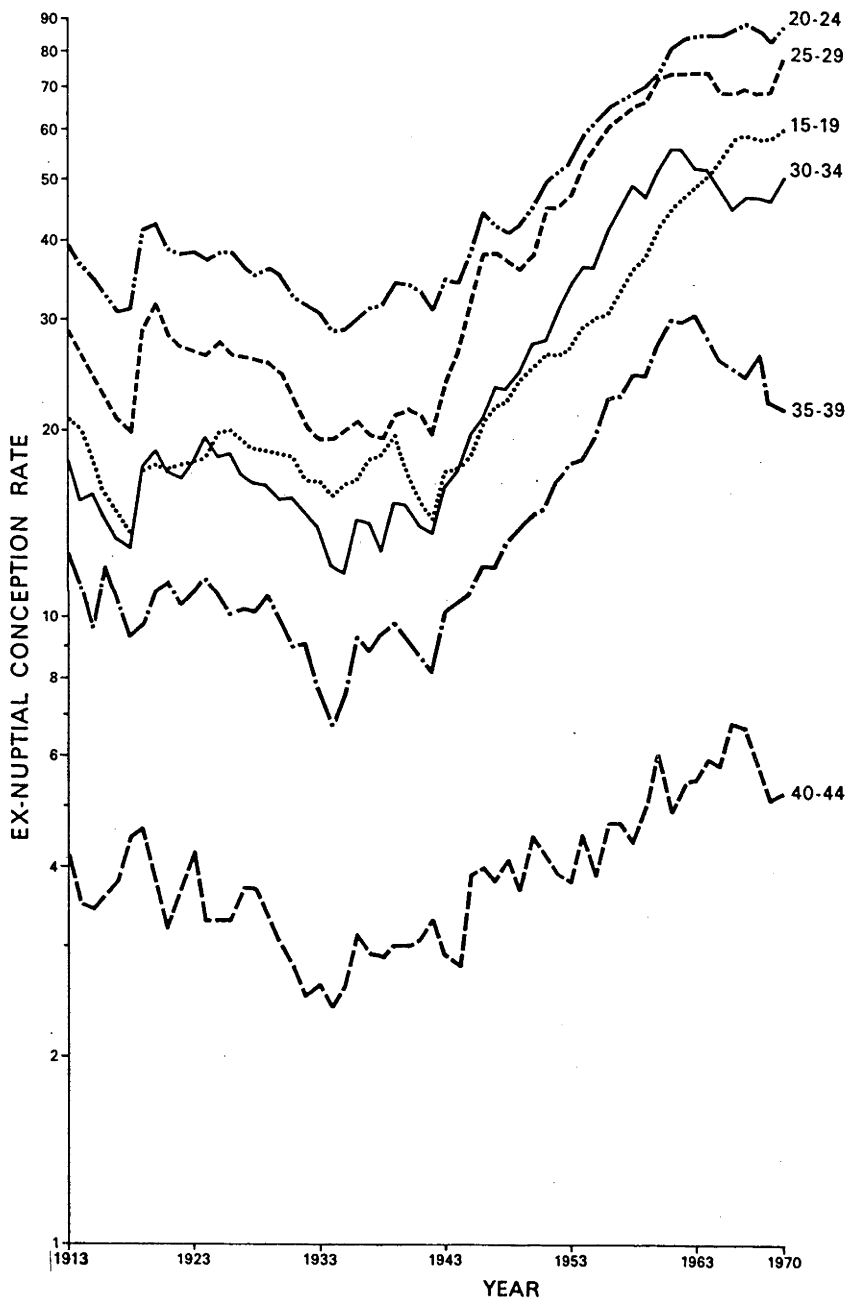
The cessation of hostilities ushered in the highest ever non-Maori ex-nuptial conception rates. It seems that the deprivations of war and the independence it encouraged in the young led to a relaxation of sexual mores. There was little further change through 1949, but thereafter the upward trend reasserted itself. The standardised ex-nuptial conception rate increased more rapidly than the unstandardised rate during the 1950s, but less so during the 1960s. Thus, an excess over the unstandardised rate of five or more conceptions per 1000 women at risk during 1956-63 had almost disappeared by 1969. The ex-nuptial conception rate at ages 15-19 increased relative to that at ages 20-24 during the 1960s (Table A2.4, Appendix 2). In doing so it balanced the effect on the ex-nuptial conception rate of the earlier trend for teenagers to become more dominant among unmarried females of reproductive age.

Age-specific Ex-nuptial Conception Rates

There were marked declines in ex-nuptial conception rates at ages below thirty-five during World War 1, but sharp recoveries immediately afterward (Figure 2.5 and Table A2.4, Appendix 2). Rates generally fell during the 1920s for women in their twenties, but continued rising until 1926 for teenagers. This suggests that at this time adolescent nonmarital sexual activity mainly involved a precocious minority, and so was not especially responsive to economic conditions unfavourable to courtship and marriage. There is further evidence for this precocity in trends during the 1930s. The ex-nuptial conception rate at ages 15-19 first fell less steeply than rates at older ages,

Figure 2.5

AGE-SPECIFIC EX-NUPTIAL CONCEPTION RATES: NON-MAORI
POPULATION 1913-1970



Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-66; unpublished data supplied by the Department of Statistics.

then quickly almost regained its peak level of the mid-1920s. [21] For no other age group did the rate recover to anything like its value of the mid-1920s before World War 2.

Nonmarital sexual activity decreased early in World War 2 (Figure 2.5). After 1942 this trend reversed, and two things stand out about the period 1942-49. The ex-nuptial conception rate for 25-29 year-olds rose very steeply until 1946, closing dramatically on the rate for 20-24 year-olds. A short term explanation again implicates women who were exchanging legal husbands. The longer run explanation lies in changing marriage patterns and a greater upward bias due to conceptions by women not officially 'at risk' in the rate for the older age group (see footnote 14). [22] Secondly, the stability of the ex-nuptial conception rate in the late 1940s masks a trade-off between temporarily declining rates at ages 20-24 and 25-29, and rising rates at other ages. Perhaps courtships of women in their twenties were unusually short at this time.

[21] A possible explanation for the less steep decline is that older women increased their reliance on induced abortion to a greater extent than did teenagers. Official concern over a rapid increase in maternal mortality from septic abortion during the early 1930s led to the setting up in 1936 of a Committee of Inquiry to report on the trend. Despite its at times quaintly moralistic tone, this committee's report (McMillan *et al*, 1937) leaves little doubt that the economic stringencies of the Depression did cause a significant increase in the frequency with which induced abortion was turned to as a method of fertility control. For a fuller account of abortion in the 1930s see Gordon and Bennett (1937) and Smith (1972).

[22] Between the 1945 and 1951 censuses the proportion of non-Maori females not currently married fell by 31.3 percent at ages 25-29, but by only 20.3 percent at ages 20-24. Other things being equal, a decline in the size of the official risk population at ages 25-29 relative to that at ages 20-24 and a higher proportion of nonmarital conceptions in the older age group occurring to women not officially at risk should produce a convergence of ex-nuptial conception rates.

Through the 1950s, ex-nuptial conception rates rose steeply at all ages, but from about 1961 rates at ages 30-34 and 35-39 began to fall, while that at ages 25-29 plateaued. Almost certainly this was a response to the introduction of the pill, but again it also reflects both changes in women's attitudes to employment and the onset of rapid fertility decline among the Maori population. The pill may have had some impact at ages 20-24 as well, but rates for this and the 15-19 age group continued to rise until the late 1960s.

Legitimation Ratio

The legitimation ratio declined during both world wars, no doubt partly because wartime conditions often precluded marriage before confinement and partly because nonmarital pregnancies resulted more often from casual relationships. During the early inter-war years it hovered just above sixty percent, until in the 1930s it rose to over sixty-five percent. Perhaps, by curtailing social activities, harsh economic conditions restricted casual intercourse. However, the main factor in the increase may have been the greater resort to induced abortion to which the Depression gave rise (see footnote 21). Logically, this should have had a greater impact on women unable or unwilling to marry the fathers of their children. As to the maintenance of higher legitimation ratios beyond the worst years of the Depression, the rising first marriage rate may have been accompanied by an increase in the probability of nonmarital conception occurring in a serious courting relationship.

The non-Maori legitimation ratio never regained its level of the 1930s after World War 2. It was below fifty-five percent throughout

the 1950s, and had fallen to well under fifty percent by 1970. Standardisation for age (Table 2.2, column (3)) only renders the decline during the 1960s even steeper.

Age-specific Legitimation Ratios

Before World War 2 the legitimation ratio at ages 15-19 was generally lower than that at ages 20-24 (Table 2.4). Since the War, however, these ratios have typically been more nearly equal. Likewise, the ratio for 25-29 year-olds has assumed even lower values relative to those for 20-24 year-olds since the War than it did before it. Both trends point to the concept of a proper time to marry which held sway before 1940. Once again, teenage nonmarital sexual activity was at this time an especially deviant form of behaviour, often not associated with serious courtship. Then, as age at first marriage dropped, nonmarital coitus at ages 25-29 increasingly involved women legally unable or ideologically unwilling to marry.

The main features of post-war trends in age-specific legitimation ratios are the declines which affected the 15-19 and 20-24 age groups during the 1960s. Several plausible explanations can be advanced. Nonmaritally pregnant women may have opted increasingly to avoid marriages they recognised to be inherently unstable. Males perhaps became more inclined to abdicate responsibility for impregnating their partners, reasoning that with the pill available women were well able to protect themselves. Thirdly, nonmarital coitus probably became less tied to serious courtship (Chapter 4). Finally, with the coming of the pill and its prescription from several weeks before marriage, pregnancies resulting from intercourse in anticipation of marriage

almost certainly dropped off (Spencer, 1969). [23]

2.6 SUMMARY

Ex-nuptial childbearing was not exactly unknown in New Zealand in the past, particularly during the colonial pioneer phase. It was even less unusual for brides to be pregnant, especially during the 1920s. The main impression one is left with, however, is of a society which, while falling short of universal adherence to a standard of absolute continence outside marriage, nevertheless exercised considerable restraint in the area of nonmarital sexual activity.

One-fifth of non-Maori brides may have been pregnant during the 1920s, but the non-Maori female first marriage rate was low and it was more automatic than it was later to be that nonmarital pregnancies were regularised by marriage. As the first marriage rate rose after 1932, age-specific bridal pregnancy ratios fell sharply. This response contrasts with increases in these ratios which accompanied a rising first marriage rate during the 1950s. The earlier combination of trends is consistent with most women subscribing to a standard of premarital chastity; the later one with growing acceptance of

[23] Consistent with this reasoning is the reduction that occurred from a mean annual 19.0 percent during 1950-59 to a mean annual 8.5 percent during 1968-71 in the proportion of non-Maori nuptial first confinements at marriage durations 0-7 months which actually took place during the eighth month after marriage. However, the downward trend is detectable from about 1957, and may in part manifest a rising incidence of pregnancy leading to hastily arranged marriage, as distinct from anticipatory pregnancy, this being likely to lead to confinement at shorter marriage durations (Ruzicka, 1977; Spencer, 1969). Then again, the 1960s brought a sharp reduction in the proportion of non-pregnant brides who became pregnant shortly after marriage (Chapter 6). This trend must have reduced the spillover of premature confinements following early marital conception into the marriage durations here deemed to imply premarital conception.

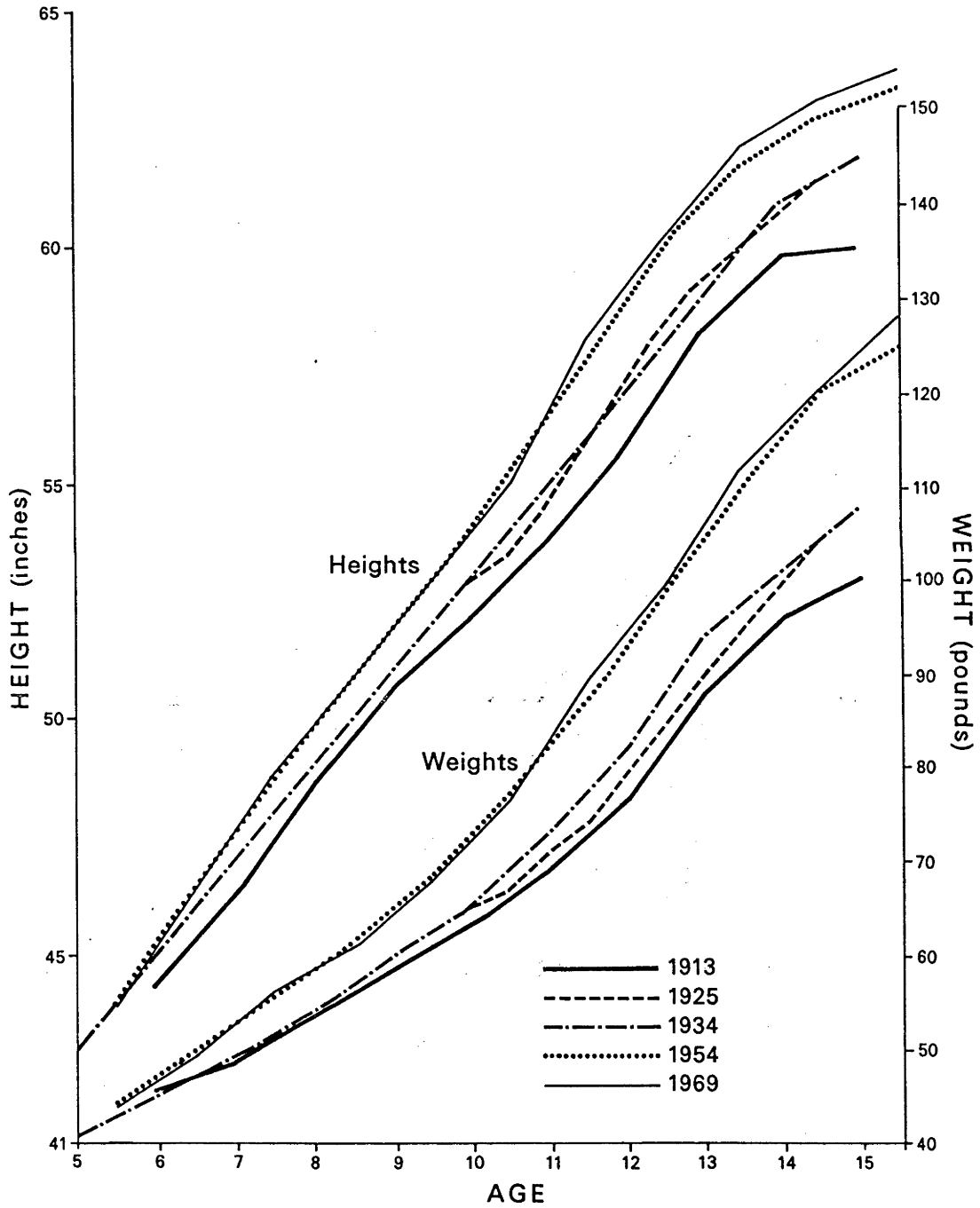
premarital coitus, at least for courting couples.

Other pointers toward sexual restraint outside marriage before World War 2 are trends in age-specific ex-nuptial conception rates (Figure 2.5) and several indications that adolescent coitus was largely restricted to a permissive minority. Low ex-nuptial conception rates at ages 15-19 earlier this century must be set against a higher prevalence of prepubescent infecundity at these ages. Indirect evidence for New Zealand of the decline in the mean age at menarche which Tanner (1962, 1968) has documented for other Western countries is furnished by Figure 2.6, for there is little dispute that it is associated with improved nutrition, and the more rapid physical growth and improved general health to which this has given rise. [24] Much of the decline apparently occurred between the end of the Depression and the mid-1950s. Thus, with the War intervening it is impossible to disentangle physiological from sociological explanations for the net increase in the ex-nuptial conception rate for 15-19 year-olds over that period. One's guess, however, is that sociological forces were overwhelmingly responsible.

Sufficient data have been presented on trends in non-Maori nonmarital pregnancy and ex-nuptial fertility since World War 2 for there to be no doubt that this period stands in sharp contrast to the

[24] It has been argued (Frisch and Revelle, 1970, 1971; Frisch, 1974a, 1974b; Frisch and McArthur, 1974) that menarche is associated with the attainment of a critical body weight, or of some critical combination of height and body weight. This hypothesis has drawn criticism for oversimplifying the physiological mechanisms involved (Johnston et al, 1971; Welton and Bielicki, 1973; Billewicz et al, 1976; Cameron, 1976). However, this criticism attacks the claim that the onset of menstruation can be accurately predicted from physical attributes. It does not challenge the more general notion that menarche and physical maturity are related.

Figure 2.6
 MEAN HEIGHTS AND WEIGHTS OF NEW ZEALAND SCHOOLGIRLS
 BY AGE 1913-1969



Source: Department of Health (1971: 30).

pre-war one. There are indications that upward trends in the illegitimacy rate, the ex-nuptial conception rate, and age-specific ex-nuptial fertility and conception rates date from the mid-1930s. However, the early stages of these trends largely recovered ground 'lost' during the previous ten to fifteen years. It is post-war that they testify to a major reappraisal of traditional morality.

CHAPTER 3

POST-WAR TRENDS IN NONMARITAL PREGNANCY AND EX-NUPTIAL FERTILITY

Immorality appears to be more prevalent now among younger groups in the community. ... In former times it was the custom for boys to take the initiative in seeking the company of girls.... Nowadays, girls do not always wait for an advance to be made to them, nor are they as reticent as they used to be in discussing intimate matters with the opposite sex. (Mazengarb, 1954: 18)

3.1 INTRODUCTION

In this chapter, post-war trends in nonmarital pregnancy and ex-nuptial fertility are examined more closely. The introduction of data for the total population permits them to be extended to cover most of the 1970s, and the analysis is also refined by paying particular attention to the changing behaviour of women aged under twenty-five.

Discussion is organised in much the same way as in Chapter 2. Within this framework, ethnic differences in nonmarital reproductive behaviour and differential trends in nonmarital pregnancy and ex-nuptial fertility by ethnic origin are investigated. The reason for not treating the ethnic variable exclusively in a separate section is the necessity to use non-Maori as well as total population data to study change over the entire post-war period. It avoids needless repetition to proceed as indicated.

3.2 THE ETHNIC FACTOR

Before adopting this approach, it is necessary to consider again problems associated with the classification of individuals and vital events by ethnic origin. It is also necessary to note cultural factors which render direct comparison of certain indices for Maoris and non-Maoris tenuous. Finally, it is desirable to make preliminary comment on the different levels of Maori and non-Maori nonmarital pregnancy and ex-nuptial fertility. Passing consideration will also be given to the influence of Pacific Islanders on non-Maori ex-nuptial fertility levels.

Classification and Measurement Problems

Nothing was said in Chapter 2 about the arbitrariness of defining a birth as Maori if the child has half or more Maori ancestry. Officially, some thirty percent of ex-nuptial live births have been Maori since data became available in 1962, but adopting more liberal definitions of what constitutes a Maori birth raises this share considerably (Table 3.1).

A point which was noted in Chapter 2 was that women who are non-Maori for census purposes may bear Maori children and vice versa. It was concluded that while of little consequence for non-Maori measures of nonmarital pregnancy and ex-nuptial fertility, this anomaly potentially had far greater significance for Maori measures. In Table 3.1 the 'Alternative 1' column shows, for 1968-78, annual percentages of ex-nuptial live births which occurred to women who for census purposes were Maori. Comparison of these percentages with those obtained using the vital statistics definition of a Maori birth

Table 3.1

PERCENTAGE 'MAORI' CONTRIBUTION TO EX-NUPTIAL LIVE BIRTHS 1962-1980

Year	Vital Statistics Definition	Alternative Definition			
		1	2	3	4
1962	31.7				
1963	32.0				
1964	29.7				
1965	28.1				
1966	28.6				
1967	28.3				
1968	28.2	27.7	31.1	35.3	
1969	30.2	30.1	33.0	37.2	
1970	29.8	29.0	32.2	36.9	
1971	29.9	28.4	31.8	37.0	
1972	28.4	28.0	31.5	36.4	
1973	27.9	29.3	32.9	37.9	43.5
1974	27.4	28.5	32.2	37.8	43.8
1975	28.8	30.2	34.0	39.9	45.3
1976	30.1	31.5	35.8	-	-
1977	30.4	31.3	35.3	41.4	45.3
1978	31.3	31.7	36.3	42.9	47.4
1979	30.6	31.5	35.8	42.3	44.6
1980	32.1	33.3	38.0	-	-

Source: New Zealand Vital Statistics 1962-80; unpublished data supplied by the Department of Statistics.

Definitions of a 'Maori' Birth

Vital Statistics - Child of half or more Maori blood or, if father's details not registered, mother of half or more Maori blood.

Alternative 1 - Mother of half or more Maori blood.

Alternative 2 - Mother with any Maori blood at all.

Alternative 3 - Child known to have any Maori blood at all. Adds to alternative 2 children whose fathers only are known to be of Maori descent.

Alternative 4 - Child likely to have any Maori blood at all. Assumes the proportion of ex-nuptial births to all full non-Maori mothers which were by fathers with some Maori blood to be the same as the proportion for full non-Maori mothers whose partners' details were registered.

reveals differences of up to 1.5 percentage points, the latter figures being higher until 1972 and lower thereafter. [1]

For most analytic purposes there is no choice but to accept the vital statistics definition. Given the available census data, the only worthwhile variation to that definition would be to define as Maori all births to women who were themselves half or more Maori. However, it is possible to do this only for some indices and only from 1968 onward. To avoid confusion it was decided not to tamper with the vital statistics definition.

The most serious deficiency of measures for the Maori population is the degree of upward bias built into the various rates because of the fact that some women who give birth following nonmarital conception are not officially at risk of becoming pregnant outside marriage (Chapter 2, footnote 7). Formal marriage and divorce being alien to traditional Maori culture, Maori women are especially likely to fall into this category. Consequently extreme caution must be exercised in comparing rates for the Maori and non-Maori populations. Changes in Maori rates are, however, more meaningful.

Levels of Nonmarital Pregnancy and Ex-nuptial Fertility

Since 1962, the Maori illegitimacy ratio has generally been about three times the non-Maori ratio, and the Maori illegitimacy rate has

[1] The sudden switch in the direction of this difference after 1972 may stem from the effective liberalisation of the abortion law in New South Wales following an October 1971 legal decision (Edwards, 1972; Parker, n.d.). The number of New Zealand women travelling to Australia for abortions almost certainly increased in the wake of this decision, and it is not unlikely that unmarried non-Maori women pregnant by Maori men were more affected than were Maori women pregnant by non-Maori men.

been anything from just under four to almost five times the non-Maori rate (Table 3.2). These differences are due in part to the Maori legitimation ratio having been much lower than the non-Maori ratio. Maori ex-nuptial conception ratios and rates to be presented shortly are respectively about twice as high and just over three times as high as non-Maori ones.

These comparisons are made without standardising for age. Furthermore, for reasons just discussed, comparisons of illegitimacy or ex-nuptial conception rates exaggerate behavioural differences between Maoris and non-Maoris. Nonetheless, nonmarital pregnancy and ex-nuptial childbearing are much more commonplace among the former. This reflects, in addition to the generally higher level of Maori than non-Maori fertility, different cultural beliefs concerning the acceptability of premarital coitus, the necessity for formal registration of marriages, and the need to terminate failed marriages by divorce.

Maori attitudes toward illegitimacy and extra-marital relations are still conditioned by the nature of pre-European society, although this influence must decrease as time goes on. In pre-European times polygamy was common and marriage was not regarded as being necessarily a permanent relationship. Pre-marital intercourse was, except in the case of daughters of high ranking chiefs, accepted by society and the provision of temporary wives for visiting chiefs was considered a proper ingredient of hospitality. ...

There was no stigma on illegitimate children and even today they inherit land in the same way as legitimate children. There was no problem in disposing of illegitimate children as the grandparents or other relations would be happy to take them. ...

These attitudes were carried over into post-European society although partly screened by mission teachings. ... A very important point in relation to the Maori statistics is the Maori 'customary' marriage. The old Maori society had no formal marriage. All that was necessary to constitute a marriage was an intention by the parties to live together and a public acceptance of the situation. ...

Table 3.2

1

EX-NUPTIAL LIVE BIRTHS, ILLEGITIMACY RATIOS, AND ILLEGITIMACY RATES BY ETHNIC ORIGIN 1945-1980

Year	Non-Maori			Maori			Pacific Island			Non-Polynesian			Total		
	Births	Ratio	Rate	Births	Ratio	Rate	Births	Ratio	Rate	Births	Ratio	Rate	Births	Ratio	Rate
1945	1824	4.9	11.4												
1951	1935	4.3	14.3												
1956	2310	4.6	17.2												
1961	3332	5.8	23.1												
1962	3734	6.5	24.8	1508	19.7	117.4							5242	8.0	32.3
1963	4066	7.2	25.8	1632	20.0	122.2							5698	8.8	33.6
1964	4452	8.2	27.3	1737	21.8	126.0							6189	9.9	35.1
1965	4713	9.0	28.1	1841	23.4	129.0							6554	10.9	36.1
1966	4969	9.5	29.0	1991	25.4	134.6							6960	11.6	37.5
1967	5577	10.5	32.1	2206	27.3	143.5							7783	12.7	41.2
1968	5812	10.7	33.2	2282	27.8	142.9							8094	13.0	42.4
1969	5674	10.5	32.1	2453	29.5	147.7							8127	13.0	42.0
1970	5830	10.8	32.4	2470	29.8	143.1							8300	13.3	42.1
1971	6299	11.2	34.3	2682	32.1	147.7							8981	13.9	44.1
1972	6723	12.1	35.5	2671	33.9	137.8							9394	14.9	44.8
1973	6634	12.4	33.8	2573	34.8	123.7							9206	15.2	42.4
1974	6804	13.0	33.4	2566	36.7	114.6	788	29.8		6016	12.1		9370	15.8	41.4
1975	6700	13.4	31.5	2707	39.9	113.8	879	30.5		5821	12.4		9407	16.6	39.8
1976	6704	13.8	30.7	2893	43.7	114.6	972	31.5		5732	12.6		9597	17.4	39.3
1977	7147	15.1	32.0	3118	46.0	117.1	954	30.9		6193	14.0		10265	18.9	41.0
1978	7041	15.8	31.1	3213	48.8	114.7	854	29.3		6187	14.9		10254	20.1	40.2
1979	7596	16.6	33.3	3346	50.3	117.7	956	31.0		6640	15.6		10942	20.9	42.9
1980	7371	16.7	32.0	3486	54.3	118.9							10857	21.5	42.0

Source: New Zealand Vital Statistics 1945, 1951, 1956, 1961-80; unpublished data supplied by the Department of Statistics.

- 1 Note that non-Maori and Maori ex-nuptial births, and Maori, Pacific Island, and non-Polynesian ex-nuptial births add to total ex-nuptial births.
- 2 For the years 1962-64 non-Maori and Maori ex-nuptial live births were estimated. Non-Maori and Maori ex-nuptial live confinements were first estimated by the method described in Appendix 3, then converted to live births by assuming that both ethnic groups experienced the same incidence of multiple live ex-nuptial confinements as the total population.

A formal divorce was unknown to Maori society and it is apparent that even today it is looked upon as a quite superfluous European practice. ... Normally if a marriage is unsuccessful the parties simply separate and take another partner. (McEwen cited by Interdepartmental Committee on Ex-nuptial Births, 1969: 18-21)

The transition of Maori society from a predominantly rural one in the mid-1950s to a predominantly urban one today (Rowland, 1971, 1972; Poulsen and Johnston, 1973; Poulsen et al, 1975) has brought a certain Europeanisation of attitudes. However, generations of behavioural precedent do not suddenly cease to have an impact, especially when the norms of the wider society are becoming more compatible with that precedent.

Another dimension is added to the ethnic differentiation of ex-nuptial fertility levels when births where the child has half or more Pacific Island ancestry are removed from the non-Maori category (Table 3.2). During 1974-78 these births represented between 8.3 and 10.1 percent of all ex-nuptial live births, whereas less than two percent of females of reproductive age at the 1976 census were half or more of Pacific ancestry. A longer series of statistics is available if the ethnic status of a birth is defined by mother's birthplace (Table 3.3). These data show a marked increase after 1970 in the percentage of live ex-nuptial confinements involving women born in Pacific Islands other than Fiji. The trend stems mainly from changing migration flows, as does its reversal after 1976. [2]

Differences in age structure are not responsible for the disproportionately large Pacific Polynesian contribution to ex-nuptial fertility. Rather the important factors are again generally high fertility compared to Europeans, and different cultural values

Table 3.3

LIVE EX-NUPTIAL CONFINEMENTS AND ILLEGITIMACY RATIOS BY BIRTHPLACE OF
MOTHER: SELECTED PACIFIC ISLAND BIRTHPLACES 1953-1979

Year	Cook, Niue, and Tokelau Islands		Western Samoa		1 Tonga		Total		2 Percent
	Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio	
1953	37	27.8	30	19.6	1		68	21.8	
1954	49	28.8	40	19.7	3		92	22.6	
1955	51	23.4	33	15.7	-		84	18.4	
1956	59	27.3	35	14.5	6		100	20.2	
1957	83	27.6	43	15.8	1		127	20.8	
1958	85	25.3	37	14.2	4		126	19.9	
1959	73	21.3	37	11.9	1		111	16.3	
1960	98	25.7	40	11.6	7		145	18.9	
1961	104	24.3	38	9.3	6		148	17.1	
1962	120	24.6	63	14.8	2		185	19.5	3.6
1963	112	21.2	94	17.9	2		208	19.1	3.7
1964	144	26.2	105	17.5	3		252	21.0	4.1
1965	151	29.7	125	18.8	4		280	22.9	4.3
1966	179	33.3	128	17.3	2		309	23.6	4.5
1967	208	32.6	183	21.1	5		396	25.5	5.1
1968	183	29.4	173	18.9	6		362	23.0	4.5
1969	181	28.0	180	18.3	6		367	22.0	4.6
1970	205	31.8	166	16.7	8		379	22.5	4.6
1971	246	35.7	218	19.5	3		467	25.1	5.2
1972	292	41.7	238	20.3	18		548	28.2	5.9
1973	303	42.4	244	20.3	13		560	27.9	6.1
1974	312	41.8	307	22.4	37	18.7	656	28.3	7.1
1975	392	48.0	312	22.0	41	14.7	745	29.6	8.0
1976	382	47.5	317	21.7	61	20.2	760	29.6	8.0
1977	368	51.1	327	21.7	54	17.1	749	29.4	7.3
1978	402	50.9	261	17.1	46	13.7	709	26.7	7.0
1979	313	45.4	182	13.2	72	16.2	567	22.6	5.2

Source: New Zealand Vital Statistics 1953-78; unpublished data supplied by the Department of Statistics.

- 1 Illegitimacy ratios are shown only where based on at least twenty ex-nuptial confinements.
- 2 This column gives the percentage of all live ex-nuptial confinements attributable to mothers born in the Pacific Islands. The percentage cannot be calculated before 1962 as the number of Maori ex-nuptial confinements was unknown.

concerning ex-nuptial fertility and marriage (Douglas, 1976). Not that there are not differences in values within the Pacific Polynesian population, as the marked disparity between illegitimacy ratios for the Western Samoan and Cook, Niue, and Tokelau Island populations indicates (Table 3.3). [3]

3.3 TRENDS IN EX-NUPTIAL FERTILITY

Illegitimacy Ratio

Reference was made in Chapter 2 to the persistent upward trend of the non-Maori illegitimacy ratio since 1950. The total population ratio has trended similarly, but at a higher level (Table 3.2). This trend has been widely interpreted as indicating a deterioration in the moral fabric of New Zealand society. However, closer investigation shows that it reflects to only a limited extent the type of behavioural change often ascribed to it.

[2] During 1960-61 to 1968-69 (years ended 31 March) there was a mean annual net intake of 689 female migrants born in the Cook Islands, Niue, Tonga, and Western Samoa. Between 1969-70 and 1974-75 the comparable figure was 1,872, while during the last three of those six years it was 2,465. This increased immigration was heavily concentrated in the 15-29 age group. Then, in 1976, tighter conditions of entry were imposed on Polynesian immigrants who were not New Zealand citizens (mainly Tongans and Western Samoans), and there was a firm clampdown on persons overstaying temporary entry permits.

[3] The illegitimacy ratio is a crude measure, but the differences between birthplace-of-mother categories are substantial. The Western Samoan community in New Zealand places particular emphasis on a church wedding for couples who wish to live together. Indeed there is even greater insistence on this in New Zealand than in Samoa because family honour is impaired by a couple's failure to adhere to the perceived norm of the host society. Cook Islanders, on the other hand, are more individualistic, less family oriented, and perhaps, as New Zealand citizens entitled to automatic entry to the country, less concerned with their image in the eyes of New Zealanders (personal communication from Dr Kilifoti Eteuati).

Three previous studies (Department of Statistics, 1967, 1975; Jensen, 1969) have used standardisation techniques to show that declining marital fertility accounts for much of the post-1962 rise in the illegitimacy ratio. Table 3.4 shows the results of a more comprehensive decomposition undertaken by component analysis. [4] The method used is based on an equation developed by Kumar (1969) which expresses the illegitimacy ratio in terms of four factors: the schedules of age-specific ex-nuptial and nuptial fertility rates, the age structure of the female population of childbearing age, and the schedule of age-specific proportions of females of childbearing age who are not currently married (see Appendix 5).

Over the entire period 1962-78, declining marital fertility was three times as important as rising ex-nuptial fertility in raising the illegitimacy ratio by more than twelve percentage points. A net increase in the proportion of women of childbearing age not currently married also played a minor role, but changes in age structure had no impact. The four mechanisms did not, however, operate with constant relative strength or in the same directions throughout. Between 1962 and 1966 declining marital fertility rates were the main incremental force, but were less than half as important again as rising ex-nuptial fertility rates. During 1966-71 this situation reversed to the extent that increased ex-nuptial fertility rates were, marginally, the dominant force over the two periods combined. Changes in age structure gave a modest boost to the illegitimacy ratio during 1962-66, but were a negative force over the ensuing five years.

[4] The general principles of this technique were first expounded by Kitagawa (1955). For a previous application to the analysis of changes in the illegitimacy ratio see Farley and Hermalin (1971).

Table 3.4

COMPONENT ANALYSIS OF CHANGES IN THE ILLEGITIMACY RATIO: TOTAL
 1
 POPULATION 1962-1978

	1962-66	1962-71	1962-76	1962-78
Starting illegitimacy ratio	8.04	8.04	8.04	8.04
Finishing illegitimacy ratio	11.57	13.93	17.42	20.09
Total change	3.53	5.89	9.38	12.05
Change due to:				
Ex-nuptial fertility rates	1.38	3.08	1.90	2.35
Nuptial fertility rates	1.92	2.70	5.89	7.06
Marriage pattern	-0.38	-0.53	0.64	1.29
Age structure	0.41	0.20	0.05	0.13
Interaction	0.20	0.44	0.90	1.22
	1962-66	1966-71	1971-76	1976-78
Starting illegitimacy ratio	8.04	11.57	13.93	17.42
Finishing illegitimacy ratio	11.57	13.93	17.42	20.09
Total change	3.53	2.36	3.49	2.67
Change due to:				
Ex-nuptial fertility rates	1.38	1.79	-2.12	0.34
Nuptial fertility rates	1.92	1.11	4.52	1.60
Marriage pattern	-0.38	-0.29	1.64	0.60
Age structure	0.41	-0.28	-0.32	0.19
Interaction	0.20	0.03	-0.23	-0.06

Source: New Zealand Vital Statistics 1962, 1966, 1971, 1976, and 1978; unpublished data supplied by the Department of Statistics.

- 1 Input data for 1976 and 1978 incorporate a linear extrapolation of the 1971-76 intercensal trend in age-specific proportions of females not currently married.

Finally, the tailend of the post-war marriage revolution restrained the ratio's upward trend slightly throughout the 1960s.

Accelerated decline in marital fertility and an emphatic reversal of the trend toward earlier marriage were sufficient to raise the illegitimacy ratio by more than six percentage points during 1971-76.

However, falling ex-nuptial fertility rates offset this potential by one-third. Their negative impact did not persist during 1976-78, but the principal positive agents continued to be declining marital fertility and the growing tendency to postpone, or reject, formal marriage.

Not surprisingly, post-1962 results for the non-Maori population are similar to those for the total population (Table 3.5). Non-Maori results are also presented for the period 1951-62, and these show that it was during this period that increments in the illegitimacy ratio were most strongly determined by changes in the level of ex-nuptial fertility. That the full potential for positive change via this mechanism was not realised during the 1950s and early 1960s was due mainly to the conflicting effect of the marriage revolution, and to a lesser extent to rising marital fertility.

The Maori illegitimacy ratio, even more than the non-Maori ratio, has risen sharply since 1962 (Table 3.2), but the demographic mechanisms involved have been different. During 1962-78 declining marital fertility was overwhelmingly the major cause of the increase, with changes in marriage patterns ranking a strong second (Table 3.5). [5] The net change in ex-nuptial fertility rates was the least important mechanism, but its minimal effect overall masks larger short term ones in opposite directions.

During 1962-66, rising ex-nuptial fertility rates were in fact the major force boosting the Maori illegitimacy ratio. Declining

[5] These changes in proportions not currently married reflect one or more of three things: postponement or rejection of formal marriage, postponement of entry into cohabiting unions, or a reduced tendency for cohabiting women to report themselves as 'married' at the census.

Table 3.5
 COMPONENT ANALYSIS OF CHANGES IN THE ILLEGITIMACY RATIO BY ETHNIC ORIGIN 1951-1978¹

	1962-66	1962-71	1962-76	1962-78	1951-62	1962-66	1966-71	1971-76	1976-78
	Non-Maori								
Starting illegitimacy ratio	6.51	6.51	6.51	6.51	4.38	6.51	9.49	11.23	13.83
Finishing illegitimacy ratio	9.49	11.23	13.83	15.84	6.51	9.49	11.23	13.83	15.84
Total change	2.98	4.72	7.32	9.33	2.13	2.98	1.74	2.60	2.01
Change due to:									
Ex-nuptial fertility rates	1.04	2.32	1.42	1.66	4.19	1.04	1.39	-1.64	0.16
Nuptial fertility rates	1.64	2.24	4.64	5.58	-0.15	1.64	0.87	3.42	1.24
Marriage pattern	-0.28	-0.42	0.48	0.98	-1.45	-0.28	-0.28	1.31	0.51
Age structure	0.39	0.17	-0.06	0.00	0.34	0.39	-0.29	-0.39	0.15
Interaction	0.19	0.41	0.84	1.11	-0.81	0.19	0.05	-0.10	-0.05
	Maori								
Starting illegitimacy ratio	19.57	19.57	19.57	19.57	19.57	25.40	32.07	43.66	48.83
Finishing illegitimacy ratio	25.40	32.07	43.66	48.83	25.40	32.07	43.66	48.83	5.17
Total change	5.83	12.50	24.09	29.26	5.83	6.67	11.59	11.59	5.17
Change due to:									
Ex-nuptial fertility rates	4.54	8.04	1.16	0.62	4.54	2.30	-8.55	-0.48	
Nuptial fertility rates	2.99	5.93	19.85	23.11	2.99	3.41	16.41	4.18	
Marriage pattern	-0.91	-0.42	5.40	8.39	-0.91	0.49	5.26	1.23	
Age structure	0.10	0.51	1.14	1.52	0.10	0.62	0.61	0.24	
Interaction	-0.89	-1.56	-3.46	-4.38	-0.89	-0.15	-2.14	0.00	

Source: New Zealand Vital Statistics 1951, 1962, 1966, 1971, 1976, and 1978; unpublished data supplied by the Department of Statistics.

¹ Input data for 1976 and 1978 incorporate linear extrapolations of the 1971-76 intercensal trends in age-specific proportions of females not currently married.

marital fertility rates assumed this role between 1966 and 1971, but ranked second over the two periods combined. Marital fertility decline accelerated rapidly during 1971-76, which was also when age-specific proportions not currently married rose substantially. Together these two trends could have raised the Maori illegitimacy ratio nearly twenty-two percentage points. That it actually increased by little more than half this amount reflects similarly dramatic reductions in ex-nuptial fertility rates. Cultural factors already noted mean that a much larger proportion of Maori than of non-Maori ex-nuptial fertility is really marital fertility. The reductions in ex-nuptial fertility rates which retarded the upward trend of the Maori illegitimacy ratio during 1971-76 may thus be viewed largely as extensions of the declines in marital fertility rates which promoted it.

Illegitimacy Rate and Standardised Ex-nuptial Fertility Rate

The total population illegitimacy rate has followed the same general trend as the non-Maori rate (Table 3.2). Except for a brief resurgence in 1970-71, upward momentum ceased in 1968, and the trend was generally downward through the 1970s. The Maori illegitimacy rate increased more or less throughout the 1960s, but declined again to below its 1962 level during 1971-74 and remained there in 1978.

Standardisation for age of the closely related ex-nuptial fertility rate (Table 3.6) raises both the non-Maori and total population rates until the mid-1960s, and thereafter reduces them. Standardised rates nonetheless follow the same general trend as do unstandardised rates.

Table 3.6

EX-NUPTIAL FERTILITY RATES BY ETHNIC ORIGIN 1962-1979

1 Year	Non-Maori Rate	2 Standard Rate	Maori Rate	Standard Rate	Total Rate	Standard Rate
1962	24.4	24.4	114.9	114.9	31.6	31.6
1963	25.5	25.8	120.7	122.0	33.0	33.4
1964	26.8	27.1	123.6	127.3	34.5	34.9
1965	27.8	27.7	126.4	133.4	35.6	35.8
1966	28.6	28.0	132.0	140.8	36.8	36.5
1967	31.5	30.3	140.6	151.1	40.2	39.4
1968	32.7	31.3	139.8	151.3	41.4	40.4
1969	31.7	30.3	144.5	157.1	41.2	40.1
1970	31.9	30.5	139.2	150.3	41.2	40.0
1971	33.9	32.2	144.7	156.7	43.7	42.3
1972	35.1	33.2	135.2	145.1	44.2	42.5
1973	33.2	31.4	121.1	128.7	41.5	39.7
1974	32.9	30.9	112.5	118.5	40.7	38.6
1975	31.1	29.1	111.1	115.6	39.1	36.9
1976	30.2	28.1	112.1	116.3	38.6	36.4
1977	31.6	29.4	115.6	120.1	40.4	38.1
1978	30.6	28.4	112.5	115.6	39.5	37.2
1979	32.8	30.6	116.9	120.4	42.6	40.3

Source: New Zealand Vital Statistics 1962-79; unpublished data supplied by the Department of Statistics.

- 1 Calculations for 1962-64 are affected by the need to estimate the distributions of non-Maori and Maori live ex-nuptial confinements by age of mother (see Appendix 3).
- 2 Standard rates are standardised to the age structure of the relevant unmarried female population at mid-year in 1962.

Age-specific Ex-nuptial Fertility Rates

Changes in ex-nuptial fertility rates reflect changes in one or more of several determinants of such rates. These include the proportion of women at risk who are sexually active, coital frequencies, the extent to which effective contraception is practised, the reliance placed on induced abortion, the extent to which pregnancy is followed by marriage before confinement, and the accuracy with

which census data measure populations at risk (Chapter 2, footnote 7). Other forces may find expression through these determinants.

Age-specific ex-nuptial fertility rates at ages thirty and over were quite stable through the 1960s, but have declined sharply since the early 1970s (Table 3.7). Taking into account non-Maori trends over the earlier post-war period (Chapter 2, Figure 2.3), rates for this age group during the 1960s form an upper plateau. Several conflicting forces produced this pattern. At these ages it might be thought that increased extramarital sexual activity associated with a rising level of marriage breakdown would be the principal agent tending to raise ex-nuptial fertility rates. However, a widening of the disparity between official and true risk populations as age at first marriage dropped may well have been the dominant influence during the 1950s.

The pill was probably the main reason why ex-nuptial fertility rates at older ages stabilised after 1960. During the 1970s, better access to induced abortion and a firming of feminist attitudes and attitudes which gave greater respectability to extramarital relationships (thus promoting more effective contraception within them) doubtless contributed to the downturn in ex-nuptial fertility rates. A growing reliance on contraceptive sterilisation may also have been a factor, [6] while changing contraceptive practice within Maori consensual marriages was almost certainly a major one (Table 3.8). Also to be taken into account is the introduction in 1968 of the Domestic Purposes Benefit (DPB).

The DPB established the principle that a woman could choose to become a solo mother and still be entitled to state assistance

Table 3.7

AGE-SPECIFIC EX-NUPTIAL FERTILITY RATES: TOTAL POPULATION 1962-1980

Year	Age of Woman													
	15	16	17	18	19	20	21	22	23	24	25-29	30-34	35-39	40-44
1962	5	10	21	29	35	40	50	58	72	76	77	64	36	10
1963	4	12	21	32	40	44	53	62	72	66	82	65	39	10
1964	5	14	25	35	37	52	54	64	66	76	84	60	39	9
1965	5	15	25	37	42	48	60	67	67	77	78	67	36	12
1966	6	16	26	37	49	51	63	73	70	69	76	60	33	10
1967	7	17	32	41	50	57	62	69	85	84	78	62	36	12
1968	6	18	33	44	54	56	64	68	94	84	79	64	36	9
1969	7	18	33	44	49	54	62	70	83	85	87	62	37	9
1970	7	18	34	45	51	61	62	70	78	84	82	62	32	9
1971	8	21	35	47	53	60	70	76	81	87	85	66	32	9
1972	9	22	39	49	56	59	65	74	84	80	80	57	35	9
1973	10	24	40	44	52	51	58	68	77	74	71	53	31	7
1974	11	25	39	45	49	52	53	62	70	80	68	52	23	7
1975	9	26	36	44	47	51	55	59	62	64	68	47	25	6
1976	9	25	37	40	48	51	53	64	64	69	65	46	22	7
1977	9	23	35	46	51	58	60	61	71	71	71	45	22	7
1978	8	23	36	42	51	55	59	65	66	73	68	43	21	5
1979	7	19	33	45	54	60	62	74	86	78	81	47	24	6
1980	6	17	31	41	52	62	66	72	87	79	79	47	24	5

Source: New Zealand Vital Statistics 1962-80; unpublished data supplied by the Department of Statistics.

Table 3.8

AGE-SPECIFIC EX-NUPTIAL FERTILITY RATES: MAORI POPULATION 1962-1979

Year	Age of Woman													
	15	16	17	18	19	20	21	22	23	24	25-29	30-34	35-39	40-44
1962	15	24	52	77	114	148	168	206	275	242	295	232	170	101
1963	13	30	54	90	134	157	184	231	281	203	315	247	198	90
1964	15	33	67	98	124	191	189	238	269	239	316	237	210	78
1965	17	32	58	104	148	176	240	275	260	244	304	264	210	86
1966	14	36	66	113	167	211	252	262	292	292	316	240	174	99
1967	13	37	82	118	180	217	239	268	326	353	315	289	218	75
1968	12	34	67	125	212	209	254	292	363	307	328	264	185	44
1969	16	38	72	127	194	240	224	297	307	294	381	291	177	64
1970	12	36	74	127	174	231	257	260	317	331	356	266	175	53
1971	17	43	87	130	187	249	288	293	276	360	322	290	150	45
1972	18	47	93	135	182	194	262	264	298	275	301	206	143	52
1973	17	46	87	130	175	182	204	243	265	246	258	186	98	35
1974	19	47	86	132	169	177	187	192	193	259	215	190	64	25
1975	21	55	79	138	158	179	190	197	210	210	206	149	77	15
1976	23	58	93	117	165	185	204	219	165	189	199	154	58	30
1977	22	54	86	137	170	226	216	198	202	211	193	136	58	21
1978	19	55	102	125	184	200	202	216	211	224	161	109	61	12
1979	18	48	98	139	185	185	200	240	268	250	187	118	58	17

Source: New Zealand Vital Statistics 1962-66; unpublished data supplied by the Department of Statistics.

1 Calculations for 1962-64 are affected by the need to estimate the distribution of Maori live ex-nuptial confinements by age of mother (see Appendix 3).

(Easton, 1978). Previously entitlement had depended on her being the victim of events beyond her control. Numbers receiving the DPB increased so rapidly after 1970 that a special committee was appointed to take stock of what was happening (DPB Review Committee, 1977). At 31 March 1977, 61.0 percent of all benefits, and 67.2 percent of those being paid to solo parents, were being paid to women living apart from legal or de facto spouses. [7] It seems likely that the availability of the DPB was a decisive factor in many separations during the 1970s, and its effect on ex-nuptial fertility rates at ages over thirty was probably negative on two counts. In extending coverage to women living apart from de facto spouses, the DPB likely led to the dissolution of some unions which were especially at risk of producing ex-nuptial children at advanced maternal ages. Second, in all probability proportionately fewer women separating at these ages straight away took new partners, having formed a new relationship being less often the immediate reason for separating.

[6] In a study of 863 ever married women aged 20-45 resident in the Hutt Valley, Reinken and Blakey (1976) found that 20.5 percent were living in voluntarily sterile unions. For women aged 30-45 the figure was 28.4 percent, and 65.0 percent of contraceptive sterilisations had taken place between January 1973 and August-September 1975. In a later study of a sample of women resident in Palmerston North and its hinterland, Trlin and Perry (1981) found that 33.5 percent of the 992 who were ever married and aged 20-44 were living in voluntarily sterile unions, while for those aged 30-44 the figure was 50.6 percent. Noting the dates of operations they concluded (p 40) that sterilisation is 'definitely a 1970s phenomenon'.

[7] Besides solo parents the DPB is also payable to persons caring full-time for sick or infirm relatives (except husbands or wives) and to 'women alone'. The latter category takes in women who cannot be expected to be self-supporting, and who qualify for no other pension or benefit.

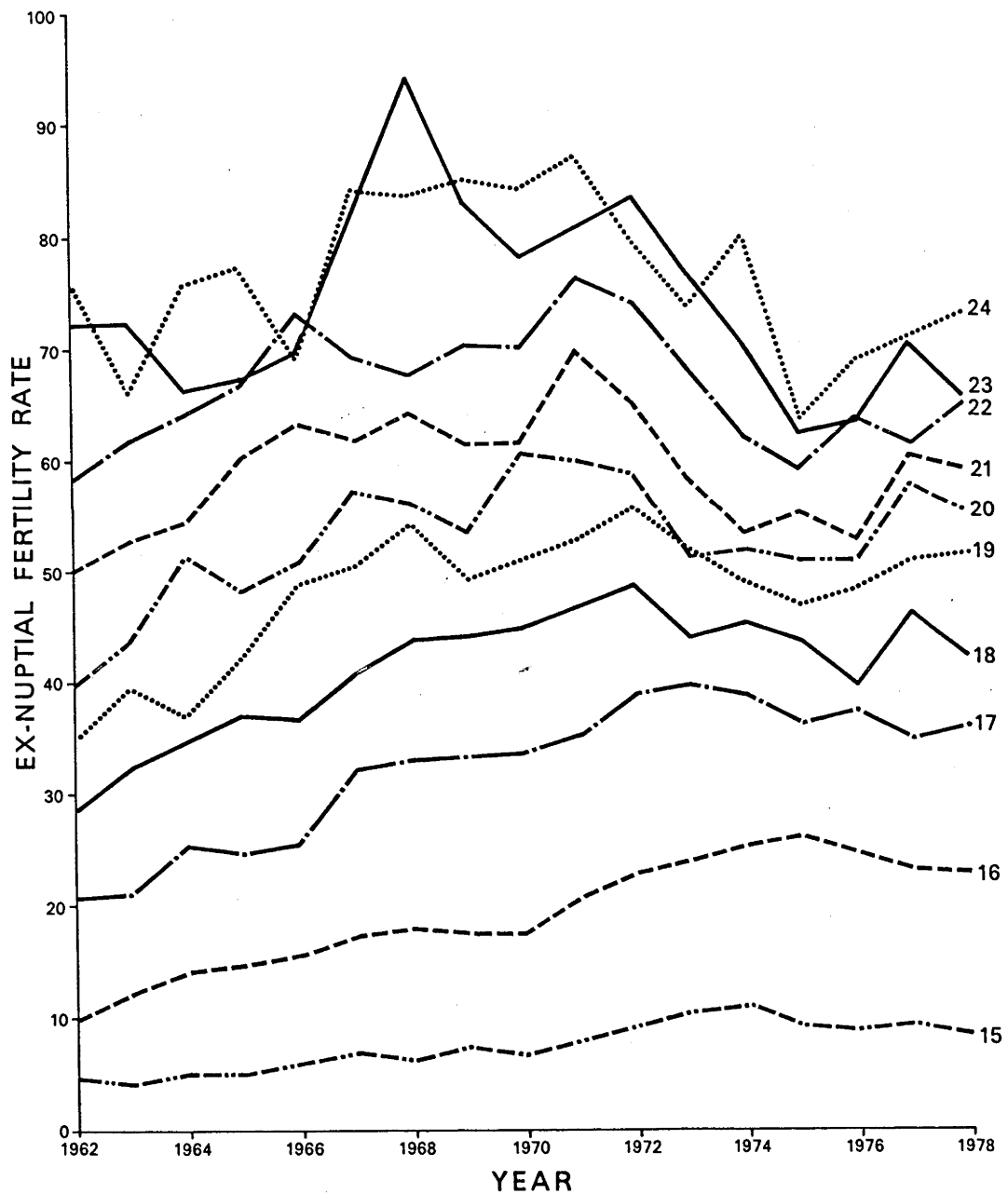
The ex-nuptial fertility rate at ages 25-29 has followed a slightly different course to rates at older ages since 1962 (Table 3.7). It was perhaps buoyed up during 1969-72 by a marked jump in the divorce rate (Chapter 7). Then, after falling sharply in 1973, it stabilised, despite a 37.7 percent decline in the corresponding Maori rate during 1973-78 (Table 3.8). The influx of Pacific migrants during the early 1970s partly explains this anomaly. Otherwise one can only surmise that, among Europeans, forces reducing ex-nuptial fertility (improved access to abortion, the likely negative impact of the DPB, and attitudes generally more favourable toward low fertility) were offset by others which raised it (deferment or rejection of formal marriage, a growing disinclination to marry when nonmaritally pregnant, and a rising incidence of marriage breakdown at short durations). Concerning the last factor, separated women aged 25-29 are perhaps more likely than older women to still be willing, even anxious, to bear children. Youth and lower average parity also enhance their attractiveness as mates, and entry into de facto unions may be more likely to have precipitated separation.

Ex-nuptial fertility rates at ages 15-22 moved decisively upward after 1962 (Figure 3.1), and earlier non-Maori data (Table 3.9) indicate that these trends can be extended back at least ten years. Particularly strong through the early and mid-1960s, the trends tended to level off later in that decade, only to surge on again thereafter. They did so briefly at ages 20-22 before reversing emphatically. Ex-nuptial fertility rates at ages twenty-three and twenty-four also fell appreciably during 1971-75. Below age twenty, peak rates occurred a year or more later, the upward trend persisting longer at younger ages.

Figure 3.1

AGE-SPECIFIC EX-NUPTIAL FERTILITY RATES (AGES 15-24): TOTAL

POPULATION 1962-1978



Source: New Zealand Vital Statistics 1962-78; unpublished data supplied by the Department of Statistics.

Table 3.9

AGE-SPECIFIC EX-NUPTIAL FERTILITY RATES (AGES 15-24):NON-MAORI
¹
 POPULATION 1945-1979

² Year	Age of Woman									
	15	16	17	18	19	20	21	22	23	24
1945	1	2	6	9	13	16	14	16	20	19
1946	1	2	6	9	11	14	16	16	20	19
1947	1	3	5	9	10	14	14	19	17	21
1948	1	3	5	10	11	13	14	16	19	17
1949	1	3	7	9	12	15	15	18	17	24
1950	1	3	7	10	13	18	17	20	22	22
1951	1	4	8	11	15	17	21	21	26	28
1952	2	4	9	13	16	20	22	26	28	29
1953	2	3	8	12	15	17	21	26	25	30
1954	2	3	7	12	15	21	24	30	30	30
1955	2	4	8	12	17	22	26	28	34	33
1956	2	4	9	13	17	21	28	29	34	40
1957	2	4	10	14	19	26	28	30	43	40
1958	2	5	12	15	18	22	29	36	37	44
1959	3	6	12	15	19	23	29	35	38	47
1960	3	7	13	19	21	26	31	38	39	44
1961	3	8	17	22	22	28	30	44	45	46
1962	4	9	18	24	29	32	39	45	53	58
1963	3	11	18	28	33	35	42	48	54	52
1964	4	12	22	30	31	41	43	50	49	59
1965	4	13	22	32	35	39	46	50	51	62
1966	5	13	22	31	41	39	49	59	51	49
1967	6	15	27	34	41	46	49	54	64	60
1968	5	16	30	36	42	45	51	50	71	63
1969	6	15	29	37	37	39	50	53	64	66
1970	6	16	29	37	41	47	46	54	58	63
1971	7	19	30	39	41	44	52	57	63	65
1972	8	19	33	40	44	47	49	57	63	63
1973	9	21	34	35	41	40	46	52	58	58
1974	10	23	33	36	37	40	41	50	58	63
1975	8	22	31	33	36	39	43	46	48	50
1976	7	20	30	31	36	38	38	49	53	57
1977	8	19	28	36	38	40	45	47	56	56
1978	7	18	28	32	37	39	44	49	49	56
1979	5	14	26	33	39	46	49	55	65	61

Source: New Zealand Vital Statistics 1945-66; unpublished data supplied by the Department of Statistics.

- 1 Rates for five-year age groups in the range 15-44 years are shown elsewhere in Table A2.3, Appendix 2.
- 2 Calculations for 1962-64 are affected by the need to estimate the distribution of non-Maori live ex-nuptial confinements by age of mother (see Appendix 3).

Increments in ex-nuptial fertility rates at younger ages during the 1960s and early 1970s were most likely produced by a combination of more widespread sexual activity (Davis, 1977), higher coital frequencies, and increasing rejection of marriage as a 'solution' to nonmarital pregnancy. As to the more recent declines in adolescent and young adult rates, the most plausible hypothesis is that improved fertility control outside marriage is the immediate cause. The DPB and the spread of feminist ideology notwithstanding, it is unlikely that either the proportion of unmarried women sexually active or their mean coital frequency dropped significantly at these ages. The central question therefore becomes one of the relative importance of improved contraception and more frequent use of induced abortion in increasing fertility control. The available evidence is circumstantial, but abortion was most likely the dominant factor. The timing of fertility trends in relation to changes in the accessibility of abortion invites this conclusion (see section 3.5).

Figure 3.1 shows a tendency for ex-nuptial fertility rates at ages 18-24 to increase again after 1975 or 1976. Table 3.7, which includes rates for 1979 and 1980 as well, shows this trend to have been particularly strong at ages 20-24, and also at ages 25-29. Raw data suggest that it mainly reflects increases in ex-nuptial live births, not selective movement of non-pregnant women in a period of high net emigration, and the age pattern of the increases makes it likely that they represent an upsurge in childbearing within cohabiting unions. This might have been brought about by severe economic recession and the resultant substantial rise in unemployment (Carmichael, 1979b), but it may also indicate that the trend toward informal cohabitation (Chapter 6) has matured to the point where some

couples are making decisions to have families whilst remaining unmarried. Unemployment might also have caused some unmarried women to consciously choose to become solo mothers and collect the DPB. [8]

Ethnic Trends in Age-specific Ex-nuptial Fertility Rates

Spectacular declines in Maori ex-nuptial fertility rates at ages 30-44 after 1970 have already been noted (Table 3.8). They were preceded by trends irregularly upward at ages 30-39 and downward at ages 40-44 during the 1960s. The Maori rate at ages 25-29 also fell steeply during the 1970s, having been reasonably stable for much of the previous decade.

Increased marital instability associated with urbanisation may have caused the Maori ex-nuptial fertility rate at ages 30-39 to rise during the 1960s. However, this trend was minor compared to the declines which occurred at ages twenty-five and over during the 1970s. It has been suggested that these may be thought of largely as extensions of the transition in Maori marital fertility. Thus they reflect the adoption by Maori women of efficient, female methods of contraception in the wake of urbanisation and a substantial assimilation to European values. The introduction of the DPB may also be significant, because as Maori mothers became aware of it they

[8] For some, solo motherhood and the DPB may have been preferable to the less lucrative Unemployment Benefit and continual searching for employment. In 1977 the DPB was being paid to solo parents with one child at the rate of \$61.00 per week as against the Unemployment Benefit rate of \$38.40 for a single person. A further \$16.00 per week was payable on a discretionary basis in respect of limited income and assets (up to \$10.00) and the cost of rent or board (up to \$6.00). There was also an income exemption of \$21.00 per week, and solo parents were further entitled to receive the Family Benefit of \$3.00 per child per week.

acquired a new capacity to live independently.

Little need be said about non-Maori ex-nuptial fertility rates at ages twenty-five and over. Trends here differ from total population ones mainly in that declines during the 1970s are less steep.

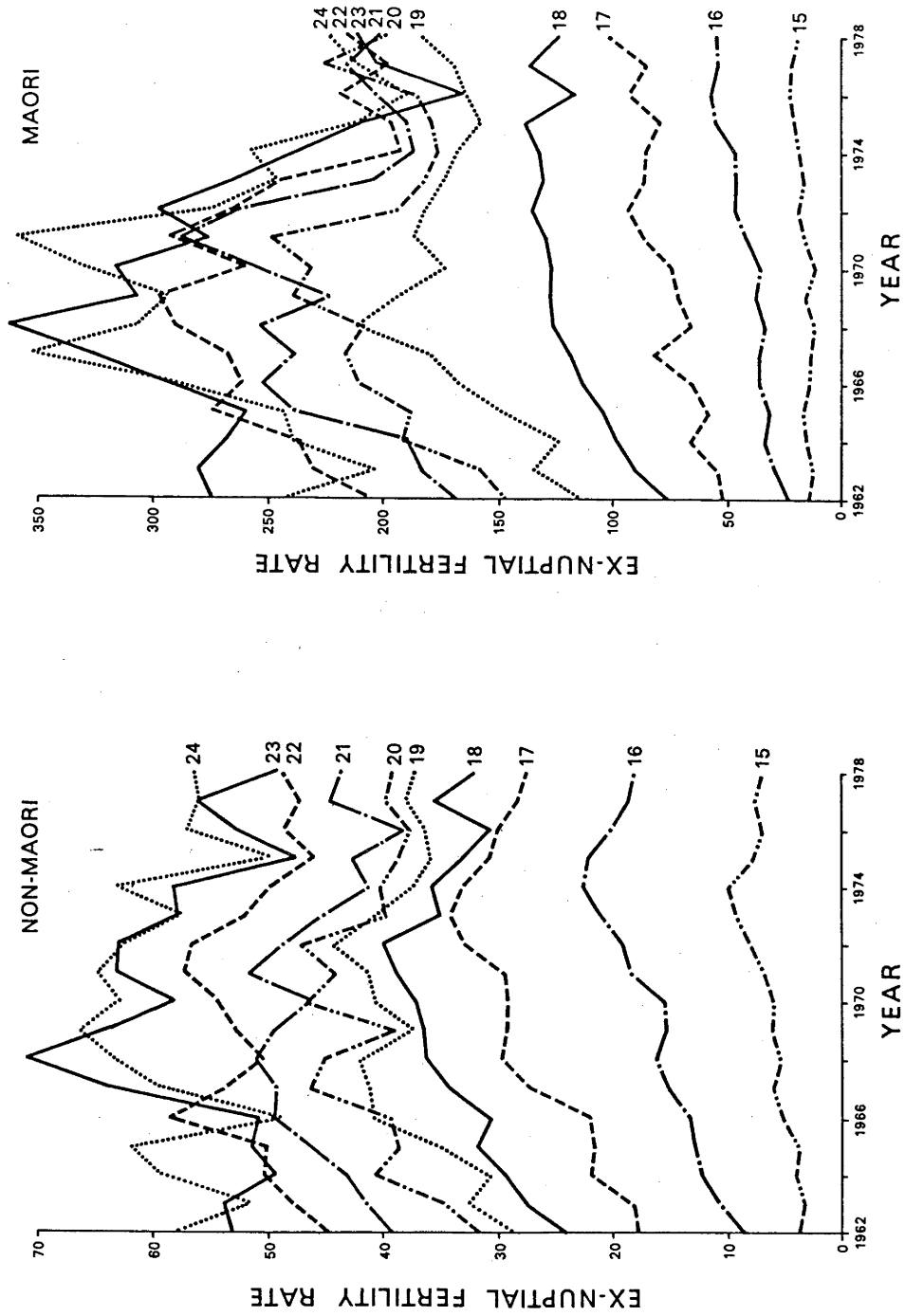
At ages 15-17, non-Maori ex-nuptial fertility rates rose through the 1960s and early 1970s, peaking about the time (1974) that the Auckland Medical Aid Centre (AMAC) opened as the first specialist abortion clinic in New Zealand. Maori rates at these ages also rose, but did not respond as clearly to the opening of AMAC (Figure 3.2). [9] Non-Maori rates at ages 18-24 followed similar trends to those for the total population. As to Maori rates at these ages, there were sizeable, if somewhat patternless increases through the 1960s. Then, from about 1971, Maori rates at ages 20-24 fell sharply for from three to five years, before starting to rise again.

Although there are broad similarities between trends in Maori and non-Maori ex-nuptial fertility rates since 1962 at ages below twenty-five, the explanations for these trends are different. Whereas rising non-Maori rates before 1970 suggest rejection of a moral code based on premarital chastity, rising Maori rates are more plausibly attributed to the impact of urbanisation on traditional social

[9] Very young Maori girls are perhaps less likely than non-Maoris to know of or possess the skills to avail themselves of a service like AMAC. In addition, they and their parents probably do not perceive pregnancy as quite the disaster that Europeans do. It is less likely to upset educational and vocational plans and aspirations, and less likely to be seen as seriously affecting matrimonial prospects. Whether, in addition, there is a cultural aversion to abortion is difficult to determine. Gluckman (1971, 1972) claims that there is, and Trlin (1975a) echoes this view. However, in a well documented paper, Hunton and Graham (1977) refute Gluckman's argument that abortion was largely unknown to pre-European Maoris, and note that it was not uncommon for AMAC patients to be Maori.

Figure 3.2

AGE-SPECIFIC EX-NUPTIAL FERTILITY RATES (AGES 15-24): NON-MAORI AND MAORI POPULATIONS 1962-1978



Source: New Zealand Vital Statistics 1962-66; unpublished data supplied by the Department of Statistics.

organisation. In both cases sexual activity and the degree of independence from older generations increased. But for non-Maoris, overtones of generational revolt are stronger.

Rural Maori society, while permitting premarital coitus, maintained an element of control over indiscriminate reproduction through the observability of individual behaviour on the marae and the influence which parents and elders wielded over the young. Urbanisation radically altered this situation. Teenagers and young adults dominated migration flows (Poulsen and Johnston, 1973). Many found themselves free from parental and wider community oversight, and tribal intermingling created uncertainty over who should oversee the behaviour of urban Maori youth. Even those who moved with their parents were freer. City living imposed a more nuclear residential structure, lessened parental supervision by separating home and workplace, and caused leisure activities to become more peer group oriented. The sexual behaviour of young Maoris continued to reflect traditional morality, but in an environment offering unprecedented opportunity and anonymity. Perhaps, too, increased miscegenation in the cities helped raise Maori ex-nuptial fertility rates. [10]

Concerning declines in ex-nuptial fertility rates at ages 20-24 during the early 1970s, it is unlikely that induced abortion was the force among Maoris that it was among non-Maoris. Data from the 1970 Ex-nuptial Birth Survey show that 49.0 percent (N = 288) of Maori

[10] A full Maori couple contribute one to both numerator and denominator of an ex-nuptial fertility rate if they have a child together. They contribute two to the numerator and one to the denominator if each has a child with a European person.

children compared to only 22.5 percent (N = 855) of non-Maori children born to mothers aged 20-24 were living with cohabiting parents shortly after birth. The declines in Maori ex-nuptial fertility rates at these ages were thus probably due in part to the changes in contraceptive behaviour which lie behind Maori marital fertility decline. Two other points should also be noted. It was in Australia that abortions became easier to get in the early 1970s, and one questions Maori women's knowledge of the Australian situation, and their willingness and ability to use it. Secondly, if a decline between the 1971 and 1976 censuses in the percentage of Maori women aged 20-24 who were 'married' partly reflects a decline in consensual marriage at those ages, the mean coital frequency of Maori women at risk of bearing ex-nuptial children at ages 20-24 may have dropped. [11]

3.4 TRENDS IN BRIDAL PREGNANCY

Available data permit calculation of bridal pregnancy ratios for the total population only for 1962-77 (Table 3.10). The ratio over ages 16-44 fluctuated marginally during 1962-70, before dropping by almost fifty percent during 1970-76. Standardisation for age reveals a gradual, but persistent decline through the 1960s as well. Non-Maori data presented in Chapter 2 show that these trends followed increases in the bridal pregnancy ratio through the 1950s.

[11] It will shortly be shown that the probability of a nonmarital pregnancy being regularised by marriage before confinement dropped steeply at all ages below twenty-five after 1970. To the extent that establishing a consensual union traditionally served to regularise nonmarital pregnancies in Maori eyes, the trend in Maori consensual marriage postulated could be regarded as a parallel one. The availability of the DPB would have assisted both trends.

Table 3.10

UNSTANDARDISED, AGE-STANDARDISED, AND AGE-SPECIFIC BRIDAL PREGNANCY RATIOS: TOTAL POPULATION 1962-1979

Age	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
16	82	83	82	81	79	82	82	77	81	81	73	72	68	63	61	67	61	75
17	61	63	63	67	65	68	68	63	61	56	56	51	49	44	42	46	44	47
18	50	51	51	50	52	48	49	47	46	41	36	32	28	26	24	24	25	25
19	37	36	35	35	33	34	31	30	29	28	24	20	17	16	15	16	16	16
20	25	27	25	24	24	22	23	21	21	19	16	14	12	11	10	11	11	11
21	17	17	17	17	17	17	16	15	15	15	14	12	11	9	9	9	9	9
22	17	17	17	18	16	16	15	15	15	16	13	12	11	10	9	10	9	9
23	17	17	17	16	16	16	16	15	14	15	13	12	12	11	10	10	9	9
24	18	17	16	14	14	14	16	15	15	14	13	10	11	11	11	11	8	8
25-29	13	15	14	15	14	13	13	13	14	14	11	10	10	10	10	10	10	9
30-34	11	13	11	11	12	11	12	12	11	11	9	9	8	7	7	7	7	8
35-39	7	8	10	9	8	8	7	7	8	6	6	5	5	5	4	4	4	4
40-44	3	3	2	3	4	2	3	3	3	3	3	3	2	2	1	1	2	2
Total	25	26	26	27	27	26	26	24	24	24	21	18	17	15	13	13	13	12
Standard ¹	25	26	25	25	25	24	24	23	23	22	19	17	16	14	14	14	14	13

Source: New Zealand Vital Statistics 1962-80.¹ Standardised to the age structure of women marrying at ages 16-44 in 1962.

Refining the analysis by age, there was negligible net change in bridal pregnancy ratios at ages sixteen and seventeen during 1962-70 (Table 3.10). Net declines of between eight and twenty-one percent were recorded at ages 18-24, while at older ages the net trend was marginally upward. After 1970, ratios at ages sixteen and seventeen fell sharply, while earlier downward trends at ages 18-24 accelerated. Declines also set in at ages 25-39, quickly cancelling out the earlier increments.

Underlying Demographic Mechanisms

Discussion of longer term trends in non-Maori bridal pregnancy ratios in Chapter 2 emphasised the sensitivity of this measure to three main forces: the probability of conceiving a child outside marriage, the probability of regularising such a pregnancy by marriage, and the probability of marrying non-pregnant. Using component analysis, changes in the total population bridal pregnancy ratio during 1963-70 and 1970-76 were decomposed into components due to each of these forces, plus a component due to changes in the age structure of marriageable women of reproductive age and a residual sum of five interaction components (see Appendix 6). Results (Table 3.11) show that the drop of 1.62 in the bridal pregnancy ratio during 1963-70 was roughly due in equal proportions to increased age-specific probabilities of marrying non-pregnant and lower probabilities of marrying before confinement following an ex-nuptial conception. However, the drop would have been sharper had not ex-nuptial conception rates risen. This component exerted the strongest influence of all, but could not offset the combined effect of the other two.

Table 3.11

COMPONENT ANALYSIS OF CHANGES IN THE BRIDAL PREGNANCY RATIO: TOTAL
POPULATION 1963-1976

	1963-70	1970-76
Starting bridal pregnancy ratio	26.04	24.42
Finishing bridal pregnancy ratio	24.42	13.16
Total change	-1.62	-11.26
Change due to:		
Probabilities of ex-nuptial conception	2.75	-7.36
Probabilities of marriage between conception and confinement	-2.09	-9.69
Probabilities of marrying non-pregnant	-2.24	3.06
Age structure	0.49	-0.26
Interaction	-0.53	2.99

Source: New Zealand Vital Statistics 1962-64, 1969-71, and 1975-77; unpublished data supplied by the Department of Statistics.

Chiefly responsible for accelerated decline in the bridal pregnancy ratio during 1970-76 were further, larger reductions in age-specific probabilities that children conceived out of wedlock would be born within it. Almost as important was a reversal of the earlier tendency for ex-nuptial conception rates to increase. Previously this component had moderated the downward trend, but it now became a major contributor to it. In its place, falling probabilities of marrying non-pregnant became the main moderating force.

Another decomposition was carried out on non-Maori bridal pregnancy ratios for 1949-70 (Table 3.12). Findings for 1963-70 parallel those of Table 3.11. Otherwise, rising ex-nuptial conception rates more than accounted for a 3.25 percentage point increase in the ratio during 1949-56, and continued to dominate as this trend gathered momentum during 1956-63. The main restraint on the non-Maori bridal

Table 3.12

COMPONENT ANALYSIS OF CHANGES IN THE BRIDAL PREGNANCY RATIO: NON-MAORI
POPULATION 1949-1970

	1949-56	1956-63	1963-70
Starting bridal pregnancy ratio	13.59	16.84	23.47
Finishing bridal pregnancy ratio	16.84	23.47	21.88
Total change	3.25	6.63	-1.59
Change due to:			
Probabilities of ex-nuptial conception	4.11	6.00	2.53
Probabilities of marriage between conception and confinement	-0.68	-1.51	-1.69
Probabilities of marrying non-pregnant	-0.49	1.39	-2.24
Age structure	0.57	1.01	0.25
Interaction	0.26	0.26	0.44

Source: New Zealand Vital Statistics 1948-50 and 1955-57; Jain (1973); unpublished data supplied by the Department of Statistics.

pregnancy ratio throughout 1949-63 was falling probabilities of marrying between conception and confinement.

Table 3.11 supports the observation of Trlin and Ruzicka (1977) that declines in age-specific bridal pregnancy ratios during the 1960s and early 1970s do not imply that nonmarital pregnancies became less frequent. Trlin and Ruzicka failed, however, to recognise that changing marriage patterns were almost as important as declining probabilities of marriage before confinement in explaining the trends. Also, they were perhaps too eager to attribute the drop in proportions marrying before confinement to changes in the pattern of placement of ex-nuptial children (Chapter 5). Undoubtedly solo motherhood and cohabitation with the child's father were increasingly preferred to formal marriage. But the possibility must also be considered that fertility control outside marriage improved, and did so most among

women who were perhaps the most likely to marry when pregnant - those involved in serious relationships and those from white collar backgrounds (Chapter 4).

Tentative support is provided by Table 3.13 for the claim that a growing preference for solo parenthood over hasty marriage can be overemphasised in explaining the recent decline in the bridal pregnancy ratio. Spencer (1969) has proposed that bridal pregnancies may be divided roughly into those where pregnancy brings about marriage and those where it occurs in anticipation of marriage on the basis of duration of marriage at confinement. She arbitrarily defines as shotgun and anticipatory those pregnancies resulting in confinement 0-3 and 4-7 months after marriage respectively. More recently, Ruzicka (1977) has used the same criteria to classify marriages of pregnant brides as either forced or advanced.

Table 3.13 reveals a pattern of moderate, but irregular, increase during the 1960s in the proportions of marriages of pregnant brides aged 16-29 which were 'forced'. It shows much more rapid increases during 1969-75. [12] Intuitively one would expect a growing preference for solo parenthood to strike predominantly at 'forced' marriages.

[12] The possibility of this finding being an artifact of a trend toward longer first birth intervals among women not pregnant at marriage (Chapter 6) was investigated. An equivalent table to Table 3.13 was produced in which 'forced' marriages were expressed as percentages of marriages followed by live confinement at marriage durations 0-6 (instead of 0-7) months (the aim being to eliminate any contamination of bridal pregnancy estimates by premature confinements following early marital conception). Results obtained removed any suspicion that Table 3.13 is misleading.

Table 3.13

'FORCED' MARRIAGES AS A PERCENTAGE OF 'FORCED' PLUS 'ADVANCED' MARRIAGES BY AGE OF BRIDE: TOTAL

1
POPULATION 1962-1979

Age	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979
16	25	26	26	26	27	29	29	30	32	34	35	36	39	44	43	41	40	46
17	22	21	22	21	23	25	25	25	26	29	33	32	35	38	37	36	40	41
18	22	20	20	21	21	23	25	24	27	29	30	31	34	37	34	37	36	38
19	20	20	20	21	20	23	23	23	26	26	28	32	35	36	35	37	35	33
20	19	19	20	20	20	20	22	23	26	27	30	33	34	33	33	38	36	33
21	20	19	18	21	23	22	24	23	23	28	30	31	32	34	33	30	32	29
22	22	21	20	21	21	21	23	25	23	27	31	33	31	38	34	32	28	31
23	21	18	22	18	21	22	25	27	26	26	30	31	32	34	34	34	32	31
24	19	23	19	22	23	19	28	30	30	31	32	27	30	36	38	37	30	32
25-29	24	27	24	24	26	23	25	29	30	30	31	29	26	27	34	36	33	35

Source: New Zealand Vital Statistics 1962-80.

1 'Forced' marriages are those followed by confinement at marriage durations 0-3 months; 'advanced' marriages are those followed by confinement at marriage durations 4-7 months.

Ethnic Differences in Bridal Pregnancy

The scope for examining ethnic differences in bridal pregnancy is limited. It is possible to estimate numbers of pregnant Maori brides by age only for 1962-70, and there are no official data giving Maori marriages by age of bride for these years. Estimates implied by Jain's (1973) non-Maori estimates are clearly too low. [13]

Under post-1951 registration procedure, the only clue that a bride or groom is of Maori extraction is provided by their name and the names of their parents (including mother's maiden name). Searches of the New Zealand marriage register for 1961 and 1971 produced the distributions of Maori marriages by age of bride shown in Table A2.5, Appendix 2. The aim was to include marriages which seemed likely to produce Maori births. Thus, a marriage was designated 'Maori' if both parents of either party appeared to be of Maori extraction or if both parties appeared to have some Maori ancestry. This procedure is imprecise, but the alternative to using it was to do nothing. [14]

Annual distributions of Maori marriages by age of bride were estimated for 1962-70 by interpolating linearly between 1961 and 1971 age-of-bride-specific proportions of marriages which were Maori, and applying the proportions obtained to known distributions of all

[13] Jain's strategy for estimating non-Maori marriages by age of bride after 1951 involved splitting annual total marriages on the assumption that a constant 3.33 percent were Maori. This figure is a rather conservative 'average' of estimates he derived for the census years 1956, 1961, and 1966 by assuming that 1951 age-sex-specific Maori marriage rates remained constant. Jain also failed to allow that registration of Maori marriages was incomplete prior to 1952. The law covering such marriages did not require a marriage licence to be obtained. As a result marriages were not registered if celebrants failed to submit copies of marriage certificates, and this is known to have happened frequently (personal communication from the Registrar-General, Mr J.L. Wright).

marriages. Non-Maori distributions were then derived by simple subtraction. At those ages at which marriage most commonly takes place, a Maori bride was, during 1962-70, considerably more likely than a non-Maori bride to be pregnant (Table 3.14). [15] Discussing traditional Maori attitudes to sex, Biggs (1960: 13) writes: 'The object of courtship was the acknowledgement of mutual attraction and its expression in sexual intercourse.' Under these conditions it was common, if not normal, for Maori brides to be pregnant, and this heritage continues to set standards to some extent.

3.5 TRENDS IN NONMARITAL PREGNANCY

Measures used in sections 3.3 and 3.4 have focused on different events - confinement and marriage respectively - and hence have not assumed the same population at risk. In this section nonmarital pregnancies resulting in nuptial and ex-nuptial confinement are considered as parts of a divisible whole in relation to a common

[14] Many persons claiming substantial degrees of Maori ancestry today have completely European names. For example, a search of the 1966 birth register showed that 15.7 percent of mothers of ex-nuptial children who claimed to be 'full Maori' had non-Maori names. Under the classification scheme outlined, this problem is ameliorated somewhat by three names being available to establish the Maori ancestry of a bride or groom. There is also the compensating factor that some persons with very little Maori ancestry have Maori names. However, there can be no certainty as to the net effect of these and other biases.

[15] The fact that non-Maori bridal pregnancy ratios were generally higher than Maori ratios at ages sixteen and seventeen may indicate that marriages which will produce Maori children have been overestimated. Another possible source of error is the assumption of linear change in age-of-bride-specific proportions of marriages which were Maori between 1961 and 1971. In consequence of different fertility trends following World War 2, the size of non-Maori birth cohorts attaining the legal age for marriage increased much more rapidly during the early and mid-1960s than did the size of Maori birth cohorts.

Table 3.14

UNSTANDARDISED, AGE-STANDARDISED, AND AGE-SPECIFIC BRIDAL PREGNANCY
RATIOS BY ETHNIC STATUS OF MARRIAGE 1962-1970¹

Age	1962	1963	1964	1965	1966	1967	1968	1969	1970
Non-Maori									
16	82	82	82	82	79	83	84	78	82
17	61	63	64	68	66	69	68	64	61
18	48	50	51	49	51	48	48	46	44
19	35	34	33	33	31	31	29	28	27
20	23	25	24	22	22	21	21	19	19
21	15	15	16	15	15	15	14	13	14
22	16	16	16	16	15	14	14	13	14
23	16	16	16	15	15	15	14	13	12
24	16	16	15	13	12	13	14	14	13
16-19	48	48	48	48	46	46	45	43	42
20-24	18	18	18	17	17	17	16	15	15
25-29	12	14	13	13	12	12	12	12	13
Total	24	25	25	25	25	24	24	23	23
² Standard	24	24	24	24	23	23	22	21	21
Maori									
16	85	87	81	76	79	73	73	65	73
17	61	62	57	63	63	61	64	55	59
18	61	61	56	58	58	55	58	54	55
19	66	63	56	64	58	63	56	55	62
20	52	55	50	55	51	48	47	52	60
21	39	37	33	40	40	38	36	39	40
22	46	42	36	47	39	39	46	39	41
23	39	37	35	40	40	40	45	47	45
24	41	33	30	39	34	35	44	47	44
16-19	65	65	59	63	62	61	60	56	60
20-24	44	42	38	45	43	42	43	44	47
25-29	26	28	26	34	31	32	29	31	35
Total	45	45	42	49	47	47	47	46	49
² Standard	45	45	41	47	45	44	45	44	47

Source: New Zealand Vital Statistics 1962-70; New Zealand Marriage Registers 1961 and 1971; unpublished data supplied by the Department of Statistics.

- 1 Calculations for 1962-64 are affected by the need to estimate the distributions of non-Maori and Maori nuptial first confinements at marriage durations 0-7 months by age of mother and duration of marriage (see Appendix 3).
- 2 Standardised rates assume, for each ethnic group, the age structure of brides marrying at ages 16-44 in 1962.

population at risk.

Ex-nuptial Conception Rate

It was shown in Chapter 2 that the non-Maori ex-nuptial conception rate increased constantly between the late 1940s and the mid-1960s. The tail of this trend is also evident in total population rates (Table 3.15). After having dropped off in the late 1960s, the total population rate peaked in 1970, then fell by almost one-third by 1977. Standardisation for age hardly alters the trend since the mid-1960s.

The rising rate of ex-nuptial conception until the mid-1960s speaks for itself. Nonmarital sexual activity increased. The levelling off of this rate in the late 1960s may reflect improved contraception outside marriage, but could also be linked to the economic recession of 1967-69. This may have reduced the frequency of nonmarital coitus, perhaps by causing marriages, and with them anticipatory coitus, to be delayed. Also, net emigration during this period may have been selective of sexually active unmarried women. As to the subsequent sharp decline in the ex-nuptial conception rate, especially during 1971-75, it is unlikely that liberalisation of access to induced abortion over this period was merely coincidental.

Age-specific Ex-nuptial Conception Rates

Total population ex-nuptial conception rates changed little at ages 25-29 and above during the 1960s, but sharp downward trends set in during the 1970s (Table 3.16). Concerning trends at younger ages, it is informative to compare Figure 3.3 with Figure 3.1, noting that

Table 3.15

EX-NUPTIAL CONCEPTIONS, EX-NUPTIAL CONCEPTION RATES, AND LEGITIMATION
 RATIOS BY ETHNIC ORIGIN 1945-1979¹

Year	Maori ²				Non-Maori				Total			
	Conceptions	Rate	Standard Rate	Ratio	Conceptions	Rate	Standard Rate	Ratio	Conceptions	Rate	Standard Rate	Ratio
1945					3839	23.9	20.9	53.7				
1946					4223	27.0	23.7	59.3				
1947					4063	26.7	23.9	59.2				
1948					3904	26.5	24.0	57.9				
1949					3935	27.6	25.4	56.6				
1950					4075	29.5	27.4	54.5				
1951					4283	31.8	29.7	52.9				
1952					4312	32.4	30.4	54.0				
1953					4468	33.6	31.8	54.9				
1954					4804	36.3	34.8	54.9				
1955					4944	37.2	36.2	54.6				
1956					5200	38.6	37.9	53.5				
1957					5581	40.7	40.2	53.8				
1958					5914	42.8	41.8	54.6				
1959					6152	44.2	43.1	54.5				
1960					6771	48.3	47.3	54.0				
1961					7439	51.8	51.4	52.9				
1962	2193	170.8	170.8	29.3	8075	53.8	53.8	52.2	10268	63.0	63.0	47.3
1963	2294	172.8	174.3	27.8	8614	55.0	55.0	51.0	10908	64.2	64.4	46.2
1964	2474	179.4	183.5	29.2	9133	56.3	55.6	50.5	11607	65.9	65.5	45.9
1965	2640	184.8	191.2	28.4	9704	58.0	56.3	51.0	12344	68.0	66.6	46.2
1966	2841	191.7	199.3	26.6	10362	60.5	57.9	49.5	13203	70.9	68.6	44.6
1967	2967	192.7	202.1	26.0	10775	61.7	58.8	48.4	13742	72.3	69.6	43.5
1968	3067	191.7	202.2	24.0	10726	60.9	58.2	48.4	13793	71.8	69.2	43.0
1969	3188	191.6	201.3	25.2	10720	60.4	57.6	47.8	13908	71.6	68.9	42.6
1970	3398	196.3	206.1	25.2	11422	63.3	60.4	47.7	14820	74.9	72.1	42.5
1971									14989	73.9	71.2	40.1
1972									14023	66.8	64.2	36.6
1973									13410	61.5	59.0	33.3
1974									12885	56.8	54.2	30.0
1975									12445	52.6	50.1	26.3
1976									12723	52.1	49.4	23.5
1977									12643	50.4	47.9	21.7
1978									13107	51.3	48.8	20.3
1979									13178	51.4	48.9	19.6

Source: New Zealand Vital Statistics 1945-80; unpublished data supplied by the Department of Statistics.

- 1 Calculations for 1961-64 are affected by the need to estimate, for the years 1962-64, the distributions of non-Maori and Maori live ex-nuptial confinements by age of mother and live nuptial first confinements at marriage durations 0-7 months by age of mother and duration of marriage (see Appendix 3).
 2 Standardised rates assume, for each population, the mid-year age distribution of unmarried females in 1962.

they refer to ages at conception and confinement respectively.

Ex-nuptial conception rates at ages fourteen and fifteen rose very rapidly during the 1960s and early 1970s (Figure 3.3). Clearly sexual intercourse involving girls under the legal age of consent (sixteen) became much more common. Reversal of these upward trends after 1973 coincides precisely with the opening of the AMAC abortion

Table 3.16

AGE-SPECIFIC EX-NUPTIAL CONCEPTION RATES AND LEGITIMATION

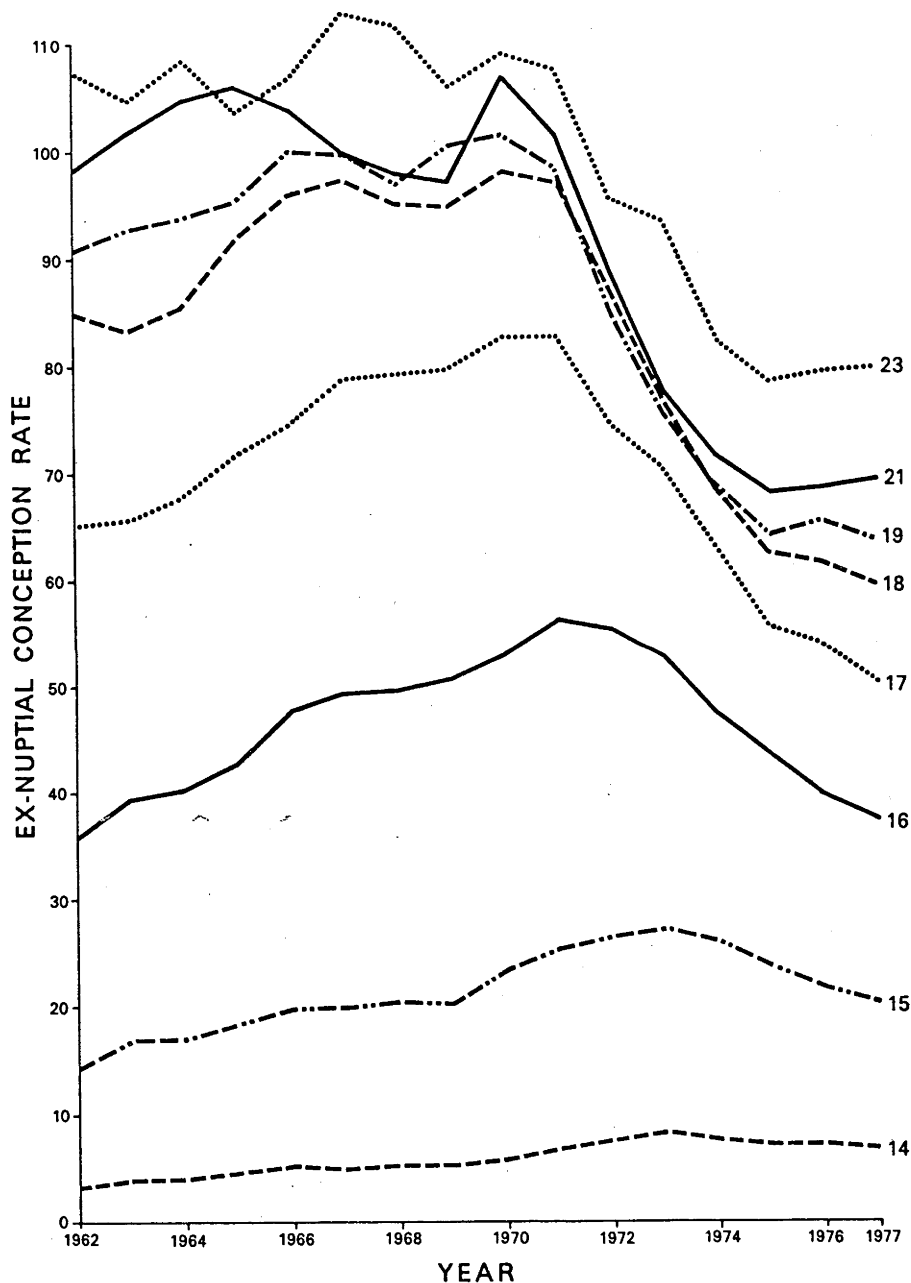
RATIOS: TOTAL POPULATION 1962-1979

Year	Age of Woman														
	14	15	16	17	18	19	20	21	22	23	24	25-29	30-34	35-39	40-44
Ex-nuptial Conception Rates															
1962	3	14	36	65	85	91	94	98	105	107	100	99	71	38	9
1963	4	17	39	66	83	93	98	102	104	105	105	100	68	40	9
1964	4	17	40	68	86	94	98	105	106	108	105	100	71	39	9
1965	5	18	43	72	92	95	101	106	107	104	96	94	67	37	9
1966	5	20	48	75	96	100	101	104	109	107	97	94	66	38	10
1967	5	20	49	79	97	100	101	100	113	113	103	94	69	36	9
1968	5	20	50	79	95	97	97	98	108	112	109	98	70	38	8
1969	5	20	51	80	95	101	97	97	101	106	108	97	68	34	8
1970	6	24	53	83	98	102	104	107	106	109	107	104	71	33	7
1971	7	26	57	83	97	99	99	101	104	108	103	98	66	34	8
1972	8	27	56	75	87	85	84	89	93	96	91	88	56	32	7
1973	8	27	53	71	77	76	74	78	84	94	92	79	56	26	7
1974	8	26	48	63	69	69	68	72	77	83	85	79	52	26	6
1975	7	24	44	56	63	64	64	68	72	79	81	75	49	23	6
1976	7	22	40	54	62	66	65	69	73	80	81	77	48	22	6
1977	7	20	38	50	60	64	65	70	74	80	82	75	46	21	5
1978	6	18	35	50	59	65	66	74	83	83	84	83	47	22	5
1979	5	16	32	46	57	67	69	75	89	88	86	84	50	24	5
Indices (1962 = 100)															
1970	177	164	149	127	116	112	110	109	101	102	107	104	100	85	82
1979	155	109	89	71	67	74	74	76	84	82	85	84	71	62	51
Legitimation Ratios															
1962		35	50	58	60	60	58	54	46	42	38	23	16	12	13
1963		35	48	55	59	57	56	53	48	40	33	24	17	15	15
1964		31	47	54	58	57	54	51	48	41	35	27	14	15	10
1965		31	48	56	57	55	53	48	45	41	37	25	15	14	15
1966		30	46	53	56	54	52	48	41	34	33	23	14	13	11
1967		27	44	52	54	53	52	47	39	34	31	23	15	11	9
1968		29	44	52	54	54	51	46	39	34	29	21	17	12	17
1969		29	45	52	54	53	50	45	39	33	29	21	15	13	15
1970		30	44	52	54	52	49	45	40	33	32	23	15	12	14
1971		29	43	49	51	50	47	41	36	32	29	21	13	12	14
1972		26	39	45	48	47	43	37	31	29	25	19	12	10	17
1973		23	36	42	44	42	39	34	29	26	23	19	12	11	14
1974		18	31	37	39	38	34	31	29	27	24	19	13	14	13
1975		14	25	33	34	34	31	27	25	25	22	19	13	9	11
1976		11	21	27	30	30	27	27	23	23	22	18	14	11	9
1977		9	18	24	28	28	26	25	23	22	20	17	13	12	12
1978		9	17	23	25	26	25	23	20	19	17	16	11	9	15
1979		8	16	21	23	25	24	23	19	19	17	15	14	13	12
Indices (1962 = 100)															
1970		87	89	88	89	86	84	83	86	79	84	97	94	96	100
1979		24	32	36	39	42	41	42	42	45	45	66	88	104	87

Source: New Zealand Vital Statistics 1962-80; unpublished data supplied by the Department of Statistics.

Figure 3.3

AGE-SPECIFIC EX-NUPTIAL CONCEPTION RATES (AGES 14-23): TOTAL
 1
 POPULATION 1962-1977



Source: New Zealand Vital Statistics 1962-78; unpublished data supplied by the Department of Statistics.

1 Trend lines for ages twenty and twenty-two are omitted to avoid cluttering the diagram.

clinic. It is unlikely to have anything to do with a sudden change in contraceptive behaviour, or with an overnight reduction in sexual activity.

At ages sixteen and seventeen, ex-nuptial conception rates increased from 1962 until 1971. Rates at ages eighteen and nineteen also rose substantially until the recession of 1967-69, when perhaps postponements of marriage and emigration had an impact. However, at ages 20-24 ex-nuptial conception rates fluctuated during the 1960s. Increments in ex-nuptial fertility rates at ages twenty-one and twenty-two during this decade (Figure 3.1) were obviously due mainly to declining legitimization ratios (Table 3.16).

The influence of declining age-specific legitimization ratios stands out even more clearly after 1970. It shows in the comparative steepness of trend lines at ages 16-23 in Figure 3.3 and 17-24 in Figure 3.1. By the mid-1970s, ex-nuptial conception rates at ages 17-24 were well below their 1962 levels (Table 3.16). As to the timing, strength, and persistence of declines in relation to changes in access to induced abortion, the evidence of Figure 3.3 is much more striking than that of Figure 3.1. Figure 3.3 shows a clear response at ages sixteen and seventeen, whereas Figure 3.1 gives no hint that girls of these ages were greatly affected. This suggests that those very young girls who had abortions in Australia in the early 1970s were girls from higher status backgrounds who otherwise would have been pressed into marrying by their parents. Figure 3.3 nonetheless supports the proposition that older women, who were more likely to be independent of their parents and to have the maturity and the money to obtain Australian abortions, made greatest use of the new opportunity

for terminating unwanted pregnancies.

Improved Nonmarital Fertility Control: Abortion or Contraception?

At this point it is appropriate to examine more closely the argument that greater resort to induced abortion is mainly responsible for declining age-specific ex-nuptial conception rates during the 1970s. Two events are crucial: a legal decision which from late 1971 placed a more liberal interpretation on the permissible grounds for abortion in New South Wales (Snyder and Wall, 1976), and a similar decision in 1969 affecting the abortion law in Victoria (Wilson, 1972).

Probably the New South Wales judgement was the more crucial one for New Zealand women. It may have received greater publicity, if only because it came later. It was also more clearcut, specifically admitting a woman's social and economic circumstances as criteria by which danger to her life or her physical or mental health could be established (Royal Commission on Human Relationships, 1977). This probably led to a more immediate expansion of abortion services provided by private practitioners. [16] In attempting to assess objectively the volume of the trans-Tasman abortion traffic, Steincamp (1975) found that, from July 1974 to June 1975, at least three abortions were performed on New Zealand women in Sydney for every one in Melbourne. She also showed that within Sydney private

[16] Major abortion clinics did not open in Melbourne and Sydney until some time after the legal decisions which eventually led to their establishment were taken. The Fertility Control Clinic in Melbourne opened in November, 1972, while the Preterm Foundation and Population Services International both opened clinics in Sydney in 1974.

practitioners accounted for more than half the terminations. Since the major Sydney clinics had by this time opened, these findings suggest that private abortionists in that city were well known to some New Zealand doctors. They are consistent with a significant flow of women to Sydney having developed between late 1971 and mid-1974.

Apart from those pertaining to operations performed in public hospitals there are no time series data on induced abortions performed on New Zealand women which establish directly a major upward trend during the early 1970s. [17] Indeed, research throughout that decade concentrated on merely estimating the incidences of abortion and its Australian component for particular years, succeeding only in identifying rather wide ranges of possible values. [18] By 1980 the Contraception, Sterilisation and Abortion Act 1977 was operating efficiently enough for the flow of women to Australia for abortions to have slowed to a trickle, and in that year 5945 New Zealand abortions (116 per 1000 live births) were notified (Abortion Supervisory Committee, 1981). [19] But regarding the trend in abortions in the early 1970s, Kirkwood et al (1979a) found in their 1976 survey that women aged fifteen or more who reported ever having had an abortion were disproportionately young (15-24 years old) and still single.

[17] Public hospital abortions did in fact increase considerably in the late 1960s and early 1970s. Those induced for 'Medical or Legal Indications' never reached 100 in any year during 1950-67. In 1968 they numbered 128, in 1971 470, and in 1974 1008. This represents the tip of an iceberg, but the upward trend might be interpreted as confirming an increasingly vocal demand for abortion to be available to women becoming pregnant unintentionally, and later a growing recognition that abortions not obtained in New Zealand would be obtained in Australia.

[18] See Facer (1972), Facer et al (1973), Geiringer (1972), Gemming and Crighton (1974), O'Neill (1975), Rogers and Lenthall (1975), Steincamp (1975), and Kirkwood et al (1979a).

Otherwise there is little hard evidence independent of that which trends in nonmarital conception rates might themselves be held to constitute.

It is highly likely that nonmarital fertility control also improved during the 1970s through more effective contraception, although there is no New Zealand research comparable to that undertaken by Kantner and Zelnik in the United States which establishes this conclusively. [20] Ex-nuptial contraception almost certainly improved greatly among the Maori population, but mainly, one suspects, among women who were consensually married. Until repealed in 1977, the Police Offences Amendment Act 1954 prevented much contraceptive instruction being given via the education system. [21]

[19] The Contraception, Sterilisation and Abortion Act 1977, which first facilitated compilation of comprehensive abortion statistics, proved cumbersome early on. The procedure for obtaining an abortion was harrowing, and in certain parts of the country considerable difficulty was experienced recruiting Certifying Consultants and establishing satisfactory counselling services. In consequence many women continued to seek abortions in Australia (Facer *et al*, 1978; Treloar and Snyder, 1978). However, amendments to the Act and a legal decision which enabled the Auckland Medical Aid Trust (operators of the AMAC clinic) to begin performing abortions again saw the numbers of women aged 15-44 travelling to Australia for three days or less for 'Business (private/official)' reasons fall dramatically between 1978 and 1980 (Abortion Supervisory Committee, 1981).

[20] Kantner and Zelnik's analyses of data for nationally representative samples of females age 15-19 surveyed in 1971, 1976, and 1979 have provided a rich body of information on levels of sexual activity, patterns of contraceptive use and non-use, incidences of premarital pregnancy, the resolution of premarital pregnancies, socio-cultural differences in these phenomena, and changes over time (Kantner and Zelnik, 1972, 1973; Zelnik and Kantner, 1972a, 1972b, 1974, 1977, 1978a, 1978b, 1980; Shah *et al*, 1975; Zelnik *et al*, 1979; Zelnik, 1980). Successive surveys have indicated increased percentages of women with premarital sexual experience always practising contraception, and increases in their regularity of contraceptive use and (during 1971-76 but not during 1976-79) their use of more effective methods (Zelnik and Kantner, 1977, 1978a, 1980). These changes did not, however, result in major declines in proportions experiencing premarital first pregnancies.

Within the home parents may, during the 1970s, have become more resigned to coitus occurring before marriage and more tolerant of its consequences. But whether parental sex education improved is less certain. Studies have generally shown parents to be an important source of sex information for New Zealand adolescents, especially for girls. [22] However, their results are difficult to interpret because they derive from multiple responses to checklists of sources and from samples which are biased toward the better educated, whose parents are probably more competent sex educators (Schofield, 1965). Page (1975) and Sparrow (1978) both provide evidence that the peer group is the primary source of contraceptive information among New Zealand adolescents.

Overall, if young people's appreciation of contraception and of the hazards of unprotected coitus improved during the 1970s, it most likely did so via a peer group which acquainted itself more thoroughly with such issues. The key question, though, is whether the practice of contraception improved. It is impossible to reach any firm conclusion by comparing surveys which have probed adolescent contraceptive behaviour. In most cases the samples are clearly not comparable, especially in respect of the age distribution of respondents. [23] Studies by Irwin (1976) and Cameron (1979) pertain to first year students in tertiary educational institutions in 1969-70

[21] This act prohibited the giving of contraceptive advice or supplies to persons under sixteen years old. With the minimum school leaving age set at fifteen there was thus little scope for reaching, for example, Polynesian teenagers or teenagers from working class backgrounds. Both of these groups have been shown to experience first coitus particularly early (Davis, 1977; Cameron, 1979).

[22] See Gow (1969), Werry et al (1974), Page (1975), Page et al (1975), Irwin (1976), Dempsey (1977), Sparrow (1978), and Cameron (1979).

and 1978 respectively. Irwin, however, fails to refine her analysis of contraceptive behaviour by sex, while Cameron has only a small, non-random sample.

Access to reliable contraception may have improved for unmarried young women aged sixteen and over during the 1970s. The pill continued to be available only on prescription, but supported by the new feminism and perhaps less concerned and better able than previous generations to avoid parental detection, they may have become more forthright in approaching doctors. Their cause may also have been aided by greater understanding of their needs by some sectors of the medical profession.

Obstacles to the practice of effective premarital contraception include the often intermittent occurrence of intercourse, coping with the premeditation needed to acquire contraceptives, and problems of concealing one's behaviour from one's family. [24] Likely changes in these areas constitute the strongest reasons for suspecting improved contraception among the unmarried young. A crucial factor here has been youth's growing autonomy and independence. Not only have young people achieved greater residential independence; they have become less answerable to parents and the parental generation. This process

[23] Lindemann (1974) has argued that young unmarried women progress toward more regular use of contraception and reliance on more effective methods as coital frequency, acknowledgement of their sexuality, and knowledge of contraceptive methods and how to obtain them increase. Such a process, apparent in data for New Zealand presented by Page (1975) and Cameron (1979), makes it essential to control for respondents' ages when comparing results from different surveys.

[24] See, for example, Rains (1971), Kantner and Zelnik (1973), Luker (1975), Tighe (1975), Pool and Pool (1978), and Allen (1980). In the New Zealand context see Sparrow (1978).

had a more confrontationalist character during the 1960s. It has since matured until, now, many unmarried young people are living together openly (Chapter 6). This trend implies an appreciable reduction in the guilt associated with premarital coitus. It also implies more regular intercourse. Finally, cohabitation presumably often reflects a conscious desire not to formalise a relationship, at least for the time being. On all these counts it is likely that regular use of reliable contraception has increased among the sexually active unmarried young, particularly from, say, age eighteen upward. At the same time a recent study of contraceptive practice among New Zealand women (Kirkwood, 1979b) concludes that 'about half' the unmarried women aged 15-24 who considered themselves at risk of pregnancy used no form of contraception. There is also American evidence (Zelnik and Kantner, 1980) that the young are showing signs of disaffection with the pill and the IUD and opting for less reliable contraceptive methods to be considered. Something similar may have occurred in New Zealand, particularly in response to publicity concerning side effects of the pill.

It is impossible to accurately apportion cause for the recent declines in age-specific ex-nuptial conception rates between abortion and contraception. Almost certainly both played a part, but probably the former was much more important. Accounts of similar trends in Australia and America have also tended to reach this conclusion. [25]

[25] See Sklar and Berkov (1974), Shelton (1977), Kraus (1978), Zelnik and Kantner (1978b), and Zelnik et al (1979).

Legitimation Ratio

The non-Maori legitimation ratio, having changed little during the 1950s, generally fell through the 1960s (Chapter 2). The total population ratio also fell steadily during the 1960s, but after 1970 it positively plummeted (Table 3.16). Given the role abortion is thought to have played in reducing the ex-nuptial conception rate during the 1970s this is perhaps surprising. One might have postulated that pregnancies terminated by abortion would first and foremost have been those occurring in relationships lacking the commitment to lead to marriage. Other things remaining equal, the legitimation ratio would then have increased. Seemingly, though, some committed couples are today sufficiently determined to avoid unplanned parenthood to also resort to abortion. [26]

Age-specific Legitimation Ratios

The main determinants of declines since 1962 in the legitimation ratio have been declines at ages 15-24. These were very uniform during 1962-70, with just a slight tendency for ratios at ages 20-24 to fall proportionately more than those at ages 15-19 (Table 3.16). Acceleration of these downward trends during 1970-77 was sharpest at the youngest ages.

It is gratifying that pregnancy at younger ages is leading less frequently to marriage, since marriages contracted under these

[26] No evidence for New Zealand is available, but a study of the first 1,007 women who presented to the Preterm abortion clinic in Sydney, Australia found that 67.3 percent of the 640 pregnant by someone other than a legal spouse described their partner as a steady boyfriend (48.6 percent), fiance (8.7 percent), or cohabitant (10.0 percent) (Snyder and Wall, 1976).

conditions often prove unstable (Chapter 8). At the same time, girls becoming unmarried mothers when very young have lately become much less likely to have their children adopted (Chapter 5). This is partly because some have chosen informal cohabitation over marriage, and cohabiting unions entered when young are probably also particularly likely not to last. Other girls have in effect chosen solo motherhood over hasty marriage. Thus, early motherhood continues to disrupt girls' lives, but to a certain extent the nature of that disruption may have changed.

Ethnic Trends and Differences in Nonmarital Pregnancy

Maori ex-nuptial conception rates and legitimation ratios can be calculated only for 1962-70. A rise in the Maori ex-nuptial conception rate during 1962-67 was tempered somewhat by unfavourable changes in age structure, whereas a similar trend in the non-Maori rate was enhanced by favourable changes (Table 3.15). Table 3.15 also shows that the legitimation ratio declined steadily for both ethnic groups through the 1960s.

Non-Maori age-specific ex-nuptial conception rates below age twenty-five followed similar trends during 1962-70 to total population rates (Tables 3.16 and 3.17). Between 1945 and 1962, non-Maori rates at ages 15-19 increased almost continuously, as did those at ages 20-24 after 1950. The pace of change for teenaged women was slower during the early 1950s and accelerated later in that decade. The reverse was true at slightly older ages, suggesting a filtering down of new attitudes to premarital sex from the young adult to the adolescent age group (Chapter 4).

Table 3.17

AGE-SPECIFIC EX-NUPTIAL CONCEPTION RATES (AGES 14-24): NON-MAORI
 1, 2
 POPULATION 1945-1970

Year	Age of Woman										
	14	15	16	17	18	19	20	21	22	23	24
1945	1	3	9	18	28	35	39	39	39	36	37
1946	1	3	9	21	33	40	45	46	44	42	39
1947	1	3	10	33	35	40	42	44	43	39	34
1948	1	4	12	24	35	39	40	42	41	41	35
1949	1	4	13	26	37	42	43	41	42	42	38
1950	1	5	14	27	39	45	48	47	45	42	42
1951	1	5	15	29	40	47	52	50	50	50	49
1952	1	5	16	30	40	47	51	54	53	53	49
1953	1	4	17	31	42	50	53	58	57	54	51
1954	1	5	18	33	47	54	61	61	61	59	57
1955	1	6	17	34	50	56	62	64	62	62	59
1956	2	6	19	34	51	59	63	66	67	67	64
1957	2	7	21	38	54	61	66	68	68	70	68
1958	2	9	23	40	56	62	66	72	69	73	66
1959	2	9	24	43	57	65	69	73	73	71	68
1960	2	10	29	51	63	68	71	77	80	76	70
1961	3	11	31	55	70	74	79	83	86	87	78
1962	3	13	32	59	76	80	83	85	88	90	82
1963	3	15	35	59	75	82	86	89	88	88	87
1964	3	15	36	61	76	82	86	90	90	91	85
1965	4	16	38	64	82	84	88	91	90	85	76
1966	5	18	43	68	86	88	88	90	91	85	76
1967	4	18	45	71	85	87	88	84	92	92	81
1968	5	18	46	72	84	84	84	82	89	92	87
1969	5	18	47	73	83	86	83	82	82	86	86
1970	5	21	48	75	86	86	86	89	89	89	87
Indices (1962 = 100)											
1945	39	20	27	31	37	43	47	45	45	40	45
1950	31	38	42	46	51	56	58	55	51	46	51
1955	50	44	54	58	65	70	75	76	71	69	72
1960	87	77	89	86	83	84	86	90	90	85	86
1965	142	127	120	109	108	105	106	107	102	94	93
1970	188	169	149	127	114	107	104	104	100	99	107

Source: New Zealand Vital Statistics 1945-61; unpublished data supplied by the Department of Statistics.

- 1 Rates for five-year age groups in the range 15-44 years are shown elsewhere in Table A2.4, Appendix 2.
- 2 Calculations for 1961-64 are affected by the need to estimate, for the years 1962-64, the distributions of non-Maori live ex-nuptial confinements by age of mother and live nuptial first confinements at marriage durations 0-7 months by age of mother and duration of marriage (see Appendix 3).

At ages up to 30-34 years, Maori ex-nuptial conception rates generally increased until 1966 or 1967, levelled off or declined a little, and then rose again in 1970 (Table 3.18). Earlier arguments which attributed increases in Maori age-specific ex-nuptial fertility rates during the 1960s mainly to urbanisation apply again.

The pattern of change in non-Maori age-specific legitimation ratios during 1962-70 was similar to the total population pattern (Tables 3.19 and 3.16). During the 1950s, non-Maori legitimation ratios at ages 16-24 changed little. Maori age-specific legitimation ratios, which were much lower than non-Maori ratios, generally fell, if irregularly, during 1962-70 (Table 3.18). They may have been affected by similar forces to those which lowered non-Maori legitimation ratios during this period (Chapter 2).

3.6 SUMMARY

In this chapter trends in nonmarital pregnancy and ex-nuptial fertility since 1945 have been analysed in detail. Component analysis was used to provide a more thorough understanding of widely misinterpreted increments in the illegitimacy ratio. It showed that while increases in ex-nuptial fertility rates largely explained the upward trend through the 1950s, declining marital fertility rates thereafter became more important until, after 1970, they were clearly the major determinant.

Consistent with these findings, the illegitimacy rate rose until the early 1970s, then began to drop. Standardisation of the non-Maori ex-nuptial fertility rate for age suggested that the trend of the illegitimacy rate understates the pace of change in the level of

Table 3.18

AGE-SPECIFIC EX-NUPTIAL CONCEPTION RATES AND LEGITIMATION
 RATIOS: MAORI POPULATION 1962-1970^{1, 2}

Age	1962	1963	1964	1965	1966	1967	1968	1969	1970
Ex-nuptial Conception Rates									
11-13	2	1	1	2	2	2	1	2	2
14	10	12	13	13	11	10	12	11	13
15	34	38	37	40	40	38	38	37	42
16	76	85	82	87	95	88	85	86	102
17	135	140	147	155	152	156	156	155	162
18	185	183	201	216	227	241	227	223	228
19	233	245	255	260	281	275	271	279	288
20	240	243	265	283	285	285	274	287	319
21	242	254	283	301	299	323	320	306	336
22	288	293	307	316	337	370	348	342	316
23	295	289	313	335	365	359	336	343	340
24	273	281	302	313	324	344	354	357	338
25-29	323	325	322	320	338	336	377	378	364
30-34	233	234	255	252	269	267	276	271	271
35-39	170	188	201	186	202	181	170	166	149
40-44	83	71	73	77	70	47	48	53	39
Legitimation Ratios									
15	30	30	26	27	27	26	23	23	21
16	42	39	40	39	34	35	33	32	34
17	49	45	46	45	39	39	38	37	37
18	48	46	46	43	42	37	34	38	37
19	43	40	42	37	38	35	31	35	34
20	38	35	34	33	34	32	31	31	31
21	36	33	30	30	28	29	27	26	27
22	26	27	28	24	21	21	21	23	21
23	24	21	26	23	17	17	20	20	16
24	19	14	17	19	16	15	16	16	17
25-29	10	11	13	11	11	10	8	9	9
30-34	1	3	5	7	5	5	5	7	4
35-39	0	1	4	6	4	4	3	5	3
40-44	1	0	4	2	4	3	4	9	4

Source: Unpublished data supplied by the Department of Statistics.

- 1 All calculations for age groups 11-13, 14, and 40-44, as well as 1962-69 calculations for age group 15, 1962-63 calculations for age group 24, and 1962-65 and 1970 calculations for age group 35-39 are based on fewer than one hundred conceptions.
- 2 Calculations for 1961-64 are affected by the need to estimate, for the years 1962-64, the distributions of Maori live ex-nuptial confinements by age of mother and live nuptial first confinements at marriage durations 0-7 months by age of mother and duration of marriage (see Appendix 3).

Table 3.19

AGE-SPECIFIC LEGITIMATION RATIOS (AGES 15-24): NON-MAORI
 1, 2
 POPULATION 1945-1970

Year	Age of Woman									
	15	16	17	18	19	20	21	22	23	24
1945	37	45	57	64	64	65	64	60	55	45
1946	30	48	61	71	69	71	67	65	60	54
1947	30	57	63	71	71	70	68	64	60	54
1948	36	56	65	70	69	68	67	64	58	53
1949	40	56	66	70	66	67	63	61	57	55
1950	40	53	65	69	68	67	64	58	49	45
1951	34	53	62	65	65	66	61	56	52	47
1952	43	57	64	66	67	67	62	59	54	50
1953	38	64	67	69	68	65	61	58	53	50
1954	37	62	68	70	67	67	63	57	54	47
1955	39	59	67	70	69	66	64	58	49	45
1956	42	58	65	69	66	65	64	55	48	45
1957	45	57	65	70	69	66	61	55	49	43
1958	45	56	67	70	70	67	63	57	49	40
1959	38	54	64	68	68	66	62	57	49	44
1960	34	52	62	68	68	67	60	56	49	44
1961	36	52	61	65	66	65	60	52	45	41
1962	36	52	60	63	64	63	59	52	47	45
1963	36	50	57	62	61	60	57	54	45	40
1964	32	49	56	60	60	58	56	54	45	41
1965	32	50	58	59	59	57	52	51	48	44
1966	30	48	56	59	58	56	52	47	41	39
1967	28	46	55	58	58	56	52	44	40	37
1968	30	46	55	59	60	56	51	45	39	34
1969	31	47	55	58	57	55	50	44	37	34
1970	32	47	55	58	57	54	50	45	39	37
	Indices (1962 = 100)									
1945	104	87	95	102	99	104	109	116	116	101
1950	112	102	108	109	106	107	109	112	103	100
1955	108	114	112	112	108	106	110	112	104	99
1960	95	101	103	108	106	106	103	109	104	98
1965	90	98	96	95	93	91	90	99	100	97
1970	90	90	91	92	89	87	86	87	82	82

Source: New Zealand Vital Statistics 1945-61; unpublished data supplied by the Department of Statistics.

- 1 Ratios for five-year age groups in the range 15-44 years are shown elsewhere in Table 2.4.
- 2 Calculations for 1961-64 are affected by the need to estimate, for the years 1962-64, the distributions of non-Maori live ex-nuptial confinements by age of mother and live nuptial first confinements at marriage durations 0-7 months by age of mother and duration of marriage (see Appendix 3).

ex-nuptial fertility through the 1950s and exaggerates it after the early 1960s. When added to the evidence that increases in the illegitimacy ratio were most strongly determined by rising ex-nuptial fertility rates earlier in the post-war period, this suggests that the 1950s were more important to the evolution of a new morality in New Zealand than has generally been realised.

Age-specific ex-nuptial fertility rates increased at all ages through the 1950s, but began to level off or decline at ages twenty-five and over after the early 1960s. Rates at ages 15-19 and 20-24, however, continued to climb until the early 1970s, and those at ages 15-17 even longer. After 1960, declining legitimation ratios tended to raise ex-nuptial fertility rates, but did not account fully for the increases recorded.

Trends in age-specific ex-nuptial conception rates confirm this last point. These rates, too, rose throughout the 1950s at all ages and on through the 1960s at ages 15-24. There being no reason to suppose that nonmarital fertility control deteriorated during this period age for age, it must be concluded that the level of adolescent and young adult premarital sexual activity rose appreciably.

The levelling off or decline of ex-nuptial fertility and conception rates at ages twenty-five and over during the 1960s probably resulted mainly from the introduction of the pill. Changing attitudes to childbearing at older ages as women's attitudes to employment changed may also have been a factor. Sharp declines in both rates at these ages during the early 1970s reflect, in addition, improved access to abortion and improved contraception among consensually married Maori women. It also seems likely that changing

patterns of marriage dissolution following the introduction of the DPB lowered the level of sexual activity among women at risk, especially at ages over thirty. The trend toward contraceptive sterilisation probably helped as well.

During 1971-75, ex-nuptial fertility rates fell appreciably at ages 20-24. Less spectacular declines set in at successively younger ages as the decade progressed. The timing and magnitude of the reductions at ages 20-24 suggests that liberalisation of the abortion laws in New South Wales and Victoria, and especially the former, provides the key to their explanation. It also seems significant that declines at the youngest ages did not begin until after the AMAC abortion clinic had opened.

These conclusions are reinforced by trends in age-specific ex-nuptial conception rates. Removal of the mediating influence of marriage before confinement results in steeper downward trends after 1971, and suggests that the expansion of abortion services in Australia affected conception rates right down to age sixteen. At the same time, there are grounds for suspecting improved contraceptive performance among the unmarried young during the 1970s, especially from perhaps age eighteen upward. A resurgence of ex-nuptial fertility rates at ages 20-29 in the late 1970s may presage a new development - a permanently higher incidence of childbearing within consensual unions.

Both the bridal pregnancy ratio and age-specific ratios at ages 16-24 rose until the early 1960s, declined gradually through the remainder of that decade, and dropped steeply after 1970. Component analysis showed that rising ex-nuptial conception rates mainly

accounted for the upward trends before 1963. During 1963-70 the positive impact of further increases in these rates was more than offset by the negative effects of declining probabilities of marriage when nonmaritally pregnant and rising probabilities of marrying non-pregnant. Accelerated decline in the bridal pregnancy ratio after 1970 stemmed from a strengthening of the first of these negative forces and emphatic reversals of the upward trends of ex-nuptial conception rates at ages under twenty-five. It was accompanied by increases in the proportions of pregnant brides at any age whose weddings were genuinely 'shotgun' ones.

At various points in the analysis, attention was focused on ethnic differentials. Maoris and Pacific Island Polynesians account for disproportionately large numbers of ex-nuptial live births and live births following ex-nuptial conception. Their value systems are more accepting of premarital coitus and illegitimacy, and less concerned with formalising marriages and their dissolution, than is the European value system.

The Maori illegitimacy ratio more than doubled during 1962-78, principally because of a massive decline in marital fertility. The increase would have been sharper except that fertility fell within consensual as well as formal marriages. Both Maori and non-Maori ex-nuptial fertility rates at ages 15-24 increased, if somewhat irregularly, through the 1960s, but for different reasons. Whereas non-Maori trends signified rejection of the Judaeo-Christian moral code, Maori ones largely manifested the greater freedom with which young people practised their traditional morality following urbanisation. After 1970, Maori ex-nuptial fertility rates did not

decline at ages 15-18 as non-Maori rates did, but both ethnic groups recorded declines at ages 19-24. This suggests that while better access to abortion was probably the main determinant of declining ex-nuptial fertility and conception rates for the total population during the 1970s, the dominant forces among Maoris were improved contraception within consensual unions and possibly a reduced incidence of consensual marriage.

That Maori data are available for less than a decade precludes much being said about differential trends by ethnic origin in either bridal pregnancy ratios or ex-nuptial conception rates. Those Maori women who married formally during the 1960s were considerably more likely than their non-Maori counterparts to be pregnant at marriage. Nonetheless, during this period Maori women were significantly less likely to regularise nonmarital pregnancies by marriage.

CHAPTER 4

PREMARITAL PREGNANCY TRENDS IN LIFE CYCLE PERSPECTIVE

4.1 INTRODUCTION

Chapters 2 and 3 examined trends in nonmarital pregnancy using various rates and ratios computed on an annual basis. This chapter attempts to place the premarital component of nonmarital pregnancy in life cycle perspective by restricting attention to first pregnancies which occur in advance of first marriage and focusing ultimately on the cumulative experience of cohorts, both synthetic and real. Such an approach emphasises the pregnancies which cause the greatest social concern - those which occur to never married women, generally at younger ages. It also adds to the analysis a realism which is one of the attractive features of the life cycle framework of social enquiry. [1]

Strictly speaking, the type of analysis just described cannot be undertaken because of shortcomings in the available data. Data on ex-nuptial confinements by age of mother cannot be obtained refined by parity and marital status, precluding isolation of those which are first confinements of never married women. Furthermore, there is no knowing how many nuptial confinements occurring within marriage

[1] For a comprehensive review of the literature dealing with this framework see Young (1977). Its value for demographic analysis has long been recognised by Glick (1947, 1957, 1977a, 1977b) (see also Glick and Parke (1965)), and more recently by Pool and Crawford (1979).

durations 0-7 months were first confinements of women who had never been married at conception. Various assumptions and estimation procedures are used to overcome these constraints.

4.2 METHOD OF ANALYSIS

Multiple decrement principles are employed as the main tool of analysis. [2] Both synthetic and real birth cohorts are depleted for three forms of decrement: conception prior to first marriage followed by ex-nuptial confinement, conception prior to first marriage followed by nuptial confinement, and first marriage prior to the conception of a first child. Derivations of the equations used are presented in Appendix 7. They assume zero mortality, and that migration at all times affected equally those who had already experienced each form of decrement and those still at risk. The latter assumption may be rather weak, but this is likely to be of limited significance to results.

Because of the data limitations the analysis is constrained in several ways. It is restricted to conceptions at ages less than twenty-five years, thus eliminating age groups in which high proportions of ex-nuptial conceptions occur to women who have previously given birth, previously been married, or both (Table A7.1, Appendix 7). Second, all nuptial confinements following premarital conception at ages less than twenty-five are assumed to be first

[2] Pool and Crawford (1980) have also applied life table methods to the investigation of trends in nonmarital pregnancy. However, their study appeared at a time when the work reported here was well advanced. Moreover, their method differs considerably in detail from that used here, and their analysis is not as thorough.

confinements. This assumption should fit reality well at younger ages, but will be less robust at older ones. Thirdly, data from the Department of Social Welfare's 1970 Ex-nuptial Birth Survey are used to adjust distributions of ex-nuptial confinements by age of mother to eliminate those which are not first confinements of never married women. This procedure is described in Appendix 7.

The analysis also required annual distributions of marriages of never pregnant spinsters by age at marriage. [3] It was possible, using the method of Basavarajappa (1968), to estimate distributions of never married brides who were not pregnant by age at marriage. From these, however, it was necessary to exclude brides who, though not pregnant, had given birth ex-nuptially. As discussed in Appendix 7, there are reasons why a never married mother might be expected to marry both sooner and later than a never married, never pregnant peer. The literature gives little guidance as to the net tendency, so results presented here assume that once a spinster has given birth her subsequent probability of first marriage at any age x equals that for members of the same cohort who attain age x without becoming pregnant. Alternative assumptions were tried experimentally, but they altered the findings concerning the two premarital conception modes of decrement only in detail, not in substance. [4]

[3] Never pregnant spinsters are defined as those who had never experienced a pregnancy which had already been, or was in the process of being, carried to term.

[4] Alternative assumptions tried were that ex-nuptial confinement increased the probabilities of first marriage at each subsequent age by one-quarter and by half compared to those for never pregnant spinsters, and that it decreased them by similar relative amounts.

4.3 MULTIPLE DECREMENT FINDINGS

Using the methodology just outlined, annual synthetic cohort multiple decrement tables were generated for the non-Maori and total female populations aged 11-24 as at 31st December for the periods 1913-69 and 1962-76 respectively. Real cohort tables covering all or part of the same age range were generated for the 1899-1955 non-Maori female birth cohorts and for the 1946-62 total population female birth cohorts. [5] In discussing results from these tables, $q(x)$ denotes the probability of premarital conception at age x leading to ex-nuptial confinement, $q'(x)$ the probability of premarital conception at age x leading to nuptial confinement, and $q''(x)$ the probability of first marriage at age x never having been pregnant. [6] The numbers of women from a radix of 1000 attaining exact age eleven experiencing each decremental event at age x are then denoted by $d(x)$, $d'(x)$, and $d''(x)$, and the cumulative numbers experiencing each event at or below age x by $\Sigma d(x)$, $\Sigma d'(x)$, and $\Sigma d''(x)$. Findings presented are those obtained using non-Maori assumption 3 and total population assumption 4 from Table A7.2, Appendix 7. These appealed intuitively as the most

[5] No attempt was made to produce Maori tables because of the shortcomings of Maori data and the limited period for which they were available.

[6] Note at this point that technically the two series of real cohort tables should have commenced with the 1902 and 1951 birth cohorts, these being the first for which $q(11)$ could be estimated. The non-Maori series was begun at 1899 because it appeared that assuming unknown $q(x)$ values to equal zero would introduce minimal errors into the 1899-1901 tables. The total population series was begun at 1946 mainly because the last non-Maori cohort for which a complete table could be derived was the 1945 cohort. In generating the 1946-50 total population tables, unknown $q(x)$ values were assumed to equal the first known values (e.g. $q(11,46) = q(11,51)$, $q(12,46) = q(12,50)$, etc, where $q(x,y) = q(x)$ for the year y birth cohort), and $q'(46,15)$ was assumed equal to $q'(47,15)$. The errors introduced by these assumptions are again undoubtedly minimal.

reasonable, but an assessment of the impact of varying them is presented in Appendix 8.

Age-specific Decremental Probabilities

Synthetic Cohorts

Comparing Tables 4.1 and 4.2 one sees that World War 1 had a greater effect on probabilities of conception followed by nuptial confinement than it did on probabilities of conception followed by ex-nuptial confinement. The former rose again as the War ended, then remained quite stable through the 1920s. The latter also changed little during the 1920s, although they tended to fall at some ages later in the decade. Again there is no hint of a sexual revolution akin to that which occurred in the United States at this time (Chapter 2, footnote 15).

The 1930s brought $q(x)$ values which, except at the youngest ages, were decidedly lower than during 1913-29 (Table 4.1). Declines seem to have preceded the Depression to a certain extent, especially at the ages of highest risk. Probabilities at ages 22-24 began to rise again later in the decade, before World War 2 brought significant increments across the board. The story concerning $q'(x)$ values was different (Table 4.2). Declines in the early 1930s were more clearly responses to the Depression, presumably reflecting its discouraging of courtship, and at most ages were quickly offset by increases which accompanied rising first marriage rates after 1933. The War then saw probabilities fall to, at many ages, the lowest levels recorded, before rising sharply again with the post-war marriage boom.

Table 4.1

SYNTHETIC COHORT PROBABILITIES OF PREMARITAL CONCEPTION LEADING TO
EX-NUPTIAL FIRST CONFINEMENT (1000q(x)) 1913-1976

Year	Age											Age										
	14	15	16	17	18	19	20	21	22	23	24	14	15	16	17	18	19	20	21	22	23	24
	Non-Maori											Total										
1913	2	4	7	11	13	14	12	10	9	9	7											
1914	1	2	6	9	12	14	11	10	9	8	6											
1915	1	1	5	9	11	13	11	10	9	7	6											
1916	1	2	4	9	11	13	11	9	9	6	5											
1917	1	2	4	8	10	11	12	10	9	7	6											
1918	1	2	5	7	10	12	12	11	9	7	6											
1919	1	2	5	8	12	13	12	12	11	9	8											
1920	1	2	5	8	11	11	11	10	9	9	8											
1921	1	2	5	7	10	10	10	9	9	8	7											
1922	1	3	5	8	10	10	10	8	9	8	7											
1923	1	2	5	7	10	12	10	9	9	8	7											
1924	1	2	5	8	11	12	11	9	9	7	7											
1925	1	2	5	9	12	11	11	10	9	7	7											
1926	1	2	5	8	11	10	10	9	8	8	7											
1927	1	2	5	8	9	10	10	8	7	7	6											
1928	1	2	5	8	9	10	9	8	8	7	5											
1929	1	3	5	7	9	9	9	9	8	6	6											
1930	1	3	5	7	9	8	8	8	7	6	5											
1931	1	2	4	7	8	9	8	7	6	5	4											
1932	1	2	4	6	8	8	7	7	6	4	4											
1933	1	2	4	6	8	8	7	7	6	4	4											
1934	1	2	3	5	7	7	7	7	6	5	4											
1935	1	2	4	6	7	8	7	7	6	6	5											
1936	1	2	4	6	7	8	7	7	6	6	6											
1937	1	2	4	6	8	8	7	6	6	6	6											
1938	1	2	3	6	8	8	7	7	8	8	7											
1939	1	2	4	6	9	8	8	7	8	9	9											
1940	1	2	4	6	8	8	9	8	8	9	8											
1941	1	2	4	6	9	9	9	9	8	8	6											
1942	1	2	4	8	10	11	11	11	10	9	7											
1943	1	2	6	9	12	13	13	13	13	12	11											
1944	1	2	5	8	11	13	12	11	12	11	12											
1945	1	2	5	8	9	12	12	12	13	14	16											
1946	1	3	4	8	9	11	11	12	14	15	18											
1947	1	2	5	8	10	11	11	11	12	13	13											
1948	1	2	6	8	11	12	11	11	12	14	13											
1949	1	3	6	9	11	13	13	12	14	14	14											
1950	1	3	7	10	13	14	14	14	15	17	19											
1951	1	3	7	11	14	15	15	15	16	18	19											
1952	1	3	6	10	13	14	14	15	15	17	18											
1953	1	3	6	10	13	15	15	16	17	18	21											
1954	1	4	7	11	14	16	16	16	19	22	26											
1955	1	3	8	11	14	16	16	16	20	24	28											
1956	2	3	8	12	15	18	18	18	21	26	29											
1957	2	5	9	13	16	16	17	18	20	26	30											
1958	2	5	10	13	16	17	16	18	20	25	28											
1959	2	6	12	17	17	19	18	19	21	24	25											
1960	3	7	15	20	21	20	20	22	26	29	30											
1961	3	8	15	22	26	25	23	24	30	34	35											
1962	3	9	16	24	27	28	25	25	28	33	31	4	10	19	28	32	35	33	33	38	44	43
1963	3	10	18	25	28	29	27	27	27	32	34	4	12	21	29	33	36	35	35	35	42	45
1964	3	11	19	26	30	29	28	28	28	31	31	4	12	21	30	36	36	36	36	37	40	41
1965	4	12	20	27	32	32	29	31	32	32	30	5	14	24	31	39	39	37	38	41	43	39
1966	5	13	24	30	24	33	30	29	35	37	33	5	15	27	35	41	40	36	37	43	47	42
1967	5	13	25	31	33	32	30	28	34	37	34	5	15	27	37	42	40	36	35	42	45	41
1968	5	13	24	31	32	30	28	28	31	37	37	5	15	27	37	40	39	34	34	37	43	41
1969	5	14	25	32	34	33	29	30	33	37	39	6	15	28	37	41	41	36	36	38	43	42
1970												7	17	30	39	42	41	38	40	43	47	43
1971												7	19	32	40	43	39	35	37	40	41	36
1972												8	21	33	38	39	36	30	31	32	31	25
1973												8	22	32	38	37	34	27	26	25	24	20
1974												7	20	31	35	36	31	25	23	19	17	14
1975												7	20	31	35	34	30	23	21	18	15	12
1976												7	19	30	35	35	31	23	19	17	14	11

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Table 4.2

SYNTHETIC COHORT PROBABILITIES OF PREMARITAL CONCEPTION LEADING TO
NUPTIAL FIRST CONFINEMENT (1000q'(x)) 1913-1976

Year	Age										Age									
	15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20	21	22	23	24
	Non-Maori										Total									
1913	1	4	12	20	24	27	27	28	27	27										
1914	1	4	10	19	22	26	26	26	26	23										
1915	1	4	9	16	18	23	25	23	23	20										
1916	1	3	9	13	17	22	22	17	16	15										
1917	1	3	8	13	15	19	19	16	14	12										
1918	1	3	8	14	18	21	24	22	19	17										
1919	1	3	10	18	24	31	35	35	30	27										
1920	2	4	10	19	24	32	32	31	30	28										
1921	1	5	11	18	23	31	29	26	24	24										
1922	1	4	11	19	24	30	29	26	24	22										
1923	1	4	12	19	25	30	30	27	23	22										
1924	1	5	13	20	24	29	30	27	24	22										
1925	2	6	13	22	25	30	31	29	27	22										
1926	2	6	13	22	25	30	30	28	26	23										
1927	1	5	13	22	24	29	28	26	23	21										
1928	1	6	13	21	25	29	28	27	24	21										
1929	2	6	12	20	25	30	29	26	25	22										
1930	2	6	12	20	23	27	28	25	24	19										
1931	2	6	12	19	23	25	25	24	23	19										
1932	1	5	11	18	22	26	25	24	21	18										
1933	1	5	10	18	23	25	26	23	19	17										
1934	1	5	11	18	21	23	23	23	19	17										
1935	1	5	12	19	24	25	24	23	21	18										
1936	1	5	13	20	24	26	26	24	23	21										
1937	1	6	13	22	25	28	27	25	23	22										
1938	1	6	14	23	27	27	26	26	25	24										
1939	1	5	13	21	26	28	25	26	25	27										
1940	1	4	10	17	20	23	21	19	17	18										
1941	1	4	9	14	18	19	18	15	13	14										
1942	1	4	9	13	16	17	17	14	12	12										
1943	1	4	9	16	17	18	19	17	15	13										
1944	1	4	9	16	20	22	21	22	18	17										
1945	1	4	12	21	25	31	30	32	31	31										
1946	1	5	13	25	29	33	35	37	40	43										
1947	1	6	15	25	29	29	31	32	32	30										
1948	2	7	17	25	28	29	27	30	31	31										
1949	2	8	18	27	30	32	28	29	28	31										
1950	2	8	18	27	32	34	32	32	29	30										
1951	2	9	19	27	32	35	32	33	37	37										
1952	2	10	20	28	34	34	35	35	35	36										
1953	2	11	22	32	35	38	35	37	38	42										
1954	2	11	24	35	38	42	40	40	44	49										
1955	2	11	23	36	40	41	42	41	43	50										
1956	3	12	24	36	41	42	41	42	45	51										
1957	4	12	26	40	44	45	43	42	47	47										
1958	4	13	27	40	46	45	45	46	46	46										
1959	3	14	30	40	46	48	45	48	45	49										
1960	4	16	34	47	50	52	49	52	54	53										
1961	4	17	36	49	56	56	54	55	58	60										
1962	5	17	36	50	55	57	54	55	57	59	6	18	39	54	59	60	58	59	60	61
1963	5	18	35	48	54	55	55	56	54	54	6	20	37	52	57	58	59	60	57	55
1964	5	19	37	49	54	54	52	58	57	57	5	20	40	53	58	58	57	62	62	60
1965	6	21	39	53	54	55	53	55	57	56	6	22	42	57	58	59	57	58	59	59
1966	5	21	40	53	56	54	51	53	51	51	6	22	42	57	60	58	55	56	53	53
1967	5	21	41	52	55	54	48	51	53	49	6	22	44	56	58	58	53	55	56	52
1968	6	22	41	52	54	51	48	48	50	50	6	23	43	55	58	55	52	52	53	52
1969	6	23	42	52	53	52	50	50	51	58	7	24	44	56	58	57	54	54	53	59
1970											8	25	44	56	57	58	58	62	62	65
1971											7	24	39	49	50	49	47	47	51	47
1972											7	20	33	40	39	35	33	33	33	28
1973											6	17	29	32	31	28	26	25	25	23
1974											4	13	22	25	24	22	20	20	19	17
1975											3	10	17	21	20	18	16	14	16	14
1976											2	8	14	18	18	16	15	14	13	12

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Probabilities of conception followed by ex-nuptial confinement changed little during 1945-49, although the beginnings of upward trends can be detected after 1947. By 1959 they were half as high again to twice as high as they had been ten years earlier. A doubling of probabilities at ages 15-17 occurred mainly after 1956, while at ages 20-24 most of the decade's change took place earlier. This suggests a filtering down of behavioural and attitudinal changes. Possibly younger women copied older siblings, or were convinced by older partners that a new morality was evolving. At these ages two or three years can mean a substantial difference in social sophistication, economic independence, and independence from parents. At no other time in their lives are girls more vulnerable to the sexual demands of slightly older male friends.

Probabilities of conception followed by nuptial confinement (Table 4.2) peaked in 1946 at ages 20-24, but either remained stable or continued to increase through the late 1940s at younger ages. Trends were upward at all ages through the 1950s, so that 1959 values were half to two-thirds higher than 1949 ones. Comparison of Tables 4.2 and A2.6, Appendix 2 shows that at ages 21-24 probabilities of marrying never pregnant remained stable or declined during the latter half of the 1950s whilst probabilities of conception leading to nuptial confinement increased or stabilised. At ages 16-19 rates of increase in the latter indices were much higher than those in the former. This contrasts sharply with what happened during the 1930s, for while in 1939 $q'(x)$ values stood at about their 1929 levels, $q''(x)$ values were considerably higher. Another finding of Chapter 2 is thus confirmed. During the 1930s marriage became more popular without any marked disturbance of a morality based on premarital chastity, but

during the 1950s questioning of this morality was an integral feature of changing marriage behaviour.

Non-Maori probabilities of conception leading to ex-nuptial confinement continued to increase at ages 14-21 until the 1967-69 recession (Table 4.1). At ages 22-24, very large increments during 1959-61 gave way to several years of little change, then further increments. Net change during 1959-69 was much higher at all ages than it had been during 1949-59, with $q(x)$ values doubling at ages 14-18. Probabilities of conception followed by nuptial confinement (Table 4.2) also continued to rise after 1959, but did so briefly at ages 19-24. Only at younger ages did they increase more or less persistently throughout the decade.

Total population trends for 1962-69 differ little from non-Maori ones (Tables 4.1 and 4.2). During 1969-76, total population probabilities of conception followed by ex-nuptial confinement at ages 14-18 first increased for from two to four years, then began to fall (Table 4.1). At ages 19-24 they declined rapidly after 1970, especially between 1970 and 1974. However, concurrent declines in probabilities of conception leading to nuptial confinement were even more spectacular (Table 4.2).

Real Cohorts

Tables 4.3, 4.4, and A2.7, Appendix 2 present $q(x)$, $q'(x)$, and $q''(x)$ values computed for real birth cohorts. [7] Comparison with Tables 4.1, 4.2, and A2.6, Appendix 2 shows that, as with any demographic phenomenon subject to marked period influences, analysis of trends using cross-sectional data is apt to exaggerate peaks and

Table 4.3

PROBABILITIES OF PREMARITAL CONCEPTION LEADING TO EX-NUPTIAL FIRST

CONFINEMENT (1000q(x)): 1899-1962 FEMALE BIRTH COHORTS

Birth Cohort	Age											Age										
	14	15	16	17	18	19	20	21	22	23	24	14	15	16	17	18	19	20	21	22	23	24
	Non-Maori											Total										
1899	2	2	5	9	10	12	12	9	9	8	7											
1900	1	1	4	8	10	13	10	9	9	8	7											
1901	1	2	4	7	12	11	10	9	9	7	7											
1902	1	2	5	8	11	10	10	9	9	7	7											
1903	1	2	5	8	10	10	10	9	9	8	6											
1904	1	2	5	7	10	12	11	10	8	7	6											
1905	1	2	5	8	10	12	11	9	7	7	6											
1906	1	2	5	7	11	11	10	8	8	6	6											
1907	1	3	5	8	12	10	10	8	8	6	5											
1908	1	2	5	9	10	10	9	9	7	5	4											
1909	1	2	5	8	9	10	9	8	6	5	4											
1910	1	2	5	8	9	9	8	7	6	5	4											
1911	1	2	5	8	9	8	8	7	6	5	5											
1912	1	2	5	7	9	9	7	7	6	6	5											
1913	1	2	5	7	8	8	7	7	6	5	5											
1914	1	3	5	7	8	8	7	7	6	5	5											
1915	1	3	4	6	8	7	7	7	6	6	6											
1916	1	2	4	6	7	8	7	6	7	7	7											
1917	1	2	4	5	7	8	7	7	7	9	8											
1918	1	2	3	6	7	8	7	7	7	9	9											
1919	1	2	4	6	8	8	8	8	9	10	12											
1920	1	2	4	6	8	8	9	10	11	13	12											
1921	1	2	4	6	9	8	10	12	13	11	10											
1922	1	2	3	6	8	10	11	13	12	10	9											
1923	1	2	4	6	9	11	12	11	10	10	8											
1924	1	2	4	6	10	13	11	11	11	10	9											
1925	1	2	4	8	12	13	11	11	11	12	11											
1926	1	2	4	9	11	11	11	10	11	12	14											
1927	1	2	6	8	9	11	10	11	12	14	14											
1928	1	2	5	8	9	11	11	12	13	15	13											
1929	1	2	5	8	10	12	12	13	14	15	15											
1930	1	2	4	8	10	13	13	15	15	16	19											
1931	1	3	5	8	11	14	14	15	16	17	20											
1932	1	2	6	9	12	15	13	15	16	18	20											
1933	1	2	6	10	14	14	15	15	17	21	23											
1934	1	3	7	11	13	15	16	16	19	22	23											
1935	1	3	7	10	13	15	16	16	18	21	20											
1936	1	3	6	10	14	16	17	17	18	21	22											
1937	1	3	6	11	14	17	16	17	19	23	25											
1938	1	3	7	11	15	16	16	18	22	26	25											
1939	1	4	8	12	15	17	17	20	26	28	29											
1940	1	3	8	13	16	18	18	21	24	26	24											
1941	1	3	9	13	17	19	21	22	23	24	21											
1942	2	5	10	17	21	24	24	25	27	28	29											
1943	2	5	12	20	25	27	26	28	30	30	28											
1944	2	6	15	22	27	28	27	29	31	33	31											
1945	2	7	15	24	28	29	28	27	30	32	29											
1946	3	8	16	25	30	31	28	25	27	27		4	10	18	29	35	37	33	30	31	31	25
1947	3	9	18	26	32	32	28	26	28			4	10	21	30	38	39	34	31	32	33	28
1948	3	10	19	26	33	31	27	27				4	12	21	31	40	39	33	33	35	34	28
1949	3	11	20	30	33	30	28					4	12	24	35	41	38	35	36	37	34	29
1950	3	12	24	31	32	32						4	14	27	37	40	40	36	35	33	31	24
1951	4	13	25	31	33							5	15	27	37	40	39	34	32	30	26	22
1952	5	13	24	32								5	15	27	37	41	38	30	28	26	24	20
1953	5	13	24									5	15	28	39	42	36	29	27	25	23	
1954	5	14										5	15	30	39	39	35	27	25	23		
1955	5											6	17	32	38	37	32	26	23			
1956												7	19	33	38	36	32	26				
1957												7	21	32	36	35	32					
1958												8	22	32	35	36						
1959												8	20	31	36							
1960												7	20	30								
1961												7	19									
1962												7										

Table 4.4

PROBABILITIES OF PREMARITAL CONCEPTION LEADING TO NUPTIAL FIRST

CONFINEMENT (1000q'(x)): 1899-1961 FEMALE BIRTH COHORTS

Birth Cohort	Age										Age									
	15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20	21	22	23	24
	Non-Maori										Total									
1899	1	4	9	13	18	30	31	26	25	22										
1900	1	3	8	14	24	32	29	27	23	21										
1901	1	3	8	18	24	30	29	27	23	21										
1902	1	3	10	19	23	30	29	27	26	23										
1903	1	3	10	18	24	30	29	29	26	21										
1904	1	4	11	19	25	29	30	28	23	21										
1905	2	5	11	19	23	29	29	26	24	22										
1906	1	4	12	20	25	30	28	27	25	20										
1907	1	4	13	22	25	29	28	26	24	21										
1908	1	5	13	22	24	29	29	25	24	19										
1909	1	6	13	22	25	30	29	25	23	18										
1910	2	6	13	21	25	27	26	25	19	17										
1911	2	5	13	20	23	25	25	23	19	17										
1912	1	6	12	20	23	26	26	23	20	18										
1913	1	6	12	19	23	25	23	22	21	18										
1914	1	6	12	18	23	23	24	23	21	18										
1915	2	6	11	18	21	24	25	23	21	19										
1916	2	5	10	18	23	26	26	24	21	16										
1917	1	5	11	19	24	27	25	23	17	16										
1918	1	5	12	20	25	26	24	19	15	15										
1919	1	5	13	22	27	28	22	17	14	15										
1920	1	5	13	23	26	24	20	16	16	16										
1921	1	6	14	21	20	20	18	17	17	19										
1922	1	6	13	17	18	18	19	21	23	21										
1923	1	5	10	14	16	18	21	26	25	18										
1924	1	4	9	13	17	21	27	29	25	22										
1925	1	4	9	16	20	29	31	28	26	24										
1926	1	4	9	16	25	32	29	27	24	21										
1927	1	4	9	21	29	28	26	26	23	27										
1928	1	4	12	25	28	28	26	28	29	28										
1929	1	4	13	25	27	31	30	30	30	31										
1930	1	5	15	25	30	33	31	33	33	35										
1931	1	6	17	27	32	34	34	34	35	35										
1932	1	7	18	27	32	34	33	34	33	35										
1933	2	8	18	27	33	37	38	37	38	36										
1934	2	8	19	28	35	41	40	38	40	37										
1935	2	9	20	31	37	40	39	37	38	39										
1936	2	10	22	35	39	41	40	41	39	38										
1937	2	11	24	36	40	44	43	44	43	43										
1938	2	11	23	36	43	44	43	45	45	46										
1939	2	11	24	39	45	47	46	47	50	47										
1940	2	12	26	39	45	48	47	47	44	43										
1941	3	12	27	40	47	50	47	47	45	39										
1942	4	13	30	46	53	54	52	54	49	45										
1943	4	14	34	48	54	53	49	48	42	41										
1944	3	16	36	50	53	52	49	48	47	42										
1945	4	17	36	48	53	52	47	46	43	42										
1946	4	17	34	49	52	50	44	41	37											
1947	5	18	37	52	54	52	45	42			6	18	36	51	55	53	46	43	38	38
1948	5	19	39	52	53	49	45				6	19	39	55	57	55	47	45	44	36
1949	5	21	40	52	54	50					6	20	41	56	57	52	49	51	42	31
											5	22	42	55	57	54	52	43	37	34
1950	6	21	41	52	52						6	22	44	55	57	55	44	35	33	29
1951	5	21	41	52							6	22	43	55	56	47	36	30	29	25
1952	5	22	42								6	23	44	55	48	36	29	26	24	23
1953	6	23									6	24	43	49	39	30	24	20	22	
1954	6										7	25	39	39	32	24	20	19		
1955											8	24	33	32	26	20	19			
1956											7	20	29	26	22	18				
1957											7	17	22	21	19					
1958											6	13	17	18						
1959											4	10	14							
1960											3	8								
1961											2									

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

troughs in the movement of indices. This is especially so at ages 22-24.

Non-Maori women born during 1900-09 were more likely to have conceived premaritally at ages 18-23 and proceeded to term ex-nuptially than those born during 1910-19 (Table 4.3). They were also a little more likely at ages 20-24 to have become pregnant and married before confinement (Table 4.4). The birth cohorts of the 1920s then recorded $q(x)$ values at ages 18-20 similar to those of the 1900s cohorts, but rather higher values at ages 21-24. These cohorts were in their early twenties during and straight after World War 2, and the fact that probabilities of conception at these ages leading to ex-nuptial confinement did not just rise temporarily at that time may indicate a loosening of moral standards. However, the post-war marriage boom probably led to more pregnancies in anticipation of marriages that never eventuated, and may also have meant that any ultra-permissive minority formed larger proportions of populations still at risk at ages over twenty. Probabilities of conception followed by nuptial confinement generally did not reach unprecedentedly high levels at ages 20-24 for 1920s birth cohorts (Table 4.4), and unless reflecting unusually brief early post-war courtships this would suggest that traditional morality remained basically intact.

[7] In computing real cohort results, assumptions 3 (non-Maori) and 4 (total population) from Table A7.2, Appendix 7 were applied cross-sectionally in the same way as when synthetic cohort multiple decrement tables were constructed. This was because they concerned a preliminary adjustment of period input data on the basis of cross-sectional survey findings. The assumption made in section 4.2 concerning the comparative marriage prospects of never married mothers and never pregnant spinsters was, however, applied in real cohort terms.

Successive birth cohorts of the 1930s generally had higher probabilities of conception leading to both ex-nuptial and nuptial confinement at all ages. For cohorts born during the 1940s values of $q(x)$ continued to rise rapidly at ages 14-18. Total population results show this trend peaking between about 1953 and 1958, while peak values at older ages were recorded by slightly earlier cohorts. Again the evidence is that probabilities of conception followed by nuptial confinement levelled out earlier than did those of conception followed by ex-nuptial confinement. More recently, declines in the former probabilities have been much larger than those in the latter.

Patterns of Cumulative Decrement by Age

Values of $d(x)$, $d'(x)$, and $d''(x)$ indicating the numbers of women from a radix of 1000 experiencing each decremental event by age are shown for synthetic cohorts in Tables A2.8-A2.10, Appendix 2, and for real cohorts in Tables A2.11-A2.13. However, it is data showing changes in the cumulative numbers of women from the radix population who experienced each decremental event at or below given ages which place premarital pregnancy trends in life cycle perspective. They indicate how likely different cohorts of women were to experience premarital pregnancies which led to ex-nuptial and nuptial confinement at some stage during adolescence and early adulthood.

Estimates have been made previously of this type of life cycle probability, but only on a restricted basis. Jensen (1969) produced figures for the 1945-51 female birth cohorts covering ages 16-22 for the 1945 cohort and one year narrower age ranges for each subsequent cohort. They compare acceptably with results from the present

analysis, given that they relate to cumulative confinements rather than to cumulative conceptions by age. More recently O'Neill (1979: 142) has claimed that 48.7 percent of women born in 1947 and 45.6 percent of those born in 1952 'had ex-nuptially conceived a child to which they subsequently gave birth by the time they had reached age 24.' His calculations, though, do not allow for repeat ex-nuptial pregnancies, and therefore exaggerate reality. The findings of Pool and Crawford (1980) have a similar limitation, although recognising the problem they examine only conceptions resulting in confinement before age twenty-one.

Synthetic Cohorts

Cross-sectionally, during World War 1 a non-Maori woman had about a seven percent chance of conceiving premaritally before her twenty-fifth birthday, then being confined ex-nuptially (Table 4.5). This figure fell to five percent during the 1930s, rose again to over eight percent during World War 2, then declined once more. From 1947, except for faltering during 1952-53 when immigration was especially heavy, it climbed relentlessly to over seventeen percent by 1966. Upward momentum was especially strong after 1958, and incorporated a marked skewing of the distribution of $d(x)$ values toward the adolescent ages (Table A2.8, Appendix 2). It ceased abruptly in the late 1960s, when the total population percentage also plateaued at around twenty (Table 4.5). This figure then rose slightly before dropping to below nineteen percent by 1974. In doing so the distribution of $d(x)$ values became even more skewed toward younger ages (Table A2.8, Appendix 2).

Table 4.5

SYNTHETIC COHORT CUMULATIVE PREMARITAL CONCEPTIONS (PER 1000 WOMEN)
LEADING TO EX-NUPTIAL FIRST CONFINEMENTS ($\Sigma d(x)$) 1913-1976

Year	Age										Age											
	14	15	16	17	18	19	20	21	22	23	24	14	15	16	17	18	19	20	21	22	23	24
	Non-Maori										Total											
1913	2	6	13	23	36	48	58	66	72	77	81											
1914	1	4	10	19	31	43	52	60	66	70	74											
1915	1	3	8	17	28	40	49	57	64	68	71											
1916	1	3	7	16	27	38	48	55	62	66	69											
1917	1	3	7	15	24	35	45	53	60	65	69											
1918	1	4	8	15	25	36	46	56	62	67	71											
1919	1	3	9	17	29	41	51	61	68	73	77											
1920	1	3	8	16	26	36	45	53	59	64	67											
1921	1	3	8	16	25	35	44	51	57	61	65											
1922	1	3	9	16	25	35	44	50	56	61	65											
1923	1	3	8	15	25	35	44	51	57	62	65											
1924	1	3	8	15	26	36	46	53	59	64	67											
1925	1	4	9	17	29	39	48	55	62	66	69											
1926	1	3	8	16	26	36	44	51	57	61	65											
1927	1	3	8	16	25	33	42	48	53	57	61											
1928	1	4	8	16	24	33	40	47	52	56	59											
1929	1	4	9	16	24	33	41	48	53	57	60											
1930	1	4	9	16	25	32	40	46	51	54	57											
1931	1	3	8	14	22	30	37	43	47	50	53											
1932	1	3	6	13	20	27	33	39	43	46	48											
1933	1	4	7	13	21	28	34	40	44	47	49											
1934	2	4	7	12	19	26	31	37	41	44	47											
1935	1	3	7	13	20	27	33	39	43	47	49											
1936	1	3	8	13	20	28	34	40	44	47	50											
1937	1	3	7	13	21	28	34	39	43	46	49											
1938	1	3	6	12	20	27	33	38	43	47	49											
1939	1	3	7	13	22	29	35	41	45	49	52											
1940	1	3	7	12	20	28	35	41	46	50	53											
1941	1	3	6	13	21	30	38	45	51	55	58											
1942	1	3	8	15	25	35	45	54	61	66	70											
1943	2	4	9	19	30	43	53	63	72	79	84											
1944	1	3	8	16	26	38	48	56	64	69	75											
1945	2	4	8	16	25	35	45	53	60	65	70											
1946	1	4	8	16	25	35	44	52	58	63	67											
1947	1	4	9	16	26	36	44	51	57	62	65											
1948	1	3	9	17	27	38	47	54	60	65	68											
1949	1	4	10	19	29	41	50	58	64	69	73											
1950	1	4	11	21	33	45	55	64	70	76	80											
1951	2	5	12	23	36	48	59	68	75	81	84											
1952	2	4	11	21	33	44	54	64	70	75	79											
1953	2	5	11	21	33	46	57	66	73	78	82											
1954	2	5	12	23	35	48	60	69	76	82	86											
1955	2	5	13	24	37	50	62	71	78	84	88											
1956	2	5	14	26	40	54	66	76	83	89	94											
1957	2	7	16	28	42	56	67	77	84	90	95											
1958	2	8	18	31	45	60	71	80	87	93	97											
1959	3	9	21	38	53	68	80	90	97	103	106											
1960	3	10	25	44	63	79	91	102	110	116	120											
1961	4	11	26	47	69	89	103	114	123	129	134											
1962	4	13	29	51	75	96	112	123	132	138	143	5	15	34	60	87	113	133	148	160	168	174
1963	4	14	32	56	80	102	119	131	139	146	151	5	17	37	65	93	120	141	157	167	175	182
1964	4	15	33	58	84	106	123	136	145	151	155	6	18	39	67	98	124	145	162	173	180	186
1965	6	17	37	62	90	113	131	144	153	159	163	7	20	43	72	105	133	154	170	182	190	194
1966	6	19	42	70	99	123	141	153	163	170	174	7	22	48	81	115	144	164	179	191	200	205
1967	5	18	43	72	100	123	140	152	161	168	173	7	21	48	82	116	144	164	178	190	198	204
1968	6	18	42	71	98	120	136	148	156	163	168	7	21	48	81	114	142	161	175	185	193	198
1969	6	19	43	73	101	124	141	152	161	167	171	7	22	50	83	117	145	165	179	189	196	201
1970												8	25	55	90	124	152	171	186	198	203	207
1971												9	28	59	95	129	156	174	188	198	205	209
1972												10	30	62	96	128	153	169	181	190	197	201
1973												10	31	62	97	127	151	167	178	186	192	196
1974												9	29	59	91	121	144	159	170	178	183	187
1975												9	28	58	90	120	143	157	168	176	181	185
1976												8	27	56	89	120	143	159	170	177	183	187

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Until recently, synthetic cohort percentages of women conceiving premaritally before age twenty-five prior to nuptial confinement ($\Sigma d'(24)$) always exceeded percentages conceiving prior to ex-nuptial confinement ($\Sigma d(24)$), generally by considerable margins (Table 4.6). The value of $\Sigma d'(24)$ for non-Maoris stabilised for a while after World War 1 at 15-16 percent, fell to thirteen percent in 1934, recovered somewhat, then dropped even lower during World War 2. By the late 1940s it was again about fifteen percent. Thereafter it rose to a peak of nearly twenty-four percent in 1962, with the distribution of conceptions by age ($d'(x)$ values) once more skewing strongly toward the younger ages (Table A2.9, Appendix 2). Little change then occurred until the late 1960s, when a decline set in which total population data show accelerated rapidly after 1970. On the basis of 1976 figures fewer than nine percent of women could expect to become premaritally pregnant before age twenty-five, marry, then have the baby.

Real Cohorts

No female birth cohort, non-Maori or total, has yet reached age twenty-five with anything like as few as nine percent of its members having experienced a premarital pregnancy which led to a marital first confinement (Table 4.8). Nor has any had quite as high a proportion of its members affected in this way as the synthetic cohorts of 1961-65. About fifteen percent of non-Maori women born during 1900-09 had the experience. This figure then fell steadily for cohorts born between 1910 and 1923 to little more than eleven. Two main factors induced the decline - improved prospects for marriage after 1933, which made compliance with traditional morality easier; and World War

Table 4.6

SYNTHETIC COHORT CUMULATIVE PREMARITAL CONCEPTIONS (PER 1000 WOMEN)

LEADING TO NUPTIAL FIRST CONFINEMENTS ($\Sigma d'(x)$) 1913-1976

Year	Age										Age									
	15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20	21	22	23	24
	Non-Maori										Total									
1913	1	5	17	35	57	80	101	120	136	151										
1914	1	5	15	33	53	75	95	113	128	139										
1915	1	5	14	29	46	65	84	101	115	125										
1916	1	3	12	24	40	60	77	90	100	110										
1917	1	4	11	24	38	55	71	84	94	101										
1918	1	4	11	25	42	61	81	97	110	120										
1919	1	5	15	32	54	81	108	132	149	162										
1920	2	5	15	33	55	83	108	129	145	158										
1921	1	6	17	34	55	82	105	123	137	150										
1922	1	5	16	34	56	81	105	123	138	150										
1923	1	5	17	34	57	83	107	125	139	150										
1924	1	6	18	38	59	84	108	126	140	151										
1925	2	8	20	41	64	90	114	133	149	160										
1926	2	8	20	41	64	90	113	132	148	159										
1927	1	7	19	40	62	87	109	128	141	152										
1928	1	7	20	40	62	88	110	128	143	153										
1929	2	7	20	38	61	86	109	127	143	154										
1930	2	8	20	39	60	83	105	123	138	148										
1931	2	8	20	38	59	80	101	118	133	144										
1932	1	6	17	34	55	78	98	115	129	139										
1933	1	6	16	33	54	76	97	114	126	136										
1934	1	6	17	34	54	74	93	109	121	131										
1935	1	6	18	36	58	79	98	114	127	136										
1936	1	6	19	38	60	82	102	118	131	140										
1937	1	7	20	41	64	87	107	123	136	145										
1938	1	7	21	43	67	90	109	125	137	146										
1939	1	7	20	40	63	86	105	120	131	140										
1940	1	5	16	32	50	70	86	98	106	113										
1941	1	5	14	28	44	61	75	85	93	100										
1942	1	4	13	26	41	56	69	79	86	92										
1943	1	5	14	30	45	61	76	87	95	102										
1944	1	5	14	30	48	66	82	96	105	112										
1945	1	5	17	37	60	84	105	122	134	143										
1946	1	6	19	43	69	95	118	135	148	158										
1947	1	8	22	46	71	94	114	129	141	148										
1948	2	9	25	49	73	95	113	128	138	146										
1949	2	9	27	52	78	102	120	133	143	150										
1950	2	10	27	53	80	106	125	139	148	154										
1951	2	11	29	54	82	108	127	141	152	160										
1952	2	12	32	58	87	112	133	148	159	166										
1953	2	13	34	64	94	122	142	157	168	176										
1954	2	13	36	68	100	130	153	168	179	187										
1955	2	13	35	69	102	131	154	169	179	187										
1956	3	14	38	71	105	134	156	172	182	190										
1957	4	16	42	78	114	144	167	182	193	199										
1958	4	17	43	79	117	148	171	187	197	204										
1959	3	17	46	83	120	153	175	192	202	209										
1960	4	20	52	94	133	167	190	207	218	225										
1961	4	21	55	98	140	175	200	216	227	235										
1962	5	22	56	100	142	177	202	219	230	238	6	24	60	106	150	186	212	230	241	250
1963	5	23	56	98	138	172	198	215	226	234	6	25	60	104	147	181	208	226	237	245
1964	5	23	58	101	141	174	198	215	227	234	5	25	62	107	150	184	209	227	239	247
1965	6	26	63	108	148	181	204	220	230	237	6	28	67	114	156	190	214	230	241	249
1966	5	26	64	108	149	180	202	217	226	233	6	28	66	114	156	189	212	227	237	244
1967	5	26	65	109	148	180	200	215	224	231	6	17	68	114	155	187	209	224	234	241
1968	6	27	66	109	149	177	198	211	220	226	6	28	68	113	154	184	205	219	229	236
1969	6	28	67	111	149	178	197	210	218	225	7	30	70	115	156	186	207	221	230	237
1970											8	31	71	116	155	185	207	221	231	238
1971											7	30	66	106	139	165	182	194	202	208
1972											7	26	56	88	115	135	149	158	165	170
1973											5	22	48	74	96	112	124	132	138	143
1974											4	16	36	57	75	88	98	105	111	116
1975											3	12	27	45	61	72	81	87	92	97
1976											2	9	22	38	52	63	71	78	83	87

Source: Statistics of the Dominion of New Zealand 1913-21; New Zealand Vital Statistics 1921-78;
unpublished data supplied by the Department of Statistics.

Table 4.7

CUMULATIVE PREMARITAL CONCEPTIONS (PER 1000 WOMEN) LEADING TO EX-NUPTIAL
FIRST CONFINEMENTS ($\Sigma d(x)$): 1899-1962 FEMALE BIRTH COHORTS

Birth Cohort	Age											Age										
	14	15	16	17	18	19	20	21	22	23	24	14	15	16	17	18	19	20	21	22	23	24
	Non-Maori											Total										
1899	2	4	9	18	27	38	49	57	62	67	71											
1900	2	3	8	15	25	37	46	53	59	64	68											
1901	1	3	7	14	26	36	45	52	58	62	66											
1902	1	3	8	16	27	36	45	52	58	63	66											
1903	1	3	9	16	26	35	44	51	58	62	65											
1904	1	3	8	16	25	36	45	53	58	63	65											
1905	1	3	8	16	25	36	45	52	57	61	64											
1906	1	3	8	16	26	36	44	51	56	60	63											
1907	1	4	8	16	28	37	45	52	57	61	63											
1908	1	3	8	16	26	35	42	49	54	57	59											
1909	1	3	8	16	25	34	42	48	52	55	57											
1910	1	3	8	17	25	33	41	46	51	53	56											
1911	1	3	8	16	24	31	38	44	48	51	54											
1912	1	3	8	15	23	31	37	43	47	51	53											
1913	1	3	8	15	23	30	36	42	46	50	52											
1914	1	4	9	16	23	31	36	42	46	49	52											
1915	1	4	9	15	22	29	35	41	45	49	51											
1916	1	3	7	13	20	27	33	38	43	47	50											
1917	1	3	7	12	19	26	32	38	42	47	50											
1918	1	3	6	12	19	27	33	38	43	47	51											
1919	1	3	7	13	21	28	34	40	46	51	56											
1920	1	3	8	13	21	29	36	43	50	57	62											
1921	1	3	7	13	21	29	37	46	54	60	65											
1922	1	4	7	13	21	30	39	50	57	63	67											
1923	1	3	7	13	21	31	42	50	57	62	65											
1924	1	3	7	13	23	35	45	53	60	65	68											
1925	1	3	7	14	26	38	47	56	62	66	70											
1926	1	3	7	16	27	37	46	53	59	63	67											
1927	1	3	8	16	25	35	43	50	57	62	66											
1928	1	3	8	16	25	35	43	51	58	63	67											
1929	1	3	8	16	25	36	46	54	61	66	70											
1930	1	3	8	16	26	37	47	57	63	68	72											
1931	2	4	9	17	28	40	51	60	67	72	76											
1932	1	4	10	18	30	43	53	62	69	75	79											
1933	1	4	10	20	32	44	55	64	71	77	82											
1934	1	4	11	21	33	46	58	67	74	80	85											
1935	1	4	11	21	33	47	58	68	75	80	84											
1936	1	5	11	21	33	47	59	69	76	81	85											
1937	2	4	10	20	34	48	60	69	76	82	86											
1938	2	5	12	22	36	50	61	71	79	85	89											
1939	2	5	13	25	39	53	65	76	85	91	96											
1940	2	5	13	26	40	56	68	79	88	94	99											
1941	2	5	15	27	43	59	73	85	93	99	102											
1942	2	7	17	33	52	72	87	100	108	114	119											
1943	2	7	20	39	61	82	99	112	121	128	132											
1944	2	9	23	44	67	89	106	120	129	136	141											
1945	3	10	25	47	71	93	111	123	133	140	144											
1946	3	11	27	51	77	100	118	129	138	144		5	15	33	60	90	118	138	151	161	168	173
1947	4	13	30	55	82	107	124	136	144			5	15	35	63	96	124	144	158	167	174	179
1948	4	14	32	57	85	109	124	136				5	17	37	66	101	129	148	162	172	179	183
1949	4	15	35	63	91	113	129					5	18	41	73	108	135	155	170	180	186	190
1950	4	16	39	69	96	119						6	19	45	79	112	140	160	174	183	189	193
1951	5	18	43	72	100							6	21	48	82	115	143	161	173	182	187	191
1952	6	19	43	72								7	21	48	82	116	142	159	170	177	183	186
1953	6	19	42									7	21	48	84	119	143	159	170	177	183	
1954	6	19										7	22	52	87	119	143	158	169	177		
1955	6											7	24	55	90	120	143	158	168			
1956												8	27	59	93	123	146	162				
1957												9	29	60	93	122	146					
1958												10	31	61	93	124						
1959												10	29	59	92							
1960												9	28	57								
1961												9	27									
1962												8										

Table 4.8

CUMULATIVE PREMARITAL CONCEPTIONS (PER 1000 WOMEN) LEADING TO NUPTIAL
FIRST CONFINEMENTS ($\Sigma d'(x)$): 1899-1961 FEMALE BIRTH COHORTS

Birth Cohort	Age										Age									
	15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20	21	22	23	24
	Non-Maori										Total									
1899	1	5	14	26	43	69	94	112	127	139										
1900	1	4	11	25	48	75	98	117	131	142										
1901	1	4	11	28	51	77	100	119	133	144										
1902	1	3	13	31	52	78	101	119	135	147										
1903	1	4	15	32	54	80	103	123	138	149										
1904	2	5	16	34	57	82	106	125	138	149										
1905	2	6	17	35	57	82	105	123	138	149										
1906	1	6	17	36	59	85	108	126	141	151										
1907	1	5	18	39	61	86	108	127	141	152										
1908	1	6	19	39	61	86	109	127	141	152										
1909	1	7	20	41	63	89	111	128	142	152										
1910	2	7	20	40	63	86	106	124	136	145										
1911	2	7	20	39	60	82	102	119	131	140										
1912	1	7	19	38	59	81	102	119	131	141										
1913	1	7	19	37	58	80	99	115	128	137										
1914	2	8	20	37	58	78	97	113	125	135										
1915	2	8	19	36	56	77	97	113	125	134										
1916	2	7	17	34	56	78	98	114	126	133										
1917	1	6	16	34	57	80	99	114	122	129										
1918	1	6	18	37	60	82	101	113	120	127										
1919	1	6	19	40	64	88	103	114	121	127										
1920	1	6	19	41	65	84	99	108	117	124										
1921	1	7	21	41	59	75	88	100	109	118										
1922	1	7	20	37	53	68	83	96	109	118										
1923	1	7	17	30	45	61	77	94	107	114										
1924	1	6	15	28	44	62	82	100	111	119										
1925	1	5	14	29	47	72	95	110	121	129										
1926	1	5	14	30	52	78	98	113	122	129										
1927	1	5	14	34	60	83	100	114	123	130										
1928	1	5	17	41	66	88	106	119	130	138										
1929	1	5	19	42	66	90	109	124	134	142										
1930	1	6	21	45	71	96	116	131	142	149										
1931	1	7	24	49	77	102	123	139	150	157										
1932	1	8	26	51	79	104	125	140	150	158										
1933	2	9	27	52	80	108	131	146	157	164										
1934	2	10	28	54	84	114	138	153	164	170										
1935	2	11	30	60	92	120	143	157	168	175										
1936	2	12	34	66	99	129	151	167	177	184										
1937	2	13	36	69	103	134	157	174	184	192										
1938	2	13	35	68	104	135	158	175	185	194										
1939	2	13	36	73	110	142	166	182	194	201										
1940	2	14	39	75	113	146	171	188	199	206										
1941	3	15	41	77	117	151	176	193	204	211										
1942	4	17	46	88	131	166	192	209	220	226										
1943	4	18	50	93	135	168	193	208	217	224										
1944	3	19	53	97	138	171	194	209	219	225										
1945	4	21	55	97	137	170	192	206	215	222										
1946	4	21	54	96	137	168	188	201	210											
1947	5	23	57	103	143	175	195	208			6	23	57	101	142	174	195	209	218	225
1948	5	24	60	105	145	174	193				6	24	61	109	151	183	204	218	227	233
1949	5	26	63	107	146	175					6	25	64	111	152	183	203	218	227	231
1950	6	26	65	109	147						5	27	66	112	153	183	204	216	223	228
1951	5	26	64	108							6	28	68	114	154	184	202	211	218	222
1952	5	27									6	27	67	113	152	177	191	199	205	210
1953	6	28									6	28	68	113	146	166	177	185	190	194
1954	6										6	29	69	109	136	152	161	167	173	
1955											7	30	66	98	120	134	142	149		
1956											8	30	60	87	105	116	124			
1957											7	27	53	74	90	100				
1958											7	23	43	61	75					
1959											5	18	33	49						
1960											4	13	26							
1961											3	10								
											2									

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

2. Subsequently the value of $\Sigma d'(24)$ nearly doubled between the cohorts of 1923 and 1942. It then remained stable until a new downward trend was established by the cohorts of the early 1950s. Only partial data are available for cohorts born after 1952, but clearly this trend will ultimately extend through to those of the early 1960s, if not beyond. [8]

Real cohort values of $\Sigma d(24)$, too, are compressed into a narrower range than synthetic cohort values (Table 4.7). Non-Maori females born early this century had about a seven percent chance of conceiving an ex-nuptial first child before age twenty-five. This figure fell to five percent for the cohorts of 1916 and 1917, partly because women born around 1900 contributed to relatively high illegitimacy rates just after World War 1 (Chapter 2). Economic conditions during the 1920s and early 1930s undoubtedly also curbed social activity, reduced ex-nuptial births stemming from serious courting relationships, and encouraged greater use of back-street abortionists. Cohorts born during the 1920s were affected by World War 2, and their experience differed little from that of women born during 1899-1904. Depression cohorts then recorded successively higher $\Sigma d(24)$ values, as did cohorts born after 1936. More than fourteen percent of non-Maori women born in 1945 became premaritally pregnant before age twenty-five, then unwed mothers. Total population data show the trend peaking with the 1950 birth cohort at over nineteen percent. Slightly lower values of $\Sigma d(24)$ are recorded for 1951 and 1952, but partial data for subsequent cohorts do not point to continued decline. They

[8] Women born in 1956 and 1958, for example, were forty and fifty-six percent respectively less likely than those born in 1952 to have conceived premaritally before age twenty-one and age nineteen, and then to have married before confinement.

rather suggest that an equilibrium may have been reached at around 18-19 percent.

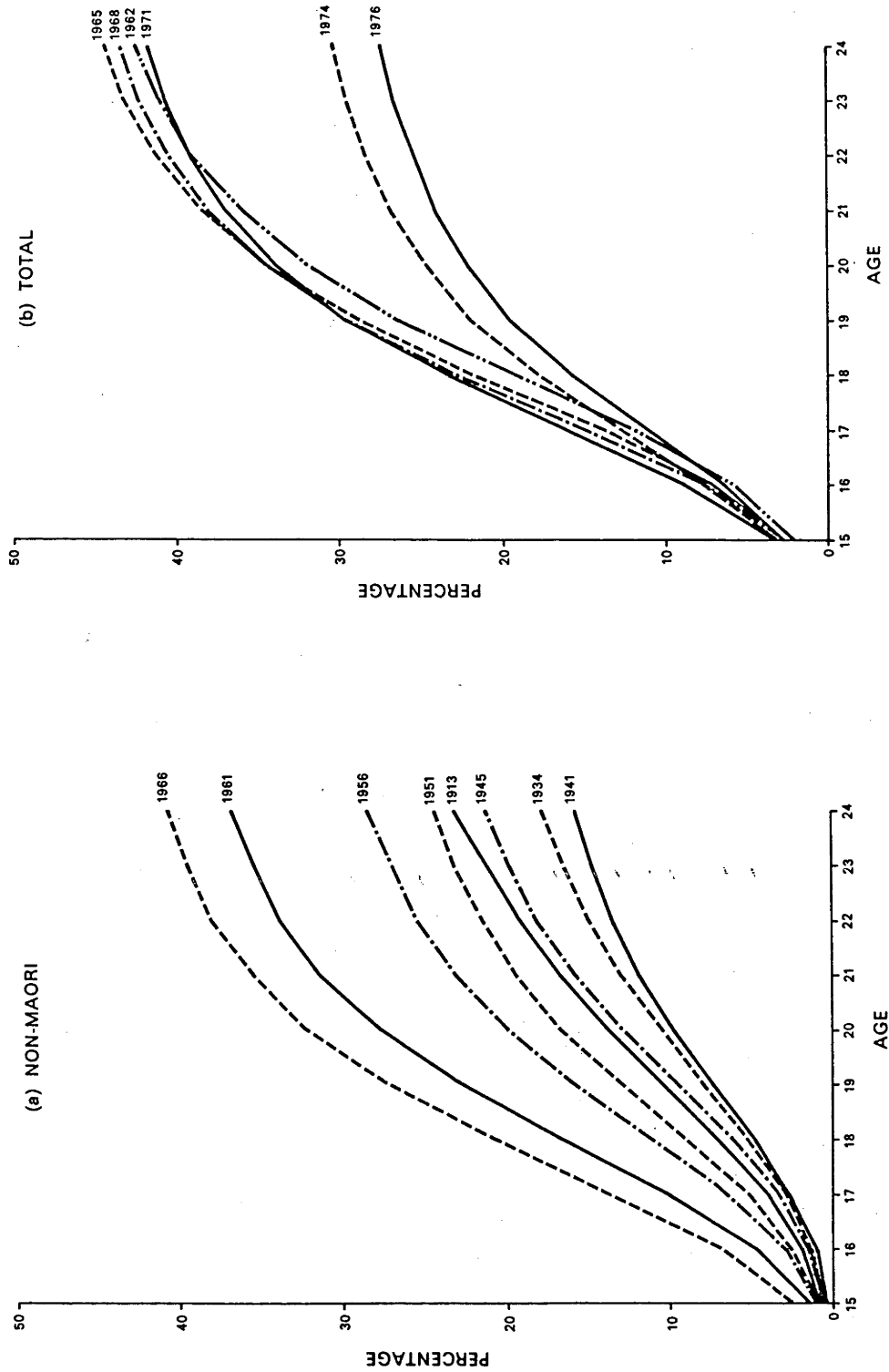
Life Cycle Premarital Pregnancy Trajectories

Summing matching values of $\Sigma d(x)$ and $\Sigma d'(x)$ permits one to trace life cycle premarital pregnancy trajectories (Figures 4.1 and 4.2). In Figure 4.1a, synthetic cohort trajectories for 1913 and 1934 define a wedge within which lie all others for the period 1913-39. The range of World War 2 trajectories is then defined by those for 1941 and 1945. Likewise in Figure 4.2a, trajectories for the 1901, 1918, and 1930 non-Maori birth cohorts set limits within which lie those for all cohorts born between 1899 and 1930. The narrow ranges of life cycle experience for these earlier cohorts contrast vividly with the much wider ranges indicated for later ones. The near parallel courses which later trajectories follow after age twenty or twenty-one also emphasise the concentration of additional pregnancies at younger ages.

Trajectories shown in Figures 4.1b and 4.2b are for cohorts at three-year intervals beginning with the first for which total population data are available. These graphs indicate the peaks to which probabilities of premarital conception of a first child before age twenty-five rose (0.445 and 0.418 for the 1970 synthetic and 1949 real cohorts respectively). They also re-emphasise the shift to a younger age distribution of conceptions. Thirdly, they highlight the rapidity of the downturn in premarital pregnancy leading to confinement at term during the early 1970s, with Figure 4.2b hinting that real cohort trajectories as low as the synthetic cohort ones of the mid-1970s will shortly be completed. Finally, Figure 4.2b shows

Figure 4.1

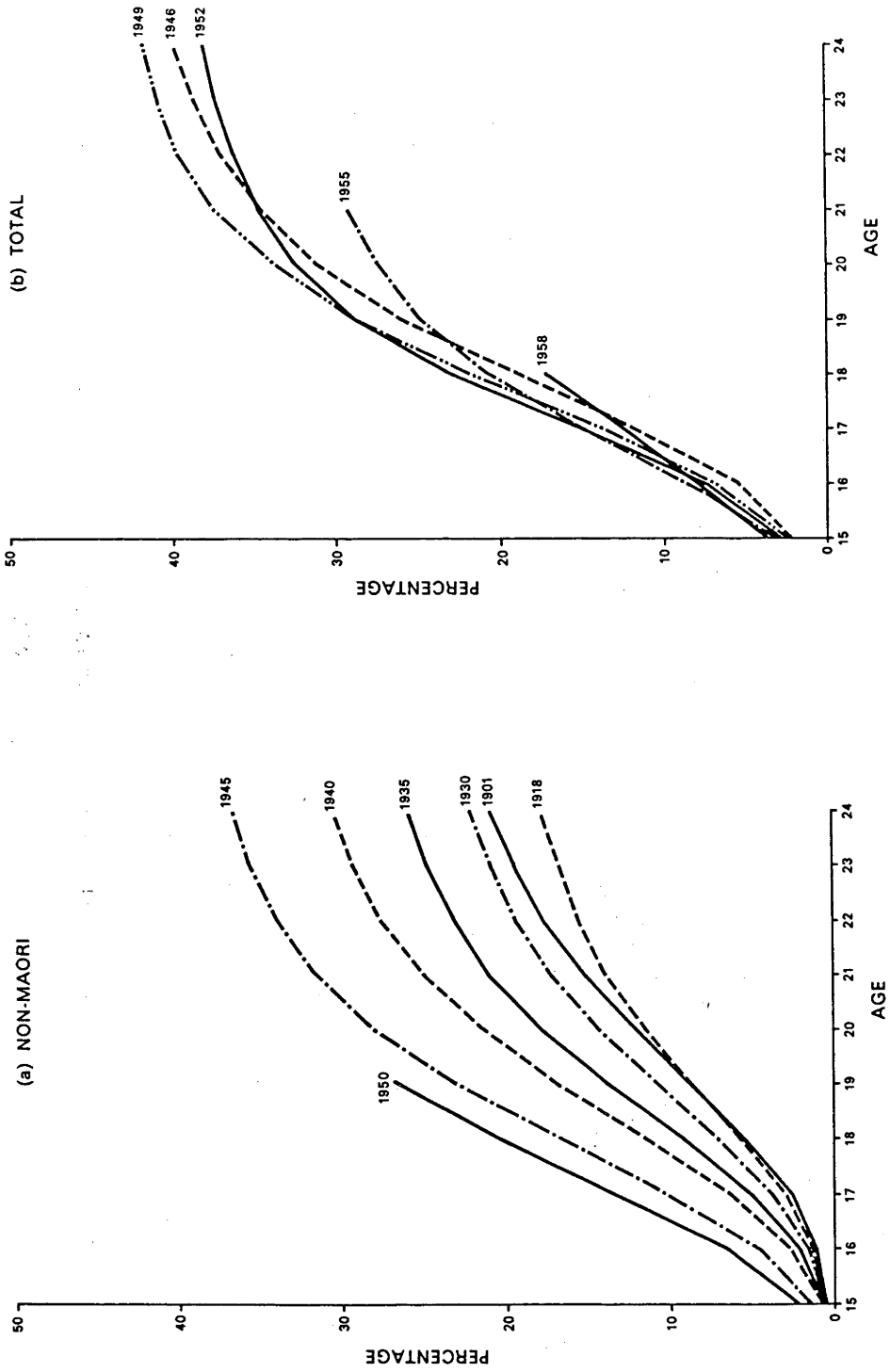
CUMULATIVE PERCENTAGES OF SELECTED SYNTHETIC COHORTS CONCEIVING A FIRST CHILD PREMARITALLY AT OR BELOW AGE X



Source: Tables 4.5 and 4.6.

Figure 4.2

CUMULATIVE PERCENTAGES OF SELECTED BIRTH COHORTS CONCEIVING A FIRST CHILD PREMARITALLY AT OR BELOW AGE X



Source: Tables 4.7 and 4.8.

clearly the period nature of this downturn, with trajectories for the 1952, 1955, and 1958 birth cohorts flattening off at successively younger ages.

4.4 INTERPRETATIVE OVERVIEW

Evolution of a New Morality

The most striking aspect of the trends just discussed is the evidence they constitute for the evolution of a new premarital sexual morality since World War 2. The traditional morality, based on female (if not always male) premarital chastity, has given way to one which no longer ties sex exclusively to formal marriage. The logical first step in this transition was for coitus to occur more often between engaged couples. That probabilities of conception followed by nuptial confinement increased more than those of conception leading to ex-nuptial confinement during the 1950s is consistent with this having happened (Tables 4.1 and 4.2). So is the finding that the latter probabilities rose more substantially and earlier at older ages, where some of the women concerned were undoubtedly victims of situations they had expected to eventuate in marriage.

Probabilities of conception leading to ex-nuptial confinement increased faster during the 1960s than during the 1950s, while at all but the youngest ages those of conception followed by nuptial confinement stabilised and even began to fall. Premarital sex became less tied to serious courtship in a climate marked by growing recognition of the pill's potential for making it a more recreational activity, yet restricted access to this new technology for the

unmarried. Girls began agreeing to coitus when going steady, not just when marriage was imminent. Some undoubtedly did so with misgivings as partners, citing a general change in society's morals, argued that by 'giving in' they demonstrated their love.

The 1970s carried this process a stage further. Sharp declines in probabilities of premarital conception leading to first confinement ($q(x) + q'(x)$ values) heralded not the re-establishing of traditional morality but greater control over fertility resulting from premarital coitus. Greatly improved access to induced abortion was the major agent of change, but with it and the associated debate came a maturing of attitudes among the young. Their behaviour took on a new openness and pragmatism, this finding expression in a rising incidence of informal cohabitation (Chapter 6). Widespread support for abortion law reform showed considerable public acceptance of more permissive lifestyles, and with unwanted fertility no longer the threat it had been young people could afford to disregard what others thought about how they lived. [9]

Period $d(x)$ and $d'(x)$ values confirm the evolutionary process just outlined (Tables A2.8 and A2.9, Appendix 2). The latter increased mainly before 1960 and the former mainly after that date at

[9] From the late 1960s onward, numerous surveys of public and medical opinion on the law relating to abortion were conducted in New Zealand. Summaries of the findings of the more notable ones are given by Facer (1973), Farmer (1975), Trlin (1975a), Kirkwood and Facer (1976), and Royal Commission on Contraception, Sterilisation and Abortion (1977). By the mid-1970s surveys were consistently showing more than sixty percent of the public in favour of leaving first trimester abortion decisions to a woman and her doctor. Moreover, young people were able to identify, if they wished, with a very strong pro-abortion lobby and the individualistic philosophy of life inherent in its arguments (Stone, 1977).

ages eighteen and over, while the rise in $d(x)$ values at younger ages accelerated during the 1960s. Then, after 1970, premarital conceptions resulting in nuptial confinement positively plummeted, while at ages 18-24 those resulting in ex-nuptial confinement also fell.

This discussion has focused on synthetic cohort findings because of the essentially period nature of the morality transition. However, the patterns described also show through in real cohort results. When it comes to life cycle incidences of premarital pregnancy, for example, it matters little which perspective is adopted. Premarital pregnancy leading to marital confinement increased most early on, while later that leading to ex-nuptial confinement rose faster (Tables 4.5 and 4.6; 4.7 and 4.8). Both synthetic and real cohort values of $\Sigma d'(x)$ (Tables 4.6 and 4.8) testify to improved premarital fertility control during the 1970s. As yet, though, the modest post-1970 synthetic cohort declines in conceptions leading to ex-nuptial confinement (Table 4.5) have had little impact on the life cycle experiences of birth cohorts. In real cohort terms, fewer conceptions at older ages have simply been cancelling more at younger ages.

The Period Since 1970

As just intimated, the life cycle probability of premarital conception followed by nuptial confinement has been by far the more affected by change in premarital reproductive behaviour since 1970. This finding was alluded to in Chapter 3 when the link between declining age-specific legitimation and bridal pregnancy ratios was discussed. A cautionary note was sounded about attributing the former

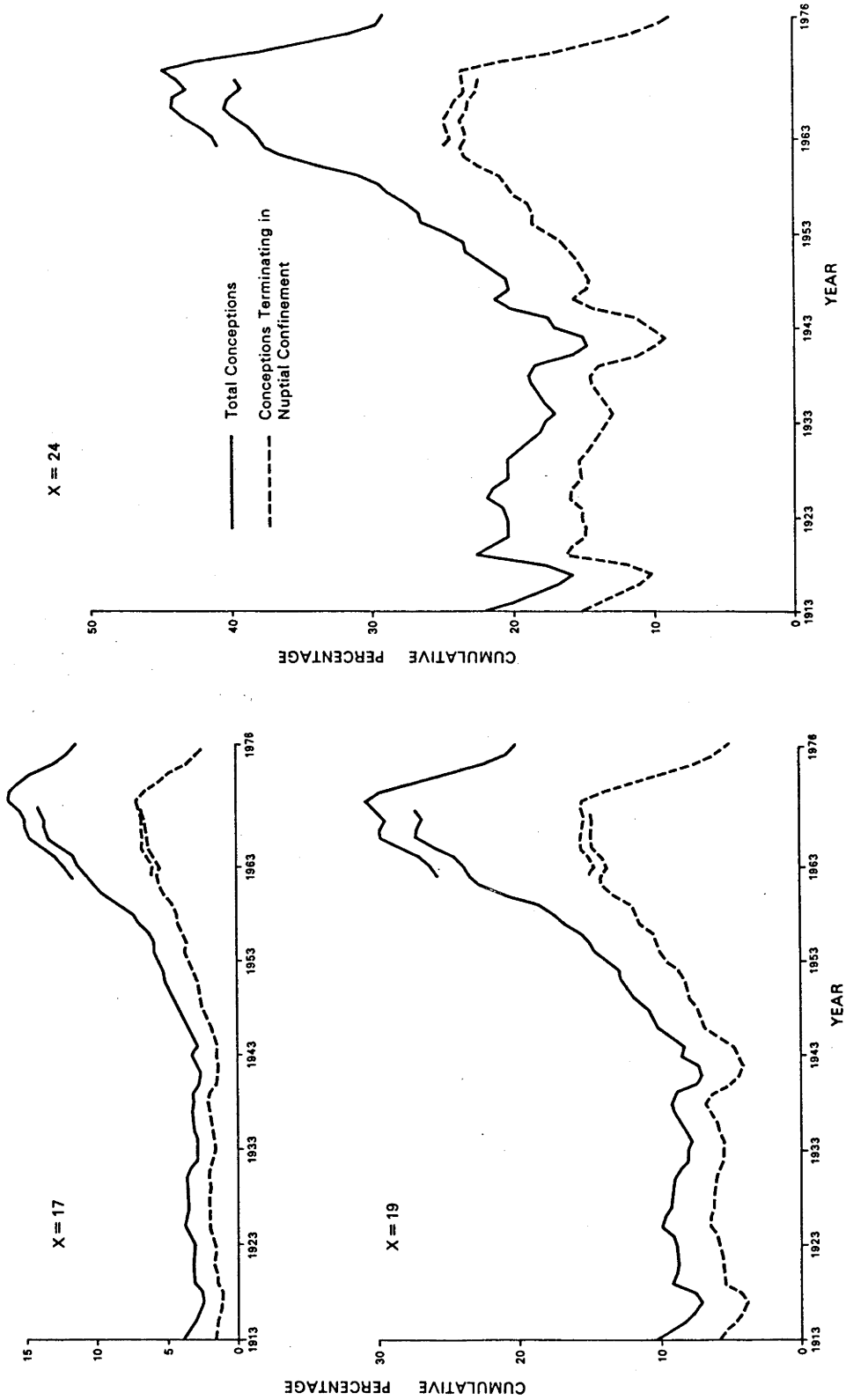
trend solely to a growing rejection of marriage in favour of solo parenthood or living informally with the child's father.

Summing matching cells of Tables 4.5 and 4.6, and 4.7 and 4.8 yields cumulative numbers of women conceiving prior to first marriage and proceeding to term. Data from these summations are plotted for selected ages in Figures 4.3 and 4.4. Also plotted are $\Sigma d'(x)$ values for the same ages. The lower trend lines thus define subareas under the upper ones which represent conceptions terminating nuptially and ex-nuptially. Trend lines consist of earlier non-Maori and more recent total population segments, the two generally overlapping.

Real cohort trend lines (Figure 4.4) are smoother than synthetic cohort ones (Figure 4.3). The post-war transition from a situation in which additional premarital conceptions led mainly to marital confinement, to one where they led mainly to ex-nuptial confinement, also shows. But the main features to note in Figures 4.3 and 4.4 are the recent parallel downward trends of total conceptions and conceptions leading to confinement within marriage. A simplistic interpretation might postulate that improvements in premarital fertility control have overwhelmingly affected couples in committed, as opposed to casual relationships, and that this explains the dramatic drop in the legitimation ratio.

However, while Figures 4.3 and 4.4 raise the possibility of differential improvement in fertility control, they do not rule out a significant undermining of the norm that a child conceived outside marriage should ideally be born within it. Improved premarital fertility control, especially insofar as it has been achieved through induced abortion, has undoubtedly averted births across the full

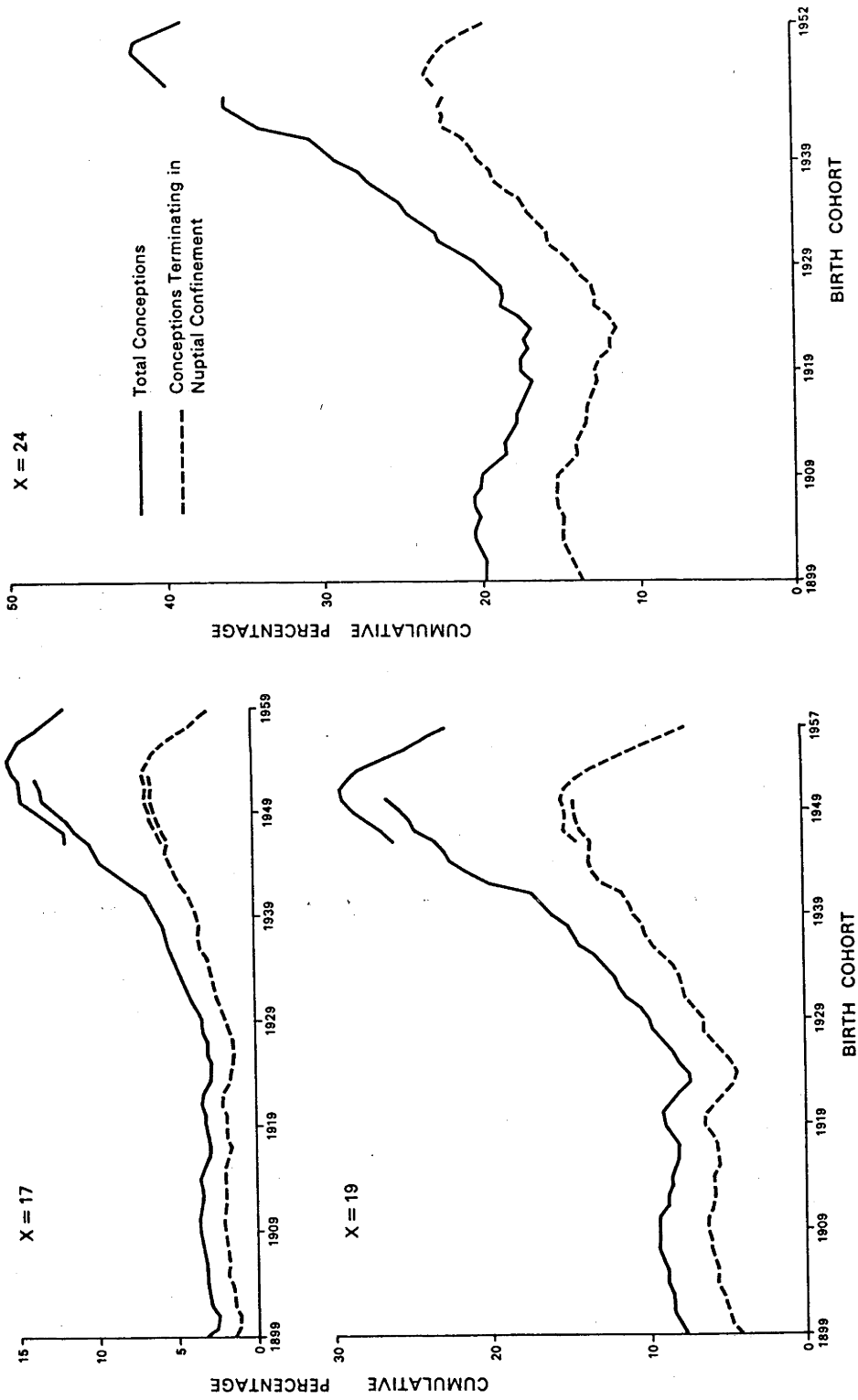
Figure 4.3
 CUMULATIVE PERCENTAGES OF WOMEN CONCEIVING A FIRST CHILD PREMARITALLY AT OR BELOW AGE X BY NUPTIALITY STATUS
 OF CONFINEMENT: 1913-1976 SYNTHETIC COHORTS



Source: Tables 4.5 and 4.6.

Figure 4.4

CUMULATIVE PERCENTAGES OF WOMEN CONCEIVING A FIRST CHILD PREMARITALLY AT OR BELOW AGE X BY NUPTIALITY STATUS
 OF CONFINEMENT: 1899-1959 BIRTH COHORTS



Source: Tables 4.7 and 4.8.

spectrum of relationships, from one night stands to deeply committed ones. The potential of the trend for reducing the life cycle probability of premarital conception leading to ex-nuptial confinement has probably been offset, though, by a tendency for conceptions which formerly might have led to marital confinement to result instead in ex-nuptial births.

Carrying this line of thought to an extreme, differential improvement in premarital fertility control with respect to seriousness of relationship could be a figment of the imagination. This, however, is unlikely. To the extent that better contraception is indicated, women sexually active within relationships marked by stability, mutual affection, and regular coitus should have benefited more than those for whom intercourse occurs intermittently or in circumstances dominated by motives of exploitation and self-gratification. Moreover, adherence to the norm that marriage should follow premarital conception was probably always stricter among the better educated and white collar sectors of New Zealand society, and a similar social class differential may have characterised any recent improvement in premarital contraceptive performance. [10]

[10] Pratt (1965), after finding an inverted U-shaped relationship between bridal pregnancy and socio-economic background, argued that it reflected a higher probability of marital resolution of premarital pregnancies among women from middle as compared to lower class families of origin. In New Zealand, O'Neill *et al's* (1976) finding that placement of ex-nuptial children for adoption was positively correlated with mother's socio-economic status can be interpreted as evidence of white collar women being especially conscious of the stigma attached to unmarried motherhood. As to improved premarital contraceptive performance, this has doubtless relied greatly on the pill. One would expect a variable such as education to relate positively to possession of the skills and motivation needed to acquire the necessary doctor's prescription, and also to access to sympathetic medical personnel such as those attached to tertiary educational institutions.

As to the almost certainly greater impact of induced abortion, it might seem that pregnancies resulting from casual sexual encounters would be the most likely to be aborted. But there are other considerations. A girl's ability to use abortion facilities may rest to a degree on support from her partner and on her own initiative, neither of which is likely to correlate with promiscuous sexual behaviour. Then there is the question of motivation. Contemporary middle class youth, and especially its female component, has a more urgent sense of controlling its own destiny than previous generations have had. Unplanned parenthood is no longer acceptable in some quarters, even if pregnancy occurs in a relationship of substance. [11] The holding of this attitude again probably has a social class bias, with its most ardent adherents tending to be better educated and of white collar parentage. [12] Furthermore, young women whose philosophies of life dogmatically reject unplanned parenthood are also likely to have definite views regarding the quality relationships should attain before becoming sexual. On all these counts greater resort to abortion by better educated, middle class women involved in steady relationships, or in other words by those who in earlier generations were probably most inclined to marry when premaritally pregnant, is likely.

If there are good grounds for suspecting differential improvement in premarital fertility control, there are also good grounds for

[11] See the Australian evidence of Snyder and Wall (1976) cited in footnote 26 of Chapter 3.

[12] Steinhoff (1978) has shown in a small scale American study associations between opting for abortion when premaritally pregnant and orientation toward a planned life course, non-working class background, and parental involvement in the pregnancy resolution decision.

suspecting that women carrying premarital pregnancies to term have become less willing to marry a child's father just because he is the father. If some women have opted for abortion over the traditional script, others have certainly rejected it in this, to many, less extreme way. There are also considerations such as changing attitudes to formal marriage, likely greater awareness of the instability of 'shotgun' marriages, and the DPB's having made solo parenthood a genuine option to be taken into account. Finally, a third mechanism may also have helped the recent marked decline in the life cycle probability of premarital pregnancy to affect overwhelmingly the probability of conception leading to nuptial confinement. The DPB may have caused some young women to deliberately choose solo motherhood as a lifestyle. [13]

The Changing Distribution of Premarital Pregnancy by Age

It was noted earlier that premarital conceptions resulting in ex-nuptial and nuptial confinement both became increasingly concentrated at younger ages during the 1960s and 1970s. The shift in the age distribution of premarital first conceptions is summarised more precisely in Table 4.9. For synthetic cohorts, conceptions below age twenty rose from 44.5 to 53.5 percent of conceptions below age

[13] This allegation has often been made by persons concerned at rapid increases in government spending on the DPB. The DPB Review Committee (1977: 18) wrote: 'There is not much doubt in our minds that the availability and generous nature of the domestic purposes benefit structure not only diminishes the fear of pregnancy but can also be very attractive to the young teenager and it is clear that in many instances the amount of money received from the benefit is higher than what the girl herself could earn in normal employment.' A distinction must be made between girls who deliberately become pregnant and those who, having conceived accidentally, choose to become solo mothers because the DPB makes that a viable option. How many fall into the former category is impossible to tell.

Table 4.9

PERCENTAGE DISTRIBUTIONS BY AGE OF PREMARITAL CONCEPTIONS LEADING TO FIRST
 CONFINEMENTS: 1945-1976 SYNTHETIC COHORTS AND 1925-1952 BIRTH COHORTS

Cohort	Age							Total	Age							Total	
	16 and Under	17	18	19	20	21-22	23-24		16 and Under	17	18	19	20	21-22	23-24		
	Non-Maori								Total								
	Synthetic																
1945	6.2	9.2	13.6	15.5	16.0	24.8	14.7	100.0									
1946	6.4	9.4	14.5	15.8	15.4	24.6	13.8	99.9									
1947	7.6	10.6	15.6	16.4	14.5	23.0	12.3	100.0									
1948	8.3	11.4	15.8	16.4	14.4	21.2	12.5	100.0									
1949	8.7	11.7	16.2	16.9	15.0	20.3	11.2	100.0									
1950	8.9	11.8	15.9	16.8	15.4	20.7	10.5	100.0									
1951	9.3	12.0	15.5	16.6	15.0	20.4	11.3	100.1									
1952	9.4	12.1	15.5	16.6	14.5	21.1	10.8	100.0									
1953	9.3	12.2	16.1	16.7	15.0	20.3	10.5	100.1									
1954	9.3	12.2	16.6	16.5	15.2	19.8	10.3	99.9									
1955	9.4	12.1	16.9	17.0	14.7	19.9	10.0	100.0									
1956	9.9	12.5	16.7	17.0	14.6	19.2	10.1	100.0									
1957	10.9	12.9	17.2	16.8	14.3	18.5	9.5	100.1									
1958	11.6	12.9	16.8	17.2	14.0	18.5	9.0	100.0									
1959	12.2	14.4	16.4	16.7	14.0	17.8	8.5	100.0									
1960	12.9	14.9	17.6	16.0	13.4	17.1	8.0	99.9									
1961	12.9	14.9	17.6	16.8	13.3	16.6	7.9	100.0									
1962	13.3	14.9	17.6	16.6	13.4	16.2	7.9	99.9	13.5	14.8	17.4	16.5	13.3	16.4	8.2	100.1	
1963	14.4	14.7	17.2	16.3	13.2	16.5	7.6	99.9	14.6	14.6	17.1	16.2	13.1	16.6	7.9	100.1	
1964	14.6	15.1	17.7	16.1	12.9	16.2	7.5	100.1	14.8	15.0	17.5	16.0	12.8	16.2	7.7	100.0	
1965	15.9	15.4	18.2	15.9	12.5	15.4	6.8	100.1	16.1	15.3	18.1	15.7	12.5	15.3	7.0	100.0	
1966	16.9	16.0	18.1	16.0	11.9	14.6	6.5	100.0	16.9	15.9	18.1	15.9	11.8	14.6	6.8	100.0	
1967	17.0	16.7	17.9	15.5	12.0	13.9	6.9	99.9	16.9	16.6	18.1	15.6	11.8	14.0	7.0	100.0	
1968	17.6	17.1	18.0	15.5	11.3	13.6	6.8	99.9	17.5	16.9	18.1	15.7	11.3	13.6	6.9	100.0	
1969	18.1	17.2	18.1	15.5	11.4	13.3	6.4	100.0	18.1	16.9	18.1	15.7	11.4	13.3	6.4	99.9	
1970									19.3	16.8	17.8	14.9	11.2	13.6	6.3	99.9	
1971									21.3	17.1	17.9	14.4	10.5	12.6	6.1	99.9	
1972									23.8	17.3	17.4	13.9	9.5	12.0	6.1	100.0	
1973									24.8	17.7	16.8	13.5	9.3	11.4	6.5	100.0	
1974									24.7	17.2	16.9	13.4	9.4	11.7	6.6	99.9	
1975									24.9	16.8	16.7	13.7	9.3	11.8	6.8	100.0	
1976									23.9	16.6	16.9	14.0	9.6	12.1	6.9	100.0	
									Birth								
1925	5.9	8.4	13.7	15.0	17.2	26.5	13.4	100.1									
1926	6.0	9.4	13.3	16.8	17.7	24.3	12.5	100.0									
1927	6.7	8.7	14.8	18.1	15.8	22.9	13.1	100.1									
1928	6.5	9.5	16.0	17.0	15.1	22.5	13.3	99.9									
1929	6.1	10.0	15.7	16.5	15.8	23.1	12.7	99.9									
1930	6.2	10.2	15.3	17.0	16.2	22.8	12.4	100.1									
1931	7.0	10.5	15.5	16.9	15.6	22.5	12.0	100.0									
1932	7.5	11.0	15.6	17.1	15.0	22.0	11.8	100.0									
1933	7.7	11.2	15.4	16.5	15.7	22.0	11.4	99.9									
1934	8.0	11.5	14.9	16.9	16.3	21.6	10.9	100.1									
1935	8.5	11.4	16.0	17.4	15.6	20.7	10.5	100.1									
1936	8.6	11.6	16.8	17.3	15.4	20.4	9.9	100.0									
1937	8.4	11.9	16.7	17.4	15.1	20.3	10.2	100.0									
1938	8.5	11.8	16.7	17.4	14.9	20.2	10.5	100.0									
1939	8.7	11.9	17.0	17.4	14.9	20.0	10.1	100.0									
1940	8.9	12.4	16.6	17.3	15.1	20.1	9.5	99.9									
1941	9.4	12.4	16.5	17.5	15.6	19.6	8.9	99.9									
1942	9.9	13.2	17.6	18.0	14.9	18.6	7.8	100.0									
1943	10.4	14.4	18.2	17.8	14.3	17.3	7.6	100.0									
1944	11.5	15.0	18.3	17.1	13.7	16.8	7.6	100.0									
1945	12.4	15.5	18.1	17.1	13.7	15.9	7.3	100.0									
1946									14.2	15.3	18.7	17.2	13.1	14.8	6.8	100.1	
1947									14.5	15.7	19.3	17.2	12.7	14.0	6.5	99.9	
1948									15.2	16.4	19.7	16.7	11.8	14.4	5.9	100.1	
1949									16.3	17.1	19.3	16.3	12.0	13.7	5.4	100.1	
1950									17.7	17.8	18.9	16.6	12.0	11.9	5.1	100.0	
1951									18.8	18.3	19.8	16.6	10.9	10.6	4.9	99.9	
1952									19.9	19.4	20.8	15.8	9.3	9.8	5.0	100.0	

Source: New Zealand Vital Statistics 1936-78; unpublished data supplied by the Department of Statistics.

twenty-five during 1945-49. The distribution then remained quite stable until 1955, but the importance of the seventeen and under age group increased between then and 1959. This trend reasserted itself after 1963 and continued into the 1970s, although from the late 1960s it mainly involved girls sixteen or under. Thus, under 1975 conditions, nearly one-quarter of girls becoming premaritally pregnant before age twenty-five did so before they turned seventeen, this being four times the more or less comparable non-Maori figure for 1945.

When birth cohorts are considered the progressive shift toward younger ages at premarital conception is if anything more pronounced. Because of the nature of the calculations being made Table 4.9 covers only cohorts for which complete information is available. Over sixty percent of premarital conceptions leading to first confinements which were experienced by the 1952 birth cohort before age twenty-five occurred before age nineteen, and this figure surpasses all those recorded for synthetic cohorts.

Clearly premarital pregnancy not only became a much more common experience during the 1950s and 1960s; it was encountered ever earlier in the life cycle. Moreover, as greater control was exerted over fertility resulting from premarital coitus after 1971, pregnancies which were carried to term became even more concentrated among the very young. Quite apart from their marital status at conception, these girls and their children tend to be at particular risk physiologically, and are also apt to be seriously socially disadvantaged (Chapter 5). The social problem represented by post-war trends in premarital pregnancy has thus been not just one of an increase in the life cycle probability of becoming pregnant. It has

also been one of change in the timing of the experience in the life cycle, and New Zealand society has been slow in getting to grips with pregnancy among younger adolescents. [14]

Marrying Prior to First Pregnancy

Little has been said yet about the third mode of decrement considered in this analysis - marriage prior to first conception. Table A2.6, Appendix 2 indicates that the post-war period, as well as being marked by unprecedentedly high life cycle probabilities of becoming premaritally pregnant, has also seen the probability of marrying never pregnant before the age of twenty-five rise well above its interwar peak. This indicates that changes in premarital sexual behaviour have occurred in the context of a broader remodelling of the courtship system. Mate selection in European New Zealand was never exactly a parental prerogative, but since 1945 parental influence in such matters has all but disappeared. The result is that today the young are relatively free to form relationships with the opposite sex from puberty onward.

One way of measuring the extent of this increased freedom to date and mate under conditions of limited access to reliable contraception

[14] An essential step toward doing so was, however, taken with the passing of the Contraception, Sterilisation, and Abortion Act 1977. This allows certain approved categories of people to counsel a person aged under sixteen to use contraception (parents, guardians, registered medical practitioners, family planning clinicians, and their delegated representatives), to supply such a person with contraceptives (the above plus registered pharmacists and their agents acting on the written authority of an approved counsellor), and to instruct such a person in the use of contraceptives (all the above plus professional social or pastoral workers and individuals acting within the school setting with the authority of the principal or head teacher and his controlling body).

and abortion is to consider changes in the probabilities of surviving to certain exact ages having been neither pregnant nor married ($l(x)$ values). Survivors to exact ages twenty and twenty-five dropped substantially after 1945 (Figure 4.5). Considerable change in fact took place at ages 20-24 during the latter two-thirds of the 1930s. By the mid-1950s in period terms, survivorship to age twenty-five had reached its minimum level, but that to age twenty continued to fall for a further fifteen years. Recent upturns in trend lines merely show that $l(x)$ values have lost their utility as indicators of the ages at which serious dating and mating occur because of improvements in premarital fertility control.

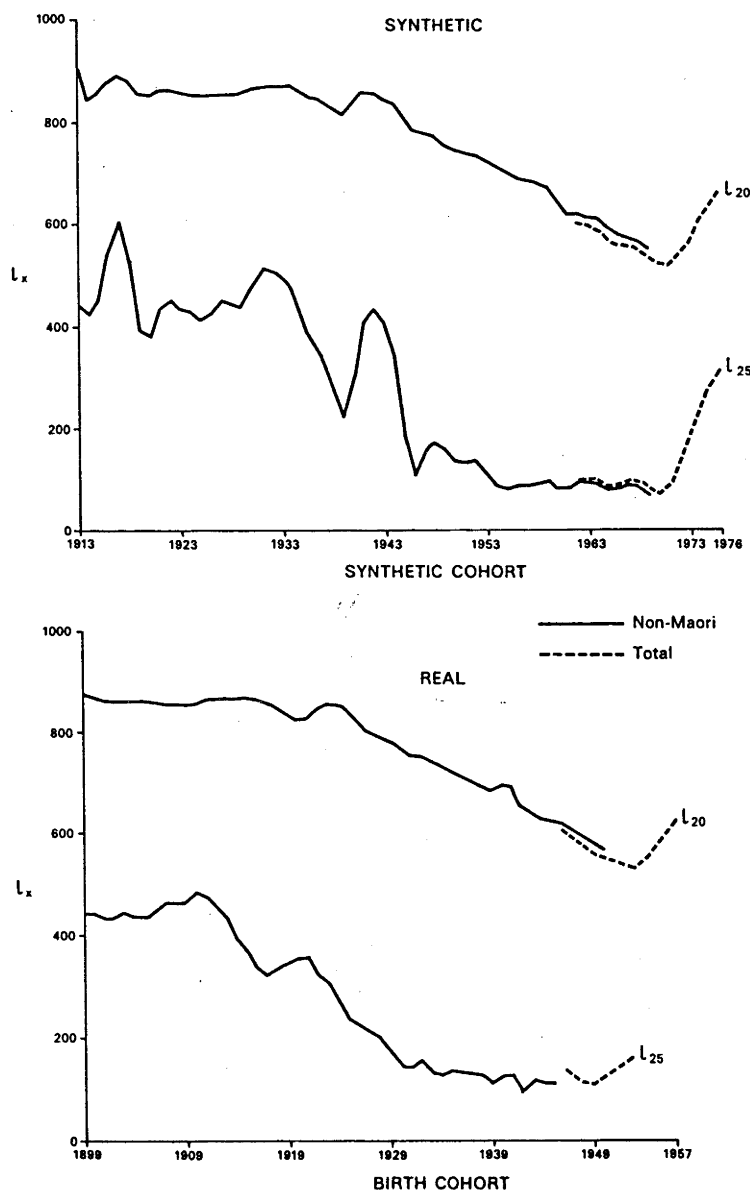
Aside from the general pre-war/post-war contrast that it reveals, Table A2.14, Appendix 2 also shows non-Maori synthetic cohort values of $\Sigma d''(24)$ to have fallen steadily during 1955-67. The trend is not so evident when values of, say, $\Sigma d''(19)$ or $\Sigma d''(20)$ are considered. Nonetheless, prolongation of the post-war trend toward younger marriage (Chapter 6) obviously relied heavily, in a statistical sense, on brides who were either pregnant or unmarried mothers. Analysis on a real cohort basis invites the same conclusion (Table A2.15, Appendix 2).

4.5 SUMMARY

Historically, the analysis made in this chapter confirms that no revolution in premarital sexual behaviour took place in New Zealand during the 1920s. It also confirms the suggestion made in Chapter 2 that marriage rates increased at younger ages during the 1930s largely independent of any disturbance of traditional morality, whereas this

Figure 4.5

NUMBERS OF WOMEN (PER 1000) SURVIVING TO EXACT AGES TWENTY AND
 TWENTY-FIVE NEVER PREGNANT AND NEVER MARRIED: 1913-1976
 SYNTHETIC AND 1899-1957 REAL COHORTS



Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

was not the case with the post-war marriage boom.

Post-war results evidence the evolution of a new moral code by successive youth generations. The first phase of this process perhaps entailed more frequent initiation of coitus during engagement along with continued observance of the maxim that it was wrong to allow a child to be born illegitimate. The second phase saw unmarried females increasingly agreeing to coitus in relationships marked by mutual affection as distinct from a commitment to marriage. It was clearly in one sense part of the quest for independence on which the young embarked during the 1960s, and may have been accelerated by the aura which surrounded the introduction of the pill. This aura may well have affected males in the main, causing them to exert unprecedented pressure on their partners for sexual favours. Indeed, the argument that intercourse is acceptable in mutually affective circumstances probably developed partly to justify the behaviour of girls who, because of their youth and males' determination to be sexually active, became increasingly incapable of assessing a man's commitment to marriage. The third phase in the process then saw attitudes mature. With unwanted childbearing avoidable through abortion if necessary, premarital sex came to be projected as normal and to be enjoyed free from guilt. Accidental pregnancy came increasingly to constitute a commitment to neither marriage nor parenthood.

It was noted that this third phase has to date brought far larger reductions in the life cycle probability of premarital conception followed by nuptial confinement than in that of premarital conception followed by ex-nuptial confinement. This suggested that improvements in premarital fertility control during the 1970s occurred

differentially along dimensions related to social class, the degree of mutual commitment in a relationship, and the degree of commitment to a philosophy of life stressing control over one's destiny. These in turn seemed likely to be linked to a tradition of compliance with the norm that premarital pregnancy should precipitate marriage. On the other hand, a tendency to reject formal marriage in favour of solo parenthood or informal cohabitation when premaritally pregnant would have offset any decline due to improved fertility control in the life cycle probability of premarital conception followed by ex-nuptial confinement. It was concluded that both mechanisms probably operated, perhaps aided by the emergence under the DPB of a group of women for whom solo motherhood was a consciously chosen lifestyle.

Not only did the life cycle probability of becoming premaritally pregnant increase substantially up until the early 1970s; girls who became pregnant did so at ever younger ages. This trend was evident in respect of pregnancies which terminated in both nuptial and ex-nuptial confinements, and it continued into the 1970s as younger adolescents proved the slowest to improve control over their fertility. In view of evidence that undesirable physiological and social consequences for both mother and child are especially likely to be associated with adolescent childbearing, this constitutes a crucial dimension of the post-war increase in the social problem represented by premarital pregnancy.

Finally, trends in the life cycle probability of marrying prior to first conception emphasised two points. A general pre-war/post-war comparison of synthetic cohort probabilities highlighted the broad restructuring of the courtship system which forms the backdrop against

which changes in premarital sexual behaviour should be seen. Aided by a favourable economic climate, young people's determination to be independent, and their increased access to motor vehicles, dating and mating became ever more independent of parents and the parental generation. Second, it was apparent that, in a statistical but not necessarily a causative sense, the post-war trend toward earlier marriage was prolonged by the rising incidence of teenage premarital pregnancy.

CHAPTER 5

SOME SOCIOLOGICAL PERSPECTIVES ON TRENDS IN NONMARITAL PREGNANCY AND EX-NUPTIAL FERTILITY

5.1 INTRODUCTION

The preceding three chapters have presented a detailed analysis of post-war trends in nonmarital and premarital pregnancy and ex-nuptial fertility. In this chapter some of the sociological issues arising out of childbearing following ex-nuptial conception are examined in relation to those trends. Two main themes are pursued. One deals with the variety of parental situations in which a child who is conceived ex-nuptially may find itself. Traditionally in New Zealand illegitimacy has been seen as a rather ill-defined social problem. However, the deleterious consequences of nonmarital pregnancy were largely averted if a child's parents married before it was born. Inasmuch as being born or giving birth ex-nuptially attracted stigma and, in the former instance, imposed legal disabilities, and inasmuch as social norms promoted acceptance of unhappy marriages, this simple outlook had some substance in reality. But fundamentally it was not only simple, but simplistic. It has become even more so as the stigma has diminished, the legal disabilities have been eliminated, and what once was hoped for in a marriage has come to be demanded of it. [1]

[1] All legal discrimination against persons born illegitimate was finally removed by the Status of Children Act 1969.

Related to this theme are the personal consequences which adolescent and ex-nuptial childbearing have for mother and child. Adolescent fertility has recently become a focus of international concern. [2] An overriding theme has stressed the personal effect which it may have on mother, child, and even grandparents (Ravenholt, 1977). In the Western context, concern stems mainly from the frequency with which adolescent reproduction is the unintended result of premarital intercourse. Thus, given the marked downward shift post-war in the age distribution of New Zealand women giving birth after premarital conception (Chapter 4), it is appropriate to review the literature on the topic and to present such New Zealand data as are available.

5.2 NONMARITAL PREGNANCY AND THE LIVING SITUATIONS OF MOTHERS AND CHILDREN AFTER CONFINEMENT

The main thrust of O'Neill et al's (1976) study of ex-nuptial births which occurred in New Zealand in 1970 is to stress the need, when assessing the social implications of illegitimacy, to think in terms of the different placement arrangements which may be made for an ex-nuptial child. Their argument may usefully be extended to take in all births which follow nonmarital conceptions.

There are six types of parental situation in which an ex-nuptially conceived child might find itself after birth: with

[2] Witness the establishment of the International Clearinghouse on Adolescent Fertility by the Population Institute (Washington DC) in 1978, the convening at Airlie, Virginia, in 1976 of the first world conference on adolescent fertility (Bogue, 1977), and the holding of an I.P.P.F. biomedical workshop on the subject in 1977 (Parkes et al, 1978).

natural parents who have married, with cohabiting natural parents, with one natural parent (normally its mother), with a natural parent and a stepparent, with adoptive parents, or with foster parents (including institutional foster parents). It would be possible, using these six categories, to develop a typology of living situations which also took into account the following factors: whether pregnancy was intended, the degree of emotional attachment between parents, the support given to solo parents by relatives and friends, whether a parent-stepparent relationship existed before conception or was formed subsequently, competition for affection from stepsiblings and half siblings, a child's age at acquiring a stepparent, whether a child was adopted by strangers or by persons known to the adopting parent(s), [3] and the circumstances leading to placement with foster parents. [4] No purpose is served by discussing such a typology in detail, the data available being too crude to permit its application. Clearly, though, a variety of social circumstances may ensue from the birth of a child who was conceived ex-nuptially, especially when the potential for mobility of mother and child between different living

[3] It is not uncommon in New Zealand for ex-nuptial children to be adopted by a natural parent (usually the mother) and a stepparent. Such adoptions are excluded here. Note secondly that there may only be one adopting parent, since where the natural father is unknown or one natural parent has deserted, only the consent of one parent to adoption is required. Finally, under the Adoption Act 1955 neither adopted persons nor their natural parents have right of access to official records for the purpose of tracing one another. For a radical viewpoint on this and other issues relating to adoption in New Zealand see Shawyer (1979).

[4] Foster placement may be made by a public authority, either following a mishap befalling a child's parents or because the home environment is unsatisfactory. It may also be made at the request of a natural parent or parents, in which case the motive for making the request is important because voluntary fostering allows the natural parent(s) to recall the child at any time.

situations through time is taken into account.

Trends in the Placement of Ex-nuptial Children

It follows from this discussion that Chapters 2-4 may not reveal the full extent of post-war social change associated with nonmarital pregnancy and ex-nuptial fertility. Analysis of the demographic trends must be supplemented by one of trends in the placement of the children concerned. Insofar as a distinction has been made between ex-nuptial conceptions leading to confinement within and outside marriage, this task already has been partly accomplished. Classification of children placed with both natural parents by quality of parental relationship would be more meaningful than classification by parents' marital status, but available data all but preclude analysis along these lines. [5]

Evidence From Ex-nuptial Birth Enquiries

The net effect of these considerations is to focus attention on children who are born, as well as conceived, ex-nuptially. Data deriving from ex-nuptial birth enquiries (Chapter 1) have three deficiencies. Not all ex-nuptial births are referred. A minority are not required to be (footnote 13, Chapter 1), but a much larger number are not referred at the discretion of registrars. As a rule perhaps 10-15 percent of ex-nuptial births have not been referred, the overwhelming majority probably being births to women known to be

[5] The only data with the slightest pretensions to facilitating such an analysis are those which permit a crude separation of bridal pregnancies into those where marriage is 'forced' and those where it is 'advanced' (see Table 3.13 and accompanying text).

living in stable de facto unions (O'Neill et al, 1976). [6] A second deficiency concerns mothers who are referred but never traced. Before 1971 they accounted for less than five percent of enquiries completed, but subsequently percentages have been higher and somewhat variable (see footnote 6). Probably the missing births would have been distributed mainly to the 'parents cohabiting' and 'solo mother' categories of Table 5.1, for almost all children 'adopted by strangers' become known to the Department of Social Welfare. The final deficiency concerns expansion over the years of the number of placement categories used. It is not always clear where births falling in some of those now used were formerly classified (see footnotes to Table 5.1), but the numbers involved are generally small.

Bearing these deficiencies in mind, three main placement categories need to be considered in Table 5.1. During the period 1955-56 to 1961-62 the percentage of non-Maori children placed with solo mothers stayed more or less constant. So, except for a temporary

[6] Precise percentages of ex-nuptial births registered each year and not referred cannot be determined because the Department of Social Welfare compiles its statistics not by year of registration, but by year in which its ex-nuptial birth enquiry was completed. Aside from the obvious lag factor this practice introduces, comparability with registration data is affected by fluctuations in the workloads of Social Workers, by changes in the priority accorded this component of their work, and by periodic decisions to write off backlogs of cases as 'not traced'. For example, during 1971-79 the percentage of 'not traced' cases among enquiries completed in a year varied between 5.3 and 16.3.

O'Neill et al (1976) were able, using unpublished data, to compare births registered in each year with births referred in the same year for the period 1962-72. During 1962-67, percentages not referred were estimated at between 13.9 and 15.7 annually, except in 1963 when, for some reason, the figure was 21.3. During 1968-72, non-referrals were 11.6, 11.1, 7.8, 8.7, and 12.2 percent of registered ex-nuptial live births, the low figures for 1970 and 1971 reflecting the conduct of the 1970 Ex-nuptial Birth Survey via the ex-nuptial birth enquiry system.

Table 5.1

PLACEMENT ARRANGEMENTS MADE FOR EX-NUPTIAL CHILDREN TRACED BY SOCIAL
1
WORKERS 1955-56 TO 1979

Year	Legitimated ²	Parents Cohabiting ³	Solo Mother	Relatives ⁴	Adopted by Strangers	Foster Parents	Died	Other	Total	Additional Cases Not Traced									
Non-Maori Children																			
1955-56	-	-	726	29.5	542	22.1	120	4.9	849	34.6	60	2.4	56	2.3	104	4.2	2457	100.0	130
1956-57	-	-	806	31.4	502	19.5	110	4.3	968	37.7	50	1.9	50	1.9	84	3.3	2570	100.0	102
1957-58	47	1.8	778	29.7	577	22.0	112	4.3	935	35.7	79	3.0	46	1.8	48	1.8	2622	100.1	33
1958-59	77	2.7	823	29.3	531	18.9	111	4.0	1090	38.8	71	2.5	68	2.4	38	1.4	2809	100.0	45
1959-60	66	2.3	819	28.4	558	19.4	116	4.0	1142	39.7	71	2.5	50	1.7	57	2.0	2879	100.0	71
1960-61	65	2.1	772	24.4	597	18.9	135	4.3	1430	45.2	62	2.0	51	1.6	49	1.6	3161	100.1	99
1961-62	107	3.0	999	28.3	668	18.9	151	4.3	1447	41.0	67	1.9	58	1.6	30	0.9	3527	99.9	167
All Children																			
1963	94	2.3	1127	28.0	782	19.5	148	3.7	1666	41.5	104	2.6	62	1.5	35	0.9	4018	100.0	184
1964	147	3.0	1273	25.7	994	20.1	221	4.5	2081	42.0	104	2.1	82	1.7	49	1.0	4951	100.1	173
1965	149	2.8	1324	24.4	1098	20.3	222	4.1	2303	42.5	166	3.1	85	1.6	69	1.3	5416	100.1	219
1966	201	3.7	1209	22.1	1240	22.6	228	4.2	2286	41.7	163	3.0	94	1.7	61	1.1	5482	100.1	142
1967	247	4.0	1289	21.1	1405	23.0	247	4.0	2529	41.4	187	3.1	112	1.8	90	1.5	6106	99.9	184
1968	222	3.3	1592	23.8	1693	25.3	302	4.5	2448	36.6	233	3.5	125	1.9	74	1.1	6689	100.0	323
1969	231	3.4	1808	26.4	1856	27.1	247	3.6	2337	34.1	184	2.7	110	1.6	80	1.2	6853	100.1	470
1970	254	3.7	1778	26.1	1950	28.6	234	3.4	2302	33.8	127	1.9	97	1.4	77	1.1	6819	100.0	297
1971	336	4.5	1855	25.0	2178	29.4	319	4.3	2409	32.5	116	1.6	119	1.6	80	1.1	7412	100.0	738
1972	313	4.3	1881	26.1	2293	31.8	250	3.5	2128	29.5	97	1.3	146	2.0	95	1.3	7203	99.8	523
1973	274	3.8	2037	28.2	2455	34.0	298	4.1	1883	26.1	73	1.0	137	1.9	70	1.0	7227	100.1	1210
1974	265	3.6	2411	32.5	2606	35.1	234	3.2	1633	22.0	69	0.9	125	1.7	82	1.1	7425	100.1	1448
1975	278	3.6	2758	35.7	2942	38.1	210	2.7	1322	17.1	32	0.4	129	1.7	56	0.7	7727	100.0	839
1976	280	3.8	2764	37.4	2935	39.7	206	2.8	1046	14.1	16	0.2	81	1.1	71	1.0	7399	100.1	823
1977	311	3.5	3590	40.2	3471	38.9	352	3.9	997	11.2	21	0.2	115	1.3	70	0.8	8927	100.0	966
1978	250	2.7	3870	42.2	3734	40.7	249	2.7	908	9.9	16	0.2	93	1.0	58	0.6	9178	100.0	513
1979	230	3.2	3167	43.4	2913	39.9	207	2.8	660	9.1	12	0.2	75	1.0	28	0.4	7292	100.0	439

Source: Annual reports of the Child Welfare Division, Department of Education 1955-56 to 1971-72, and of the Department of Social Welfare 1972-73 to 1979-80.

- 1 Data relate to ex-nuptial birth enquiries completed during years ended 30 March until 1961-62 and to enquiries completed during calendar years thereafter. It should also be noted that as the legitimacy of Maori births could not be ascertained before 1962, figures presented for the period up until 1961-62 pertain to non-Maori children only. Allowing time for the registration of a birth, its referral to a Child Welfare Officer, and completion of that officer's enquiry it is unlikely that the 1961-62 data are seriously contaminated by Maori ex-nuptial births which occurred during the first three months of 1962.
- 2 This category was first distinguished in 1957-58. Before that it is assumed that cases where the natural parents had married subsequent to the child's birth were included in the 'Parents Cohabiting' category. From 1976 onward, cases where the child's mother had married someone other than its father, and cases where she had married someone whose relationship to the child was unknown have been separately itemised. These have been included in the 'Legitimated' category, although previously where the husband was known not to be the natural father they may have been included in the 'Solo Mother' category, which was officially labelled 'Infant Remaining With Mother (parents not cohabiting)'. In the years 1976-79 there were 7, 7, 13, and 6 such cases recorded.
- 3 From 1976 onward, cases where the child was with its mother who was cohabiting with someone other than its father, or with someone whose relationship to the child was unknown have been separately itemised. It is assumed that previously a cohabitant was assumed to be the natural father in the absence of evidence to the contrary. As to cases where the cohabitant was known not to be the natural father, they have here been included in the 'Solo Mother' category. In the years 1976-79 there were 16, 59, 101, and 34 such cases recorded.
- 4 From 1976 onward, cases where the child was with its father, who was not cohabiting with its mother have been separately itemised. These have been included in the 'Relatives' category. In the years 1976-79 there were 5, 5, 10, and 3 such cases recorded. Otherwise the 'Relatives' category includes children formally adopted by relatives and those for whom relatives were essentially foster parents.

decline in 1960-61, did the percentage placed with cohabiting parents.

However, there was a reasonably sustained upward trend in the relative importance of the adopted by strangers category from the late 1950s, probably due to the increasingly youthful maternal age structure. [7]

Between 1963 and the mid-1970s the percentage of ex-nuptial children placed with solo mothers doubled, eventually stabilising at about forty. This trend began before 1968, so the introduction of the Domestic Purposes Benefit (DPB) was not its catalyst. What the DPB may have initiated is a pronounced decline in the percentage of children placed for adoption by strangers, which after remaining stable during 1963-67 dropped sharply in 1968 to commence a downward trend which has yet to abate. [8] By 1979 the relative importance of this placement category had fallen to less than one-quarter of its 1967 level. Obviously the DPB increased the economic feasibility of mothers keeping their children as solo parents. But this was not the only factor involved.

Another major influence on the adoption market during the 1970s was easier access to induced abortion. It is logical that such a trend should in particular attract women who, proceeding to term, would place their children for adoption (Baldwin, 1977). One of O'Neill et al's (1976) findings was that adoption placement is positively correlated with mother's socio-economic status. If, therefore, the induced abortion rate for nonmaritally pregnant middle class women increased more after 1970 than did that for working class

[7] During 1950-55 the percentages of non-Maori ex-nuptial live births which occurred to mothers aged seventeen or under and nineteen or under fluctuated in the ranges 7.5 to 8.5 and 21.4 to 22.9. Thereafter, they rose to 14.9 and 33.1 in 1961.

[8] Note, however, that the DPB's early effect was only partly direct via a growing preference for solo motherhood over adoption. It was also indirect via a primary impact on the rate of marriage dissolution, and hence on childbearing within cohabiting unions. The sharp reduction in the importance of adoption during 1967-69 reflected sizeable increases in placements with cohabiting parents and solo mothers more than a marked decline in the number of adoption placements (Table 5.1).

women as speculated in Chapter 4, it is indeed highly likely that greater use of abortion reduced adoption placements. [9] Twin concerns of middle class women and their parents have traditionally been the disruption which nonmarital pregnancy caused to the former's lives and the stigma attached to it. Formerly these negative consequences were minimised by marriage or adoption. Now they may be almost eliminated by terminating the pregnancy.

Several other factors may have helped lower the proportion of ex-nuptial children adopted by strangers. One is a changing social climate which today sees unmarried mothers and family formation within de facto unions more widely accepted. This reflects, in turn, resurgent feminism and a less religious younger generation's re-evaluation of traditional social mores, and has both stimulated and responded to legislative milestones such as the DPB and the Status of Children Act. Another factor may have been reduced pressure from medical personnel and social workers to place for adoption. Finally, a rising level of marriage dissolution (Chapter 7), if leading to more childbearing within cohabiting unions, will have tended independently to reduce the percentage of children placed for adoption.

The percentage of ex-nuptial children placed with cohabiting parents dropped during 1963-67 (Table 5.1). Baby boom teenagers were accounting for an increasing proportion of ex-nuptial births at ages when unmarried mothers were least likely to be cohabiting. During

[9] Commenting on the impact on the availability of children for adoption of the 1967 change in British abortion law, Gill (1977: 104-05) writes: 'In 1961-64 just over half the children released to strangers for adoption were drawn from the two upper social class groups. By 1969-70, of the illegitimate pregnancies aborted 72 per cent were drawn from these two groups.'

1967-69 the percentage rose sharply again. Depressed economic conditions may have discouraged marriage when pregnant, but cohabitation hardly seems an alternative. A more likely explanation focuses on the sudden jump in the divorce rate between 1968 and 1969 (Chapter 7). Visible marital instability, that attested to by separation, almost certainly increased sharply at this time, so that the potential rose for childbearing within unions which remained informal while divorce proceedings ran their course.

During 1969-72, placement of ex-nuptial children with cohabiting parents remained at a constant level. However, by 1979 it accounted for well over forty percent of all referred ex-nuptial children. Three factors probably explain the upward trend. One is the elimination through induced abortion, and perhaps also improved contraception, of many births which, had they occurred, would have been assigned to other placement categories. The second is a suspected growing lack of concern in some sectors of the community with formal marriage as a necessary setting for family formation. The third is the continued rise in the level of marital breakdown, so that more relationships are being formed by persons with divorces pending.

Evidence From Adoption Statistics

Under the provisions of the Adoption Act 1955, most adoptions come to the attention of the Department of Social Welfare. It is from this source that adoption statistics mainly emanate. [10]

Table 5.2 summarises the adoption scene since enactment of the current adoption legislation. Of the eighty to ninety percent of adoptions annually coming to the attention of the welfare authorities

Table 5.2

FINAL ORDERS MADE ON ADOPTIONS COMING TO THE ATTENTION OF WELFARE
 AUTHORITIES BY STATUS OF CHILD'S BIRTH, BY RELATIONSHIP TO
 CHILD OF ADOPTIVE PARENTS, AND AS PERCENTAGES OF ALL
 FINAL ADOPTION ORDERS 1956-1979

Year	Status of Child's Birth						Relationship to Child of Adoptive Parents						Final Adoptions		(7) as a Percentage of (8)
	Nuptial (1)		Ex-nuptial (2)		Unknown (3)		Strangers (4)		Parent + Spouse (5)		Relatives or Friends (6)		Cases (7)	Total (8)	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent			
956	265	31.9	567	68.1	-	-	424	*	219	*	69	*	832	1050	79.2
957	352	21.5	1285	78.5	-	-	1161	*	311	*	160	*	1637	1890	86.6
958	452	26.3	1267	73.7	-	-	1140	66.3	393	22.9	186	10.8	1719	1917	89.7
959	446	24.7	1348	74.5	15	0.8	1248	69.0	359	19.8	202	11.2	1809	2302	78.6
960	419	23.3	1377	76.7	-	-	1327	73.9	347	19.3	122	6.8	1796	2242	80.1
961	405	19.2	1709	80.8	-	-	1613	76.3	393	18.6	108	5.1	2114	2579	82.0
962	401	19.1	1681	80.1	17	0.8	1598	76.1	366	17.4	135	6.4	2099	2645	79.4
963	445	19.0	1855	79.4	36	1.5	1775	76.0	382	16.4	179	7.7	2336	2843	82.2
964	419	16.1	2128	82.0	48	1.8	1941	74.8	418	16.1	236	9.1	2595	2885	89.9
965	350	12.3	2429	85.6	58	2.0	2162	76.2	447	15.8	228	8.0	2837	3088	91.9
966	443	14.8	2475	82.6	79	2.6	2230	74.4	504	16.8	263	8.8	2997	3462	86.6
967	432	13.6	2674	84.1	75	2.4	2409	75.7	492	15.5	280	8.8	3181	3513	90.5
968	377	10.8	3023	86.9	77	2.2	2617	75.3	502	14.4	358	10.3	3477	3780	92.0
969	473	13.5	2977	85.1	50	1.4	2499	71.4	652	18.6	349	10.0	3500	3888	90.0
970	495	14.7	2831	84.2	36	1.1	2286	68.0	739	22.0	337	10.0	3362	3837	87.6
971	506	15.7	2674	82.8	51	1.6	2176	67.3	738	22.8	317	9.8	3231	3967	81.4
972	498	15.2	2713	82.7	69	2.1	2136	65.1	801	24.4	343	10.5	3280	3642	90.1
973	451	14.6	2551	82.6	86	2.8	2000	64.8	770	24.9	318	10.3	3088	3524	87.6
974	506	17.0	2391	80.3	79	2.7	1821	61.2	903	30.3	252	8.5	2976	3366	88.4
975	571	20.8	2106	76.6	74	2.7	1581	57.5	877	31.9	293	10.7	2751	3322	82.8
976	593	23.2	1902	74.5	59	2.3	1347	52.7	913	35.7	294	11.5	2554	2942	86.8
977	537	25.4	1536	72.6	43	2.0	1052	49.7	792	37.4	272	12.9	2116	2550	83.0
978	523	24.6	1526	71.6	81	3.8	1067	50.1	782	36.7	281	13.2	2130	2452	86.9
979	374	19.1	1375	70.4	205	10.5	845	43.2	773	39.6	336	17.2	1954	2200	88.8

Source: Annual reports of the Child Welfare Division, Department of Education 1956-57 to 1971-72, and of the Department of Social Welfare 1972-73 to 1979-80.

The Adoption Act 1955 came into force in October of that year, making 1956 the first full year for which detailed adoption statistics were collected under its provisions. Note that the small number of adoptions in 1956 and the unusually high percentage of cases which involved nuptial children are artifacts of the introduction of a system providing for the granting of interim adoption orders, which, except in special circumstances, must remain in force for six months before application for a final order can be made. Note also that the 'Number' elements of columns (1)-(3) and (4)-(6) sum to the figures given in column (7), except in the case of columns (4)-(6) in 1956 and 1957 (see footnote 2). 'Percent' elements for columns (1)-(3) and (4)-(6) add to within 0.1 of 100.0.

In 1956 and 1957 there were respectively 120 and 5 cases for which the relationship to the child of the adoptive parents was unknown. Columns (4)-(6) thus do not sum to column (7) and percentages have not been calculated.

Data from which columns (1)-(6) were compiled were never published for 1962. The figures presented are estimates based on the means of the 1961 and 1963 percentage distributions over columns (1)-(3) and (4)-(6).

(column (9)), a fairly constant three-quarters during the 1960s involved placement with strangers (column (4)). The proportion seems to have risen to this level in the late 1950s and early 1960s as the rate of ex-nuptial childbearing rose. Since 1968 it has fallen almost continuously, and by 1979 was well below fifty percent.

Simultaneously the percentage of adopted children placed with a natural parent and spouse has more than doubled (column (5)). Early on there were increasing numbers of adoptions of this type, but as the 1970s progressed a marked decline in the number of adoptions by strangers became the main mechanism of change. [11]

It is, of course, adoptions of ex-nuptial children which are of primary interest. Table A2.16, Appendix 2 shows with respect to these similar patterns to those of Table 5.2 for the period 1963-78. However, the central issue concerns the probability of an ex-nuptial child being adopted and how this has changed. The main feature of Table 5.3 is the decline in the probability of adoption within the first two years of life since the late 1960s. [12] A child born ex-nuptially in 1977 was only one-third as likely to have been adopted before its second birthday as one born ten years previously. There is

[10] Until 1973 the annual New Zealand Vital Statistics also included a table giving adoptions by age and sex of child. Adoptions not covered by Department of Social Welfare data fall into two categories. First, where both the child and at least one adoptive parent are Maori (before 31:3:63 it was where the child alone was Maori), the social worker's report required by law unless one adoptive parent is also a natural parent is provided by a Maori Welfare Officer of the Department of Maori and Island Affairs. Regrettably, that department publishes no data on cases it deals with. Second, cases where the magistrate chooses not to call for a social worker's report may escape the Department of Social Welfare's notice as well.

[11] Adoptions by a natural parent and spouse usually occur when a divorced parent remarries or when unmarried mothers marry their children's stepfathers. Both situations were involved. The rapid rise in the divorce rate in the late 1960s coupled with the fact that unmarried mothers from the birth cohorts of the late 1940s began to marry saw parent plus spouse adoptions increase by 237, or 47.2 percent between 1968 and 1970, 131 of the additional children being nuptial and 106 ex-nuptial.

[12] Table 5.3 is based on unpublished Department of Social Welfare data giving final adoption orders by child's age and relationship to its adoptive parents during 1963-78. The method used to construct it is detailed in Appendix 9.

Table 5.3

ESTIMATED RATES OF ADOPTION BY STRANGERS, RELATIVES, CLOSE FRIENDS, OR
FOSTER PARENTS BY AGE: 1963-1977 EX-NUPTIAL BIRTH COHORTS

Ex-nuptial Birth Cohort	Age in Completed Years										
	0	1	2	3	4	5	6	7	8	9	10
1963	248	83	13	6	3	2	1	1	1	-	1
1964	259	80	10	4	4	2	1	1	1	-	1
1965	266	85	12	5	4	2	2	1	1	1	1
1966	260	90	12	5	5	3	2	1	2	1	-
1967	262	80	12	6	4	3	2	1	2	1	1
1968	258	60	12	6	3	2	2	1	1	1	
1969	236	60	8	6	4	3	2	1	1		
1970	224	58	8	6	4	3	2	1			
1971	200	57	7	6	4	3	2				
1972	179	50	6	6	3	2					
1973	165	51	8	4	3						
1974	130	48	7	3							
1975	109	38	5								
1976	90	32									
1977	82										

Source: Unpublished data supplied by the Department of Social Welfare; New Zealand Birth Register 1966; New Zealand Vital Statistics 1963-73.

little to be added by way of explanation to earlier discussion of Table 5.1. Table 5.3 just confirms the trend it disclosed, adds, within the limitations of estimation procedures used, precision to the adoption levels and changes therein, and relates adoptions to birth cohorts.

Evidence From the Birth Register

Data for 1966 and 1976 from the New Zealand Birth Register allow some refinement of trends in the placement of ex-nuptial children by age of mother and ethnic origin of child. They have several limitations. Ex-nuptial births where the parents marry between

confinement and registration cannot easily be identified in the main birth register. [13] A supplementary register is kept, but is destroyed after five years. Thus, one has complete information on the 223 such cases among the 9,507 ex-nuptial confinements from which live births were registered in 1976, but only partial information on the 231 out of 6,907 such cases in 1966. [14] A second limitation concerns the classification of births by ethnic origin. Birth registration procedure elicits information on parents' ancestry solely for statistical purposes, and between 1966 and 1976 transferring of these details to the main birth register was discontinued. Moreover, it appears that even in 1966 they were not always transferred. [15] The only way of making comparisons by ethnic origin between 1966 and 1976 is thus if classification is based on parents' names, with data on

[13] Births are identified as ex-nuptial in the main birth register either by there being no details of the father registered or by there being no date of marriage of the parents registered. Where the parents of an ex-nuptial child marry they are required by law to reregister its birth within three months. When reregistration is effected, the original birth entry is cancelled and a new entry is made in the parents' married names. However, when marriage precedes initial registration, only the latter entry is ever made. By comparing dates of birth and of parents' marriages it is possible to identify reregistration entries. To then distinguish those which relate to births never previously registered requires comparison of names of children and parents from these entries and from entries relating to identifiable ex-nuptial births. Besides being an unjustifiably time consuming exercise, this procedure was incompatible with undertakings made concerning confidentiality before access was granted to the birth register.

[14] Ages of mothers in these cases were deduced by comparison of the incomplete data obtained from a search of the birth register with published data. Otherwise the only information available was on items on which by definition there was no variation among the missing cases.

[15] Officially there were 1,977 live Maori ex-nuptial confinements in 1966. Data obtained from the birth register indicate 1,692 such confinements. A small percentage only of the shortfall would be children born to parents who married before registering their births.

birthplace helpful in identifying parents of Pacific Polynesian origin. [16]

Other data limitations will be noted in due course. The first of those just discussed has no bearing on changes in the incidence of placement for adoption by age of mother. Table 5.4 shows marked declines in the percentages of ex-nuptial children adopted by strangers etc before their second birthdays at virtually all maternal ages. By 1976, however, extreme youth had become a more marked correlate of adoption placement than a decade earlier. The percentage of 20-24 year-old mothers of ex-nuptial children placing for adoption dropped by almost four-fifths during 1966-76, from 35.1 to 7.3. In proportionate terms, declines at younger maternal ages were less dramatic.

Table 5.5, which refines the data of Table 5.4 by ethnic origin, discloses very low rates of placement for adoption of Maori and Pacific Polynesian ex-nuptial children. This reflects the cultural attitudes of these groups to ex-nuptial childbearing and consensual marriage, but also masks an element of informal adoption. [17] Although low in 1966, the incidence of adoption placement fell

[16] For an assessment of the comparability of classifications made for 1966 on this basis and on the basis used in compiling official statistics see Appendix 10.

[17] Adoption/fostering of children by relatives is quite common among Maoris. Webster (1973) summarises the limited quantitative evidence available and reviews earlier literature on the topic. Data collected in 1980 by Edward Douglas of the University of Waikato show that of 758 children of 149 Maori mothers, 86 (11.3 percent) were adopted or fostered, while 76 (31.4 percent) of 242 adults interviewed had themselves been raised wholly (45) or partly (31) by relatives or non-kin.

Table 5.4

EX-NUPTIAL CONFINEMENTS FROM WHICH CHILDREN WERE ADOPTED BY STRANGERS,
RELATIVES, CLOSE FRIENDS, OR FOSTER PARENTS BEFORE THEIR SECOND
BIRTHDAYS BY AGE OF MOTHER 1966 AND 1976

Age of Mother	1966			1976		
	¹ Adoptions	Confinements	Percent Adopted	¹ Adoptions	Confinements	Percent Adopted
13	2	6	33.3	5	8	62.5
14	22	43	51.2	26	62	41.9
15	79	148	53.4	79	275	28.7
16	183	372	49.2	192	741	25.9
17	299	595	50.3	201	1061	18.9
18	371	793	46.8	168	1025	16.4
19	417	907	46.0	135	1032	13.1
20	291	699	41.6	74	865	8.6
21	223	590	37.8	50	679	7.4
22	158	464	34.1	43	617	7.0
23	80	328	24.4	38	488	7.8
24	74	272	27.2	20	426	4.7
25	46	232	19.8	22	373	5.9
26	34	212	16.0	19	324	5.9
27	26	168	15.5	16	250	6.4
28	19	136	14.0	15	228	6.6
29	23	151	15.2	10	192	5.2
30-34	53	430	12.3	20	566	3.5
35-39	23	258	9.3	10	234	4.3
40+	6	103	5.8	4	67	6.0
Total	2430	6907	35.2	1147	9504	12.1

Source: New Zealand Birth Register 1966 and 1976.

¹ Adoptions of twins etc are counted only once.

noticeably for both ethnic groups during the next decade. Forty-eight percent fewer Maori ex-nuptial children born in 1976 were adopted before age two than would have been if 1966 adoption rates by age of mother had applied. Clearly, though, trends described in the previous paragraph mainly reflect the changing behaviour of the non-Polynesian majority of the population.

Table 5.5

EX-NUPTIAL CONFINEMENTS FROM WHICH CHILDREN WERE ADOPTED BY STRANGERS, RELATIVES, CLOSE FRIENDS, OR FOSTER
 PARENTS BEFORE THEIR SECOND BIRTHDAYS BY AGE OF MOTHER AND ETHNIC ORIGIN OF CHILD 1966 AND 1976¹

Age of Mother	Non-Polynesian			Maori			Pacific Polynesian			
	Adoptions	Confinements	Percent Adopted	Adoptions	Confinements	Percent Adopted	Adoptions	Confinements	Percent Adopted	
				1966						
13-15	95	142	66.9	7	50	14.0	1	3	33.3	
16-17	473	758	62.4	9	175	5.1	-	9	-	
18-19	751	1255	59.8	35	316	11.1	2	39	5.1	
20-24	761	1504	50.6	51	593	8.6	14	186	7.5	
25-29	124	461	26.9	20	322	6.2	4	76	5.2	
30-34	48	249	19.3	3	146	2.1	2	25	8.0	
35-39	19	155	12.3	3	83	3.6	2	10	20.0	
40+	5	56	8.9	1	37	2.7	-	1	-	
Total	2276	4580	49.7	129	1722	7.5	25	349	7.2	
				1976						
13-15	97	228	42.5	12	100	12.0	1	12	8.3	
16-17	371	1210	30.7	18	452	4.0	4	77	5.2	
18-19	282	1235	22.8	20	619	3.2	1	123	0.8	
20-24	179	1632	11.0	30	940	3.2	16	395	4.1	
25-29	50	738	6.8	21	411	5.1	11	185	5.9	
30-34	11	289	3.8	8	183	4.4	1	74	1.4	
35-39	4	134	3.0	4	66	6.1	2	30	6.7	
40+	3	28	10.7	1	28	3.6	-	8	-	
Total	997	5494	18.1	114	2799	4.1	36	904	4.0	

Source: New Zealand Birth Register 1966 and 1976.

¹ Confinements followed by marriage of the parents prior to birth registration are not included. As such confinements seldom are followed by adoption by strangers etc within two years, percentages adopted are likely to be slightly inflated. Note also that the classification by ethnic origin of child is based on parents' names and, in the case of children of Pacific Polynesian extraction, parents' birthplaces; that adoptions of twins are counted only once; and that the ethnic origin category 'Mixed Maori-Pacific Polynesian' has been omitted, there being no adoptions among 25 and 84 confinements in 1966 and 1976.

Cohabitation is established in the birth register if the details of both parents are registered and both have the same address. There is no compulsion on cohabiting parents to register the father's particulars, and so coverage is incomplete. To what extent it is incomplete is unknown. Presumably cohabiting fathers are strongly inclined to formally acknowledge paternity through the birth register, but it cannot be taken for granted that the number who fail to do so is negligible. Hopefully, despite this, major trends and differentials are not misrepresented.

The percentage of ex-nuptial confinements where the parents were married or known to be cohabiting at the time of birth registration rose from 31.7 to 50.0 between 1966 and 1976 (Table 5.6). Standardisation for age raises the latter figure to 51.0 percent. Concurrently, the percentage of confinements for which the father's particulars were registered, but which occurred to non-cohabiting parents quadrupled, although only to 2.8. If cohabiting fathers also became more willing to formally acknowledge paternity, Table 5.6 overstates the increase in placement of ex-nuptial children with cohabiting parents. Probably, however, the trend among noncohabiting fathers reflects solo mothers' need to establish paternity and take maintenance proceedings before applying for the DPB.

For both the 1966 and 1976 ex-nuptial birth cohorts the probability of a child being born to cohabiting parents increased with age of mother to the mid-twenties and then plateaued. All age-specific probabilities rose substantially during the decade, but the largest relative increments occurred at younger ages (Table 5.6). At age fifteen the increase was almost six-fold, at ages 16-17 it was

Table 5.6

LIVE EX-NUPTIAL CONFINEMENTS BY AGE OF MOTHER AND COHABITATION

STATUS OF PARENTS AT BIRTH REGISTRATION 1966 AND 1976

Age of Mother	Parents Cohabiting		Parents Married		Parents not Cohabiting		Parents' Cohabitation ¹ Status Unknown		Father's Particulars not Registered		Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1966												
13	-	-	-	-	-	-	-	-	6	100.0	6	100.0
14	2	4.7	-	-	-	-	-	-	41	95.3	43	100.0
15	5	3.4	2	1.4	4	2.7	-	-	137	92.6	148	100.1
16	32	8.6	11	3.0	4	1.1	-	-	325	87.4	372	100.1
17	62	10.4	12	2.0	9	1.5	2	0.3	510	85.7	595	99.9
18	119	15.0	43	5.4	6	0.8	2	0.3	623	78.6	793	100.1
19	149	16.4	42	4.6	4	0.4	6	0.7	706	77.8	907	99.9
20	161	23.0	24	3.4	5	0.7	7	1.0	502	71.8	699	99.9
21	149	25.3	17	2.9	3	0.5	7	1.2	414	70.2	590	100.1
22	147	31.7	17	3.7	2	0.4	5	1.1	293	63.1	464	100.0
23	139	42.4	-	-	1	0.3	3	0.9	185	56.4	328	100.0
24	103	37.9	3	1.1	2	0.7	3	1.1	161	59.2	272	100.0
25	98	42.2	-	-	2	0.9	3	1.3	129	55.6	232	100.0
26	107	50.5	6	2.8	2	0.9	3	1.4	94	44.3	212	99.9
27	90	53.6	8	4.8	-	-	3	1.8	67	39.9	168	100.1
28	68	50.0	11	8.1	-	-	2	1.5	55	40.4	136	100.0
29	74	49.0	9	6.0	-	-	3	2.0	65	43.0	151	100.0
30-34	253	58.8	8	1.9	2	0.5	4	0.9	163	37.9	430	100.0
35-39	143	55.4	10	3.9	1	0.4	3	1.2	101	39.1	258	100.0
40+	64	62.1	8	7.8	1	1.0	-	-	30	29.1	103	100.0
Total	1965	28.4	231	3.3	48	0.7	56	0.8	4607	66.7	6907	99.9
1976												
13	-	-	-	-	-	-	-	-	8	100.0	8	100.0
14	6	9.7	-	-	3	4.8	-	-	53	85.5	62	100.0
15	54	19.6	3	1.1	13	4.7	3	1.1	202	73.5	275	100.0
16	214	28.9	13	1.8	33	4.5	6	0.8	475	64.1	741	100.1
17	377	35.5	37	3.5	43	4.1	4	0.4	600	56.6	1061	100.1
18	405	39.5	26	2.5	30	2.9	8	0.8	556	54.2	1025	99.9
19	445	43.1	33	3.2	21	2.0	8	0.8	525	50.9	1032	100.0
20	405	47.3	17	2.0	17	2.0	5	0.6	412	48.1	856	100.0
21	351	51.7	18	2.7	16	2.4	10	1.5	284	41.8	679	100.1
22	328	53.2	13	2.1	13	2.1	8	1.3	255	41.3	617	100.0
23	279	57.2	10	2.0	10	2.0	7	1.4	182	37.3	488	99.9
24	248	58.2	14	3.3	12	2.8	5	1.2	147	34.5	426	100.0
25	251	67.3	8	2.1	5	1.3	1	0.3	108	29.0	373	100.0
26	186	57.4	-	-	9	2.8	3	0.9	126	38.9	324	100.0
27	161	64.4	4	1.6	5	2.0	3	1.2	77	30.8	250	100.0
28	146	64.0	2	0.9	5	2.2	1	0.4	74	32.5	228	100.0
29	115	59.9	5	2.6	7	3.6	-	-	65	33.9	192	100.0
30-34	368	65.0	15	2.7	17	3.0	8	1.4	158	27.9	566	100.0
35-39	150	64.1	3	1.3	8	3.4	2	0.9	71	30.3	234	100.0
40+	44	65.7	2	3.0	3	4.5	1	1.5	17	25.4	67	100.1
Total	4533	47.7	223	2.3	270	2.8	83	0.9	4395	46.2	9504	99.9

Source: New Zealand Birth Register 1966 and 1976.

1 This column relates to instances in which the father's particulars were registered some time after the initial birth registration, so that it could not be ascertained whether he was coresident with the mother at the time of initial registration.

more than three-fold, and at ages 18-21 it was more than two-fold.

Refining the data by ethnic origin, the role cultural acceptance of consensual marriage plays in boosting Maori relative to non-Maori

ex-nuptial fertility levels is readily apparent (Table 5.7). Percentages of live ex-nuptial confinements involving couples known to be cohabiting increased for both Maoris and Pacific Polynesians during 1966-76. The increase for Maoris, which remains after standardising for age, is perhaps surprising given recent sharp declines in Maori ex-nuptial fertility at older ages (Chapter 3). Increments have, however, been greatest at ages under twenty, suggesting that participation of Maoris in social trends affecting the wider youth community has more than offset the impact of fertility decline among consensually married older women. [18]

The more frequent placement of Pacific Polynesian ex-nuptial children with cohabiting parents in 1976 could be linked to high levels of immigration from the Pacific in the early 1970s. As a result, Pacific minority groups almost certainly became culturally less European than they had been (Trlin, 1975b). However, compared to the rise in the percentage of non-Polynesian ex-nuptial children born to cohabiting parents, increments recorded for Maoris and Pacific Polynesians are slight. This percentage more than doubled during 1966-76 (Table 5.7). There was almost a six-fold increase in the probability that a mother aged 13-15 would be cohabiting, nearly a five-fold increase for mothers aged 16-17, and well over a three-fold increase for mothers aged 18-19. Absolute increments at ages 20-24 and 25-29 were also substantial.

[18] It must also be noted that the classification procedure used in compiling Table 5.7 may define a culturally less Maori group of 'Maori' ex-nuptial live births than does the official procedure (see Appendix 10).

Table 5.7

LIVE EX-NUPTIAL CONFINEMENTS BY AGE OF MOTHER, ETHNIC ORIGIN OF CHILD,
AND COHABITATION STATUS OF PARENTS AT BIRTH REGISTRATION 1966 AND 1976¹

Cohabitation Status	1966									1976									Total
	13-15	16-17	18-19	20-24	25-29	30-34	35-39	40+	Age of Mother Total	13-15	16-17	18-19	20-24	25-29	30-34	35-39	40+		
Non-Polynesian																			
Parents Cohabiting	4	43	118	296	176	128	81	34	880	35	327	402	799	470	194	81	22	2330	
	2.8	5.7	9.4	19.7	38.2	51.4	52.3	60.7	19.2	15.4	27.0	32.6	49.0	63.7	67.1	60.4	78.6	42.4	
Parents not Cohabiting	4	8	9	11	4	2	-	1	39	12	58	37	36	18	6	6	-	173	
	2.8	1.1	0.7	0.7	0.9	0.8	-	1.8	0.9	5.3	4.8	3.0	2.2	2.4	2.1	4.5	-	3.1	
Cohabitation Status Unknown	-	1	4	13	8	1	2	-	29	2	2	11	15	3	3	1	-	37	
	-	0.1	0.3	0.9	1.7	0.4	1.3	-	0.6	0.9	0.2	0.9	0.9	0.4	1.0	0.7	-	0.7	
Father's Particulars not Registered	134	706	1124	1184	273	118	72	21	3632	179	823	785	782	247	86	46	6	2954	
	94.4	93.1	89.6	78.7	59.2	47.4	46.5	37.5	79.3	78.5	68.0	63.6	47.9	33.5	29.8	34.3	21.4	53.8	
Totals - Number	142	758	1255	1504	461	249	155	56	4580	228	1210	1235	1632	738	289	134	28	5494	
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.0	100.0	100.1	100.0	100.1	100.0	100.0	100.0	99.9	100.0	100.0	
Maori																			
Parents Cohabiting	3	48	131	317	220	113	58	28	918	20	214	359	585	277	128	47	16	1646	
	6.0	27.4	41.5	53.5	68.3	77.4	69.9	75.7	53.3	20.0	47.3	58.0	62.2	67.4	69.9	71.2	57.1	58.8	
Parents not Cohabiting	-	5	-	2	-	-	1	-	8	3	16	10	24	8	9	2	3	75	
	-	2.9	-	0.3	-	-	1.2	-	0.5	3.0	3.5	1.6	2.6	1.9	4.9	3.0	10.7	2.7	
Cohabitation Status Unknown	-	1	3	10	5	-	1	-	20	1	8	3	13	2	3	-	1	31	
	-	0.6	0.9	1.7	1.6	-	1.2	-	1.2	1.0	1.8	0.5	1.4	0.5	1.6	-	3.6	1.1	
Father's Particulars not Registered	47	121	182	264	97	33	23	9	776	76	214	247	318	124	43	17	8	1047	
	94.0	69.1	57.6	44.5	30.1	22.6	27.7	24.3	45.1	76.0	47.3	39.9	33.8	30.2	23.5	25.8	28.6	37.4	
Totals - Number	50	175	316	593	322	146	83	37	1722	100	452	619	940	411	183	66	28	2799	
Percent	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.0	99.9	100.0	100.0	100.0	99.9	100.0	100.0	100.0	
Pacific Polynesian																			
Parents Cohabiting	-	1	14	77	35	11	4	1	143	4	37	70	201	98	42	21	5	478	
	-	11.1	35.9	41.4	46.1	44.0	40.0	100.0	41.0	33.3	48.1	56.9	50.9	53.0	56.8	70.0	62.5	52.9	
Parents not Cohabiting	-	-	1	-	-	-	-	-	1	-	2	4	8	5	2	-	-	21	
	-	-	2.6	-	-	-	-	-	0.3	-	2.6	3.3	2.0	2.7	2.7	-	-	2.3	
Cohabitation Status Unknown	-	-	1	2	1	2	-	-	6	-	-	-	6	3	1	1	-	11	
	-	-	2.6	1.1	1.3	8.0	-	-	1.7	-	-	-	1.5	1.6	1.4	3.3	-	1.2	
Father's Particulars not Registered	3	8	23	107	40	12	6	-	199	8	38	49	180	79	29	8	3	394	
	100.0	88.9	59.0	57.5	52.6	48.0	60.0	-	57.0	66.7	49.4	39.8	45.6	42.7	39.2	26.7	37.5	43.6	
Totals - Number	3	9	39	186	76	25	10	1	349	12	77	123	395	185	74	30	8	904	
Percent	100.0	100.0	100.1	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.1	100.0	100.0	100.0	100.1	100.0	100.0	100.0	

Source: New Zealand Birth Register 1966 and 1976.

- 1 Note that because of the small number of cases involved the ethnic origin category 'Mixed Maori-Pacific Polynesian' has been omitted. Of 25 cases falling into this category in 1966 and 84 in 1976 the parents were cohabiting in 24 and 79 respectively. Note also that confinements followed by marriage of the parents prior to registration of the birth(s) resulting are not included. Finally note that the classification by ethnic origin of child is based on parents' names and, in the case of children of Pacific Polynesian extraction, parents' birthplaces.
- 2 This row relates only to instances in which the father's particulars were registered.
- 3 This row relates to instances in which the father's particulars were registered some time after the initial birth registration, so that it could not be ascertained whether he was coresident with the mother at the time of initial registration.

Factors which combined to produce these changes were outlined earlier. Among them was a growing belief that family formation need not take place within formal marriage. Some couples, while accepting responsibility for nonmaritally conceived children, are refusing to see parenthood as reason to marry. Others are ideologically committed either to consensual marriage or to testing a relationship's durability before formalising it. Indirect evidence for these changes is furnished by Table 5.8, which shows that among parents of ex-nuptial children known to be cohabiting (but not married) at birth registration there was a marked shift during 1966-76 away from the father being six or more years older than the mother toward him being between one year younger and three years older. Thus, the cohabiting relationships within which childbearing took place in 1976 were more similar to formal marriages, in which typically the husband is about the same age as his wife or up to, say, four years older.

When ex-nuptial confinements resulting in adoption by strangers etc within two years and those known to have occurred to cohabiting women are subtracted from total live ex-nuptial confinements, the residual consists mainly of confinements following which mothers kept their children as solo parents. [19] This residual increased only modestly as a percentage of total confinements between 1966 and 1976, but these figures conceal larger increments at younger ages (Table 5.9). They also conceal significant ethnic differences.

[19] The two categories of confinements subtracted from total live ex-nuptial confinements to yield this residual are not mutually exclusive. The 19 and 68 confinements which fell into both categories in 1966 and 1976 have been subtracted only once.

Table 5.8

RELATIVE AGES OF PARENTS KNOWN TO BE COHABITING AT BIRTH REGISTRATION: 1966 AND 1976 EX-NUPTIAL BIRTH COHORTS

Age of Mother	More Than 10 Years Younger		4-5 Years Younger		2-3 Years Younger		Relative Age of Father Within 1 Year of Same Age		4-5 Years Older		6-10 Years Older		More Than 10 Years Older		Total					
	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent	Number	Percent				
	1966																			
14-15	-	-	-	-	-	-	-	3	42.9	2	28.6	2	28.6	-	-	7	100.1			
16-17	-	-	-	-	-	-	15	16.0	25	26.6	24	25.5	20	21.3	10	10.6	94	100.0		
18-19	-	-	-	-	-	-	62	23.1	59	22.0	45	16.8	67	25.0	35	13.1	268	100.0		
20-24	-	-	-	5	0.7	37	5.3	137	19.6	106	15.2	161	23.0	149	21.3	699	100.0			
25-29	1	0.2	12	2.7	15	3.4	35	8.0	77	17.6	54	12.4	106	24.3	96	22.0	437	100.0		
30-34	4	1.6	24	9.5	11	4.3	26	10.3	47	18.6	21	8.3	57	22.5	44	17.4	253	100.0		
35-39	5	3.5	17	11.9	5	3.5	13	9.1	18	12.6	12	8.4	37	25.9	22	15.4	143	100.1		
40+	4	6.3	5	7.8	6	9.4	5	7.8	11	17.2	7	10.9	13	20.3	8	12.5	64	100.0		
Total	14	0.7	58	3.0	42	2.1	116	5.9	367	18.7	287	14.6	463	23.6	364	18.5	1965	100.0		
	1976																			
14-15	-	-	-	-	-	-	-	7	11.7	22	36.7	19	31.7	10	16.7	2	3.3	60	100.1	
16-17	-	-	-	-	-	1	0.2	166	28.1	194	32.8	113	19.1	79	13.4	38	6.4	591	100.0	
18-19	-	-	-	-	-	13	1.5	288	33.9	213	25.1	135	15.9	136	16.0	65	7.6	850	100.0	
20-24	-	-	1	0.1	27	1.7	120	7.4	438	27.2	328	20.4	241	15.0	286	17.8	170	10.6	1611	100.2
25-29	1	0.1	35	4.1	48	5.6	86	10.0	213	24.8	121	14.1	144	16.8	110	12.8	859	100.1		
30-34	9	2.4	57	15.5	38	10.3	38	10.3	50	13.6	33	9.0	56	15.2	58	15.8	368	100.0		
35-39	11	7.3	16	10.7	12	8.0	21	14.0	22	14.7	13	8.7	26	17.3	16	10.7	150	100.1		
40+	7	15.9	5	11.4	6	13.6	3	6.8	6	13.6	7	15.9	5	11.4	3	6.8	44	99.9		
Total	28	0.6	114	2.5	131	2.9	282	6.2	1190	26.3	931	20.5	653	14.4	742	16.4	462	10.2	4533	100.0

Source: New Zealand Birth Register 1966 and 1976.

1 Table relates only to parents cohabiting and still unmarried at the time of birth registration. Note also that relative ages have been determined on the assumption that a parent aged x years at the date of a child's birth was aged x+0.5 years exact.

Table 5.9

EX-NUPTIAL CONFINEMENTS FROM WHICH CHILDREN WERE NEITHER ADOPTED
BEFORE AGE TWO NOR PLACED WITH PARENTS KNOWN TO BE
1
COHABITING 1966 AND 1976

Age of Mother	1966 Confinements			1976 Confinements		
	Residual	Total	Percent	Residual	Total	Percent
13	4	6	66.7	3	8	37.5
14	19	43	44.2	31	62	50.0
15	62	148	41.9	143	275	52.0
16	147	372	39.5	328	741	44.3
17	222	595	37.3	461	1061	43.4
18	264	793	33.3	433	1025	42.2
19	301	907	33.2	435	1032	42.2
20	225	699	32.2	362	856	42.3
21	204	590	34.6	261	679	38.4
22	142	464	30.6	234	617	37.9
23	112	328	34.1	164	488	33.6
24	92	272	33.8	148	426	34.7
25	89	232	38.4	93	373	24.9
26	66	212	31.1	119	324	36.7
27	45	168	26.8	72	250	28.8
28	38	136	27.9	65	228	28.5
29	45	151	29.8	63	192	32.8
30-34	116	430	27.0	165	566	29.2
35-39	83	258	32.2	72	234	30.8
40+	18	103	17.5	17	67	25.4

Source: New Zealand Birth Register 1966 and 1976.

1 Adoptions referred to in this title exclude those by a natural parent and spouse.

The 'residual' category declined in importance for both Maoris and Pacific Polynesians during 1966-76, and increased in importance for non-Polynesians (Table 5.10). The downturn in the Maori figure was due mainly to declines at the adolescent ages. It perhaps mainly reflects better access to induced abortion. The low incidence of formal adoption of Maori ex-nuptial children implies that those most likely to have turned to abortion were women who otherwise would have

Table 5.10

EX-NUPTIAL CONFINEMENTS FROM WHICH CHILDREN WERE NEITHER ADOPTED BEFORE AGE TWO NOR PLACED WITH PARENTS
1,2
KNOWN TO BE COHABITING BY AGE OF MOTHER AND ETHNIC ORIGIN OF CHILD 1966 AND 1976

Age of Mother	Non-Polynesian			Maori			Pacific Polynesian		
	Residual Confinements	Total Confinements	Percent	Residual Confinements	Total Confinements	Percent	Residual Confinements	Total Confinements	Percent
	1966								
13-15	43	142	30.3	40	50	80.0	2	3	66.7
16-17	243	758	32.1	118	175	67.4	8	9	88.9
18-19	391	1255	31.2	151	316	47.8	23	39	59.0
20-24	454	1504	30.2	226	593	38.1	95	186	51.1
25-29	162	461	35.1	84	322	26.1	37	76	48.7
30-34	73	249	29.3	30	146	20.5	12	25	48.0
35-39	55	155	35.5	23	83	27.7	4	10	40.0
40+	17	56	30.4	8	37	21.6	-	1	-
Total	1424	4580	31.1	675	1722	39.2	181	349	51.9
	1976								
13-15	101	228	44.3	68	100	68.0	7	12	58.3
16-17	532	1210	44.0	221	452	48.9	36	77	46.8
18-19	567	1235	45.9	247	619	39.9	52	123	42.3
20-24	660	1632	40.4	329	940	35.0	179	395	45.3
25-29	219	738	29.7	116	411	28.2	77	185	41.6
30-34	84	289	29.1	49	183	26.8	31	74	41.9
35-39	49	134	36.6	15	66	22.7	8	30	26.7
40+	3	28	10.7	11	28	39.3	3	8	37.5
Total	2167	5494	39.4	1039	2799	37.1	390	904	43.1

Source: New Zealand Birth Register 1966 and 1976.

- Confinements followed by marriage of the parents prior to registration of the birth(s) resulting are not included. As none of these confinements would fall into the 'residual' category, the percentages shown are in some cases slightly inflated. Note also that the classification by ethnic origin of child is based on parents' names and, in the case of children of Pacific Polynesian extraction, parents' birthplaces. Finally note that the ethnic origin category 'Mixed Maori-Pacific Polynesian' has been omitted owing to the small number of cases involved. In 1966 1 out of 25, and in 1976 5 out of 84 such cases were 'residual confinements'.
- Adoptions referred to in this title exclude those by a natural parent and spouse.

kept their children as solo mothers or placed them informally with relatives. This argument might also largely explain the reduction in the Pacific Polynesian figure.

The increase in the non-Polynesian residual percentage has been achieved entirely at ages below twenty-five (Table 5.10). One must caution, however, against an over-simple explanation in terms of a change in placement preference away from adoption toward solo motherhood, just as one cautioned in Chapter 3 against assuming an increased preference for solo motherhood over marriage whilst pregnant. Probably elements of both processes were involved. But the importance of solo motherhood has almost certainly also increased because abortion has particularly reduced the number of ex-nuptial confinements likely to result in adoption.

Changes in Placement Arrangements Through Time

Possibilities for adding a temporal dimension to the foregoing analysis are limited. The only relevant data are those pertaining to adoptions at older ages and by a natural parent and spouse, and those deriving from the mandatory reregistration of ex-nuptial births when natural parents marry.

A drop in the likelihood of adoption by strangers etc at age two between the 1968 and 1969 ex-nuptial birth cohorts (Table 5.3) may stem from the DPB reducing the likelihood that a solo mother, having kept her child, would find herself unable to cope. Otherwise, no persistent change in the incidence of adoption by strangers etc at older ages is evident. Upward trends might have been anticipated for ex-nuptial birth cohorts experiencing fewer early placements for

adoption. That these did not eventuate doubtless reflects the improved financial position of unmarried mothers and the fact that with abortion now more widely used, such mothers are as a group more determined to keep their children.

Given a marked downturn in the chance of an ex-nuptial child being adopted soon after birth by strangers etc, the probability of that child's eventually being adopted by a natural parent and spouse might be expected to have risen. However, there is at best limited evidence of this (Table 5.11). The probability of experiencing such an adoption by any age increased more between the 1963 and 1967 ex-nuptial birth cohorts than between the 1967 cohort and any subsequent one. In fact, for more recent cohorts probabilities at or below ages 1-4 have fallen sharply. No legal advantage is now gained by cancelling illegitimate birth status by adoption. Perhaps, too, the DPB reduced a perceived need to formalise relationships between stepchildren and stepfathers. [20] But most importantly, a diminishing concern with formalising marital unions has probably been accompanied by a diminishing concern with, and a diminishing legal possibility of, formalising stepchild-stepparent relationships. To adopt in New Zealand a couple must be legally married.

An ex-nuptial child may be reregistered at any age, and the necessary steps are sometimes not taken until well after parents actually marry. For all this, most reregistrations take place before the age of three. [21] Of ex-nuptial live births first registered in 1966 and 1976, 11.3 and 9.4 percent were reregistered by age three.

[20] In law, marriage itself made a stepfather liable for his stepchild's maintenance, but this fact may not have been widely known.

Table 5.11

ESTIMATED RATES OF ADOPTION BY A NATURAL PARENT AND SPOUSE AT OR BELOW
SUCCESSIVE AGES: 1963-1977 EX-NUPTIAL BIRTH COHORTS

Ex-nuptial Birth Cohort	Age in Completed Years										
	0	1	2	3	4	5	6	7	8	9	10
1963	2	6	11	16	22	27	30	31	34	35	37
1964	2	6	11	17	25	30	33	35	37	39	41
1965	3	8	14	21	30	36	40	43	46	47	49
1966	3	7	14	22	31	39	42	46	48	51	53
1967	3	8	16	23	31	38	42	45	48	50	51
1968	3	10	19	28	37	44	48	51	53	54	
1969	3	10	18	28	38	45	49	52	54		
1970	2	8	17	26	35	44	47	51			
1971	2	9	17	27	36	45	49				
1972	2	8	16	25	33	42					
1973	3	8	15	22	28						
1974	2	5	11	17							
1975	1	4	8								
1976	1	4									
1977	2										

Source: Unpublished data supplied by the Department of Social Welfare; New Zealand Birth Register 1966; New Zealand Vital Statistics 1963-73.

Comparable figures for births known to have resulted in placement with cohabiting parents were 24.7 and 14.3 percent. [22]

Apparently the recent rise in the retention of ex-nuptial children by cohabiting parents has been accompanied by a decreased concern with formalising cohabiting unions. It might also be that such unions have become less stable, but any such trend has probably

[21] Of 1,107 live ex-nuptial confinements from which births were first registered in 1966 and reregistered before the child turned twelve, 42.0 percent resulted in reregistration within one year of birth and 70.9 percent in reregistration within three years.

[22] The 1976 figures still had scope for increasing when data were collected in September 1979, but would have risen by no more than a few tenths of a percentage point.

been of secondary importance. For a growing minority of couples parenthood and formal marriage seem no longer inextricably bound together. For some, marriage is perhaps incompatible with maintaining personal freedom in a relationship. For others it may unnecessarily complicate the ending of a relationship should the need arise. For still others time, not the birth of a child, is probably the test of whether to marry. Underlying each of these attitudes seems to be a growing belief that children cannot be the main, let alone the sole reason why couples live together.

Drawing together findings thus far, one general point stands out. The proportion of ex-nuptial children who, at any given age, are living with two legally married parents has fallen substantially since the late 1960s. Add the continued upward trend of the illegitimacy ratio through the 1970s (Chapter 3), and an increasing proportion of all children have been spending their early years in 'non-conventional' families. A crude estimate is that fifty-one percent of ex-nuptial members and six percent of all members of the 1966 birth cohort had never lived with two legally married parents on turning three. Equivalent estimates for the 1976 birth cohort are seventy-seven and thirteen percent. [23] Social change has continued, despite a levelling off of the upsurge in the life cycle probability of a woman conceiving and bearing a child before marriage (Chapter 4).

Factors Associated With Alternative Placement Arrangements

This section reviews the literature on the determinants and consequences of the different placement arrangements which may be made for a child conceived out of wedlock.

Determinants of the Placement of Ex-nuptial Children

Studies of the placement decisions of unmarried mothers have generally focused on the decision to keep the child or adopt it out. American and British ones have consistently linked adoption with higher socio-economic status and being better educated. [24] There is some disagreement over the role maternal age plays in the placement decision. Youthfulness has often been associated with adoption (Meyer et al, 1956, 1959; Jones et al, 1962; Weir, 1970; Festinger, 1971), but Bowerman et al (1966) report that adopting mothers were older, while Gill (1977) found age unimportant among single non-cohabiting mothers. One reason for expecting more younger mothers to surrender their babies is the greater likelihood of parents influencing them. Yelloly (1965), Bowerman et al (1966), and Festinger (1971) all show parental disapproval of keeping the child to be a significant predictor of adoption, while financial dependence on parents (Weir, 1970) and residential mobility during pregnancy (Gill, 1977) have also

[23] These estimates derive from published vital statistics and from data on adoptions and reregistrations of ex-nuptial children obtained from the 1966 and 1976 birth registers. Using lexis grid principles, adoptions and reregistrations at age two for the 1976 ex-nuptial birth cohort were adjusted upward by a factor of one-seventeenth to allow for the collection of data some four months before the recording of these events would have been complete. Final estimates are liberal on three counts. Some children whose natural parents married before they turned three would have been reregistered after their third birthdays, if at all. Some children would have been placed for adoption before, but not legally adopted until after, their third birthdays. Finally, it is not required that a child in the care of a legally married parent and stepparent be adopted. Change in this last area especially could have affected the degree to which estimates increased.

[24] See American studies by Meyer et al (1956, 1959), Vincent (1960, 1961), Jones et al (1962), Bowerman et al (1966), Grow (1969), and Festinger (1971), and British studies by Yelloly (1965), Weir (1970), and Gill (1977).

been linked with it.

The adoption decision has frequently been ascribed a religious dimension. Being non-Catholic was found to be significant by Meyer et al (1956, 1959) and Jones et al (1962). More importantly, frequent churchgoers seem especially likely to opt for adoption (Bowerman et al, 1966; Weir, 1970).

Besides being socio-economically and educationally disadvantaged, unwed mothers who keep their babies tend to have less positive personality profiles (Vincent, 1960, 1961; Jacokes, 1965; Weir, 1970; Horn and Turner, 1976) and to be more often disturbed or maladjusted (Costigan, 1964). They also more often come from broken homes (Vincent, 1960, 1961; Yelloly, 1965; Grow, 1969; Weir, 1970; Festinger, 1971), and from larger families and homes which are judged to be unhappy and mother dominated (Vincent, 1960, 1961). Their most positive characteristic seems to be a more satisfactory relationship with the child's father (Bowerman et al, 1966; Festinger, 1971; Gill, 1977), who is more likely to be married (Meyer et al, 1956, 1959; Grow, 1969; Weir, 1970). [25]

Whether some of these relationships have persisted through the 1970s is unclear. Certainly with abortion having become a much more important method of fertility control among the unmarried they warrant re-evaluation. Studying adoption placements among 210 white unmarried mothers, Grow (1979: 369-370) concludes:

[25] Yelloly (1965) finds the father's being married predictive of adoption, but her sample almost certainly underrepresents mothers who were cohabiting with their children's fathers.

Women who opt for adoption are now in the minority and indeed, these women may be reflecting the traditional values of previous decades. ... Neither social deviancy nor the psychological explanations of previous eras adequately explain why some of the pregnant unwed women of this decade decide to keep and others decide to surrender. In today's society a social milieu has evolved that has adapted to changes in points of view regarding marriage and the family. A pregnant unwed woman coming from such a milieu will most likely keep her child. ... A pregnant unwed woman exposed to the traditional social milieu that adheres to older conventions is more likely to surrender her child.

There have been two New Zealand studies of the placement of ex-nuptial children. O'Neill et al (1976) associate adoption with young, European mothers, and with more education and higher occupational status. Generally, adopting mothers lived with their parents at conception, but tended to change residence during pregnancy. Cohabiting mothers were older, of lower socio-economic status, residentially immobile during pregnancy, and likely to have been married, to have previously given birth ex-nuptially, and to be Maori. Moreover, whereas Maori mothers were generally cohabiting 'permanently' and by choice, non-Maori mothers more often were legally unable to marry, had been cohabiting for shorter periods, had had fewer previous ex-nuptial children, and more frequently had definite plans to marry. No clear profile of mothers who became solo parents emerged, but compared to adopting mothers they were much less mobile during pregnancy if living with their parents at conception.

Cluster analysis showed that placement for adoption was substantially a function of race, maternal age, and socio-economic status. Following a detailed descriptive analysis of the effects of these variables O'Neill et al (1976: 286) concluded:

Younger mothers, European mothers and mothers of high socio-economic status are more likely to place their child for adoption than are older mothers, Maori mothers and mothers of lower socio-economic status. Further, there appears to be a good

deal of interaction between these three variables: the 'age effect' is stronger for European women than it is for Maori women and the 'socio-economic effect', while being strong for European women, is almost non-existent for Maori women.

The second New Zealand study (Beckingham, 1977) examines the placement decisions of 200 unmarried mothers contacted through five Auckland maternity hospitals. Non-Polynesians and very young mothers were more likely to surrender their babies than Polynesians and older mothers, while encouragement and practical assistance from the child's father often reinforced a decision to keep the baby. So did the financial security provided by welfare benefits, but they rarely were a primary reason for not adopting. As to the role of mothers' families, Beckingham (1977: 20) writes:

Generally speaking, the families from which the babies were adopted appeared to be closer-knit with both grandparents concerned with the situation and acting in a united supportive manner in spite of initial displeasure. The grandmothers in particular had a strong influence over the mothers' decisions in these families and neither grandparent was likely to be indifferent to the situation. The families of the mothers who kept their babies, though initially more likely to be pleased, were not as helpful later as the others.

Vincent (1961) observed that adopting mothers seemed better equipped to become mothers than those keeping their babies. Research findings broadly support that observation. Grow's (1979) assertion that non-adopting unmarried mothers no longer exhibit a deviant personality profile is plausible, but unsupported by evidence. As to decisions to adopt out ex-nuptial children, these seem to be linked to contact with persons and social groups emphasising the stigma supposedly attached to ex-nuptial childbearing. The consistent relationship between higher social status and adoption invites this

conclusion, as does that between religious involvement and adoption. Finally, there is a recurring theme which implicates parental pressure in the decision not to keep a child (Young et al, 1975).

Consequences of the Placement of Ex-nuptial Children

Rather more research has been undertaken into the consequences of placement decisions taken in respect of ex-nuptial children than into the factors affecting those decisions. Particular interest has been shown in the effects of placement for adoption.

Pringle (1967) reviews British, American, and Canadian studies of adoption published during 1948-65. More recently Sorosky et al (1978) have summarised the literature on the effects of adoption during childhood, adolescence, and adulthood. Several early researchers found average or better levels of development and mental ability in adopted children of disadvantaged natural parentage. Others attributed adopted children's ability and achievement largely to the status and personal qualities of their adoptive parents. Comparisons with non-adopted children generally found adoptees more poorly adjusted, but disagreed on how serious the problem was.

The adopted child has been painted as vulnerable to stress and certain emotional problems, and as prone to various types of 'acting-out' behaviour: aggression, lying, stealing, running away, etc. Adopted children have also been claimed to have a high psychiatric referral rate. [26] However, these mostly clinical studies invariably fail to control for age at placement (Pringle, 1967), and may also be biased by a greater propensity to seek specialist advice among adoptive parents (Seglow et al, 1972).

The consensus of recent adoption follow-up studies has been that adjustment was usually good, and depended more on the attitudes and personal qualities of adoptive parents than on overt background characteristics. [27] This finding emerged even for children adopted after seriously deprived early childhoods (Kadushin, 1970; Tizzard, 1977). [28] Kornitzer (1968) argues that such problems as do occur often reflect 'the fantasy world of adopters', who pretend that the adoptee had no pre-adoptive existence. Others agree that parental performance in this area is crucial to adjustment (Triseliotis, 1973; Sorosky et al, 1978).

Problems associated with adoption often surface during adolescence (McWhinnie, 1967; Sorosky et al, 1978). Genealogical matters and identity confusion become issues, and the adoptee's sexual development can irk an infertile adoptive parent. [29] Age differences between adoptive parents and their children are often above average. Moreover, adoptive parents may interpret adoptees' curiosity about

[26] On these points see Schechter (1960), Goodman et al (1963), Humphrey and Ounsted (1963), Sweeny et al (1963), Schechter et al (1964), Borgatta and Fanshel (1965), Menlove (1965), Kirk et al (1966), Simon and Senturia (1966), Jackson (1968), Reece and Levin (1968), Offord et al (1969), Bohman (1970), and Jaffee and Fanshel (1970).

[27] See, for example, McWhinnie (1967), Kornitzer (1968), Ripple (1968), Lawder et al (1969), Bohman (1970), Jaffee and Fanshel (1970), Hoopes et al (1970), Kadushin (1970), and Tizzard (1977).

[28] Several studies have nevertheless found the severity of emotional problems in adoptees to be correlated with age at placement and the extent of early maternal deprivation (Humphrey and Ounsted, 1963; Witmer et al, 1963; Jameson, 1967; McWhinnie, 1967; Pringle, 1967; Offord et al, 1969).

[29] Concerning identity confusion in adolescent adoptees see American Academy of Pediatrics (1973), Mech (1973), and Schoenberg (1974). This problem is a major reason for the current lobbying in several countries for freer access to official adoption records (Sorosky et al, 1978). It is discussed in the New Zealand context by Shawyer (1979).

their origins as ingratitude, and may also fear 'bad blood' causing deviant behaviour. They may therefore be unreasonably restrictive or, fearing rejection, ultra-lenient.

Studies generally have found adult adoptees quite well adjusted, although on occasion fears of unwittingly marrying incestuously or transmitting a hereditary disease have added anxiety to courtship, marriage, and childbearing (Sorosky et al, 1978). [30] Adoption clearly creates problems for some individuals, but overall few seem to be seriously affected. There is, moreover, the question of what adoptees' lives would have been like had they not been adopted.

Quite the major investigation of the consequences of alternative placement arrangements made for ex-nuptial children is a British follow-up study of all children born in one week in 1958 (Crellin et al, 1971; Seglow et al, 1972). This showed that at age seven adopted ex-nuptial children were significantly better off than those not adopted.

The outstanding fact to emerge from this careful study is the power of the environment to affect children's development for good or ill. ... By the age of seven years, the care, affection and material advantages provided by their new parents had enabled the adopted children to overcome their earlier handicaps and to compare very favourably with their peers in the general population. (Seglow et al, 1972: Foreword)

Much has been written on unwed mothers and their circumstances. However, much of this literature is impressionistic, and empirical research often has been deficient in design (Furstenberg, 1976c;

[30] See Witmer et al (1963), Elonen and Schwartz (1969), Lawder et al (1969), Bohman (1970), Hoopes et al (1970), Jaffee and Fanshel (1970), and Seglow et al (1972).

Chilman, 1978). Several writers have condemned stereotyping of unwed mothers. [31] Nonetheless, as a group they are clearly disadvantaged (Schlesinger, 1978). Economically they are seldom well off, often subsisting on welfare benefits. Employment is conditional on child care being available, and age, sex, inexperience, and limited education further restrict job opportunities. Housing is frequently rented and of inferior quality, and this makes for high residential mobility. [32] Over time some mothers improve their lot, but generally only to the extent of becoming self-sufficient (Bowerman et al, 1966; Sauber and Corrigan, 1970). Others try marriage in a bid to raise their living standards, often unsuccessfully (Berkov and Sklar, 1976; Furstenberg, 1976c).

Unmarried mothers are especially likely to work when their children are very young (Crellin et al, 1971; Gill, 1977). [33] Also, their transition to parenthood may be marked by greater ambivalence and stress than normal, although Furstenberg (1976c, 1980) contends that these problems have been exaggerated. A recurrent theme in discussions of unmarried motherhood has been the risk of repeat pregnancy (Osofsky, 1968; Menken, 1972; Bumpass et al, 1978; Trussell and Menken, 1978), and it appears that arrival of a second

 [31] See, for example, Bowerman et al (1966), Roberts (1966), Sauber and Corrigan (1970), Juhasz (1974), and Furstenberg (1976c).

[32] See, for example, Sauber and Rubinstein (1965), Holman (1970, 1975), Society for Research on Women in New Zealand (1970), Hunt et al (1973), and Marsden (1973).

[33] Note, however, that the children of unmarried mothers who work may be better off than those of unmarried mothers who do not work. Furstenberg (1976c) found that the former had better cognitive development when aged 42-60 months, probably because childrearing responsibilities were shared with another adult and because employment raised the material standard of living.

child all but destroys any hope of becoming self-supporting (Furstenberg, 1976c). Social isolation may also lower self-esteem (Cattell, 1966) and produce high anxiety levels (Paulker, 1969).

Situational disadvantage combines with the background characteristics of unwed mothers and fatherlessness to create the environments in which their children are raised. Sugar (1976) suggests that the mothers of unwed mothers are apt to provide poor role models. This not only affects the latter's mothering potential, it raises doubts over the advisability of rearing ex-nuptial children in the grandparents' home. However, several studies summarised by Baldwin and Cain (1980) show children so reared to have better physical health, cognitive development, and school achievement than those raised by mothers living alone. Indeed it has recently been argued that too little notice has been taken of the part families of origin play in helping unwed mothers to cope (Furstenberg and Crawford, 1978; Furstenberg, 1980; Presser, 1980a). Hofferth and Moore (1979) find that early motherhood has surprisingly little impact on the later wellbeing of the very youngest childbearers, and attribute this to their tendency not to form households of their own.

Children fatherless during the first 3-5 years of their lives may exhibit a number of adverse symptoms. Biller (1970, 1974) lists several personality abnormalities found in boys fatherless as preschoolers. [34] Compared to father-present boys they tend to be less masculine, more dependent and effeminate, more impulsive, and less intellectually competent. They may have difficulty with peer

[34] For a more sceptical assessment of some of these findings see Herzog and Sudia (1968, 1970).

relations and relations with the opposite sex, and are inclined to strive for compensatory masculinity through aggressive acting-out behaviour. Other qualities attributed to them include anxiety, immaturity, low achievement motivation, and a proneness to emotional problems, depression, and poor adjustment at school.

Father absence appears to have fewer deleterious consequences for girls. Some studies have found it to increase maternal dependence (Lynn and Sawrey, 1959). However, its main effect seems to be to impair girls' ability to interact appropriately with males, this often being manifest in deviant sexual behaviour during adolescence (Hetherington, 1972).

The children of unmarried mothers have been linked with delinquency, poor school achievement, and child abuse (McKenry et al, 1979). Ross and Sawhill (1975) stress that while father absence per se may induce delinquency via psychological mechanisms, such intervening factors as poor supervision from working mothers and economic disadvantage may be more important. A recent study by Kellam et al (1977, 1979) found that children of adolescent mothers adapted relatively poorly to school, especially if the mother was the sole caretaker. In another study Card (1981) shows the children of teenagers, and especially those raised by solo mothers, to exhibit long-term academic deficiencies, even after controlling for background factors. Noting also Crellin et al's (1971) finding of low school achievement among non-adopted ex-nuptial children, ex-nuptial children kept by solo mothers do seem prone to below average academic performance.

Reported cases of child abuse involve only a small minority of children, but several studies, including the major New Zealand one to date (Fergusson et al., 1972), show ex-nuptial children to be especially at risk. The literature also associates abuse with lower socio-economic status, high geographic mobility, and stepparents, all of which may feature in the lives of ex-nuptial children placed initially with solo mothers. [35] Furthermore, one distinct subgroup of abusing parents are said to be those who expect more affection, reassurance, and comfort from a child than is reasonable (Skinner and Castle, 1969; Steele and Pollock, 1974).

No placement of an ex-nuptial child automatically maximises its chances of developing to its fullest potential. Equally none automatically condemns it to a deprived existence, to achievement below its capabilities, or to a deviant life course. The prognosis for children placed for adoption nevertheless seems to be relatively favourable, although parting with her child may be traumatic for the natural mother.

Retention of a child by its own non-cohabiting mother may have unfavourable developmental results, although these are not inevitable and may be responsive to enlightened social welfare policies. It is difficult, too, to know how far they stem from the placement arrangement, and how far from factors in mothers' backgrounds. Children of solo mothers often acquire stepfathers, but unions entered

[35] For a review of this literature see Fergusson et al., 1972. Note also that this study shows clusters of variables measuring instability in the child's life history (especially changes in parent figures and home situation) and inadequate material standards as the distinctive elements in abused children's family backgrounds.

in the hope of securing a higher standard of living seem especially likely to prove unstable. Moreover, having a stepparent may pose a child its own problems (Duberman, 1975; Maddox, 1975; Social Development Council, 1978; Visher and Visher, 1979).

Ex-nuptial children placed with cohabiting parents have received little separate attention in follow-up studies. Sometimes all children kept by their mothers have been treated together. Otherwise, children of cohabiting parents seem to have been ignored as no different to those born to legally married ones.

Consequences of Bridal Pregnancy

It has often been suggested that bridally pregnant couples are disadvantaged compared to those whose first child is conceived after marriage. The most comprehensive research to date on this topic derives from a longitudinal study of 1113 white, married women who gave birth to a first, second, or fourth child in Detroit in July, 1961. Using these data Pratt (1965) found that premarital pregnancy was strongly associated with early marriage; that it was inversely related to both socio-economic status and religious observance; that it was especially common among wives never employed full-time before marriage and among interfaith marriages; and that women from middle class backgrounds more often resolved nonmarital pregnancies maritally than did those from lower class backgrounds.

Freedman and Coombs (1966b) next found a strong negative correlation between bridal pregnancy and current family income, even after controlling for religion, age at marriage, and parents' socio-economic status. The same authors (1966a) then showed both

family income and assets to be positively correlated with the first birth interval. The disadvantage associated with premarital pregnancy was marked, and remained even among couples having their fourth child. Premarital pregnancy also heralded more rapid subsequent fertility.

Three later papers carried the investigation further. Coombs and Freedman (1970) divided couples into the 'premaritally pregnant' (PMP), the 'short-spacers' (who had a maritally conceived child within a year of marriage), and the 'long-spacers'. The income disadvantage of the PMP decreased during 1961-66, but the relative gain in assets was much smaller. In contrast, early income and assets disadvantages of short-spacers compared to long-spacers diminished rapidly. Poor education and early marriage accounted statistically for the inferior economic position of the PMP in 1966, suggesting that they were unlikely ever to 'catch up'.

Coombs et al (1970) dispelled any notion of the inferior economic position of PMP couples resulting merely from low status backgrounds. It was likely to stem more from a loss of educational and occupational opportunities due to early marriage. [36] There was no support either for the hypothesis that the PMP receive less help from relatives than other couples, but they were, as expected, more likely to come from discrepant socio-economic and religious backgrounds. Moreover, marriage was clearly more likely to follow pregnancy if the female was

[36] It should be noted, however, that using the same data Freedman and Thornton (1979) argued that the causal importance of truncated education to the economic disadvantage of PMP couples has been exaggerated. Premarital pregnancy might indeed truncate education, but low educational attainment might also predispose toward premarital pregnancy. Furthermore, both poor education and premarital pregnancy might be attributable to one or more other factors.

of higher background status.

More recently Freedman and Thornton (1979) have examined the longer term economic impact of bridal pregnancy. Improvement in the relative income position of PMP couples during 1961-65 did not persist during 1965-76, but 'they continued to prosper in absolute terms.' As earlier, their economic disadvantage was greatest with regard to assets, and overall they had lower living standards because lower incomes and smaller benefits derived from assets went hand in hand with a larger average support burden. It was concluded, however, that (p 20) 'the long-run economic consequences for young people of a marriage precipitated by pregnancy may be less disastrous than the fairly severe short-term effects.'

In another study of bridal pregnancy Cutright (1973) examined a national sample of American mothers aged under sixty. He found no evidence that the proportion living above the poverty line varied by pregnancy status at first marriage, which Furstenberg (1976c) sees as contradicting the Detroit findings. However, Cutright does not control for marriage duration, conceding that PMP couples may well be severely disadvantaged early in marriage. Moreover, his measure of economic status is crude and one of current income. Analysts of the Detroit data never claimed that PMP couples live in poverty, and they showed longer term economic disadvantage to be mainly a matter of asset accumulation.

Apart from their inferior economic position, PMP couples seem more prone to separation and divorce. Clearly the two findings are likely to be linked, although a full review of the relevant literature (Chapter 8) throws up other plausible explanations as well.

To place matters in perspective, prospects for PMP couples and their children are better than those for non-cohabiting unmarried mothers and their children. But they are not optimal. In part this may be due to the types of individuals who make up PMP couples. But to the extent that it advances marriage, matches persons who, given time, would have decided they were incompatible, and advances parenthood premarital pregnancy itself has unfavourable consequences.

5.3 PERSONAL CONSEQUENCES OF ADOLESCENT, NONMARITAL, AND EARLY MARITAL CHILDBEARING

Strictly, the concern in this section is with the consequences for mother and child of childbearing outside marriage and within marriage following premarital conception. However, much of the relevant literature addresses, specifically, adolescent childbearing.

Maternal and Infant Health

Research has consistently shown children born to teenagers to have higher incidences of prematurity, low birth weight, and infant mortality (especially neonatal mortality) than children born to mothers aged 20-29. [37] Medical and psychological evidence also suggests that children of teenagers are especially likely to suffer from various physical handicaps and from impaired mental performance (Nortman, 1974), although it has been argued more recently (Belmont et

[37] For extensive lists of references substantiating this point for both developed and developing cultures see Hunt (1976) and Nortman (1974). Data for the U.S. and summaries of the American literature are presented by Menken (1972a, 1972b, 1980), Nortman (1974), Alan Guttmacher Institute (1976), McKenry et al (1979), Ventura (1980), and Monkus and Bancalari (1981).

al, 1981; Broman, 1981) that social disadvantage rather than maternal age per se accounts for the latter relationship.

Whether first births or all births are considered, low birth weight is more common in New Zealand at maternal ages below twenty, and especially at ages below seventeen, than it is at ages 20-29 (Table 5.12). This relationship holds for all ethnic groups, but there are clear inter-ethnic differences in risk levels. [38] Not surprisingly, low birth weight is also more common among ex-nuptial than among nuptial children for all ethnic groups. But whether nuptiality status affects birth weight independently of maternal age cannot be determined from available data.

The late fetal death rate for the period 1976-79 was lower among adolescent mothers than among older mothers (Table 5.12). This finding stands in sharp contrast to that of Foster (1977), who showed a U-shaped relationship between late fetal mortality and maternal age for 1972-73. It is consistent, though, with rates for ex-nuptial children born in 1976 presented (but not commented on) by O'Neill (1980). The most likely explanation for the change is that many high risk adolescent pregnancies have in recent years been terminated by induced abortion. Many stillbirths to adolescent mothers may formerly have been due to inadequate antenatal care, and in turn to pregnancies being unwanted. Non-biological factors do seem to affect late fetal mortality. Relatively low mortality rates for children of adolescent mothers suggest that the rate for ex-nuptial children might also be

[38] Surprisingly, the risk level is lowest for Pacific Polynesian children. This is probably due to genetic factors, since Pacific Polynesian late fetal death rates are higher than either Maori or non-Polynesian rates (Table 5.12).

Table 5.12

SELECTED MEASURES OF THE PHYSICAL WELLBEING OF NEW-BORN CHILDREN BY BOTH NUPTIALITY STATUS AND AGE OF MOTHER: 1976-79 BIRTH COHORT BY ETHNIC ORIGIN

	Percent Weighing <2500 Grams at Birth			Late Fetal Death Rate		
	Non-Polynesian	Maori	Polynesian	Non-Polynesian	Maori	Polynesian
Birth Status:						
Nuptial	4.4	6.9	2.8	6.7	8.0	11.0
Ex-nuptial	6.9	9.7	4.2	8.2	6.1	13.5
			Total			Total
			4.5			7.0
			7.5			8.1
Age of Mother (1st births):						
<17	7.3	10.2	6.8	5.0	6.9	5.2
17-19	7.0	9.8	5.4	7.2	5.9	10.2
20-24	5.3	9.0	3.5	7.8	6.9	12.3
25-29	5.7	8.2	3.1	8.3	6.6	16.4
30+	7.0	9.1	3.2	9.0	9.2	17.2
			8.1			5.6
			7.6			7.0
			5.6			8.0
			5.7			8.7
			6.9			9.6
Age of Mother (all births):						
<17	7.3	10.4	6.7	5.0	6.7	5.1
17-19	6.8	9.4	5.3	6.9	5.5	9.8
20-24	4.7	8.0	3.1	6.5	6.5	11.0
25-29	4.1	6.9	2.7	6.8	6.8	12.2
30+	4.6	8.1	3.0	8.2	12.0	14.2
			8.2			5.5
			7.4			6.7
			5.0			6.8
			4.3			7.1
			4.8			9.0

Source: Unpublished tables supplied by the Department of Statistics.

relatively low. However, except among Maoris the reverse holds true (Table 5.12).

As a rule, data relating infant mortality to maternal age and nuptiality status of birth can be obtained only through record linkage. Without undertaking such an exercise, all that can be calculated are early neonatal death rates by age of mother. For maternal ages <17, 17-19, 20-24, 25-29, and 30+ these were respectively 12.8, 9.9, 6.6, 6.0, and 6.8 per 1000 live births over the period 1975-78. Higher early neonatal mortality among children born to teenaged mothers is thus confirmed, and Foster (1977) has shown the rate for ex-nuptial children to exceed that for nuptial children. As to the late neonatal and post-neonatal components of infant mortality, findings of a study of health care delivery in the Wellington metropolitan region (Salmond, 1975), if holding nationally, are consistent with the children of unmarried mothers (and probably also those of teenaged mothers) being especially at risk.

Maternal mortality is today negligible in New Zealand, and seems to have a variable association with early childbearing in Western countries (Deschamps and Valantin, 1978). However, certain complications of pregnancy seem to be more common among adolescent mothers than among those in their twenties: severe anaemia, toxæmia and the related conditions of pre-eclampsia and eclampsia, prolonged and difficult labour, and first or third trimester bleeding (Menken, 1972a; Nortman, 1974; Hunt, 1976; Robertson, 1981).

Data from the Christchurch Child Development Study (CCDS) permit certain other aspects of infant and maternal wellbeing, and also aspects of early child development, to be examined in relation to

maternal age and nuptiality status of conception and confinement (Tables 5.13-5.15). [39] First parity CCDS mothers were much less likely to have received formal antenatal instruction if they were confined ex-nuptially, as teenagers, or nuptially following premarital conception than if they were confined nuptially, in their twenties, or following marital conception. The former three groups of mothers were also far less likely to have planned their pregnancies, and hence experienced more anxiety on learning they were pregnant. This anxiety was significantly more acute among young adolescents than among older ones (Table 5.14) and among mothers who conceived premaritally and did not marry before confinement than among those who did marry (Table 5.15). Finally, failure to consult a doctor during the first trimester was strongly linked to ex-nuptial confinement (Table 5.13), was less strongly associated with a mother being aged under twenty (Table 5.14), and was much less common among nonmaritally pregnant women who married before confinement than among those who did not marry (Table 5.15). Seemingly, failure to seek medical advice early in pregnancy is caused by factors associated with ex-nuptial childbearing: mothers' background characteristics, fear of parental reaction to pregnancies, and a reluctance to face the reality of

[39] Several papers bearing on this theme have already been published from the CCDS data. O'Donnell et al (1978) showed children of single parents to suffer more respiratory illness and receive less post-natal care during the first sixteen weeks of life. Fergusson et al (1979a) have examined the contraceptive backdrop and maternal reactions to pregnancies resulting in ex-nuptial births. They have also (1979b) linked smoking during pregnancy to younger and unmarried mothers, while Shannon et al (1980) have shown solo mothers to be especially likely not to follow the recommended course of immunisation for their children in the first year of life. Finally, Fergusson et al (1981) have shown children in single parent families to suffer depressed levels of preventive health care and relatively high rates of hospital admission, even after controlling for a variety of background variables.

Table 5.13

SELECTED MEASURES OF MATERNAL AND INFANT HEALTH AND CHILD DEVELOPMENT
 1
 BY NUPTIALITY OF BIRTH: CCDS COHORT

Index	All Births		First Births	
	Nuptial	Ex-nuptial	Nuptial	Ex-nuptial
Percent mothers attending antenatal classes	39.6 (1038)	29.0 (210) ⁺	78.0 (355)	36.4 (140) [*]
Percent mothers attending antenatal classes whose male partner also attended	63.7 (411)	32.8 (61) [*]	73.3 (277)	33.3 (51) [*]
Percent mothers first visiting doctor after first trimester	7.4 (1038)	23.8 (210) [*]	3.9 (355)	22.1 (140) [*]
Percent mothers whose pregnancies were unplanned	30.4	82.4 [*]	28.5	84.3 [*]
Percent mothers who were 'worried/anxious' or 'very upset' over pregnancy	11.1	41.4 [*]	11.0	45.0 [*]
Percent children of low birth weight (<2500 grams)	4.7 (1041)	6.2	5.6	5.7
Percent children with weight gain to 3 months of less than 2000 grams	31.3 (951)	29.2 (171)	28.8 (333)	29.9 (117)
Percent children with weight gain to 1 year of less than 5000 grams	31.4 (738)	25.0 (108)	35.9 (270)	24.1 (79)
Percent children ever breastfed	80.2 (1003)	59.2 (196) [*]	88.7 (345)	58.8 (131) [*]
Percent breastfeeders no longer breastfeeding at 4 months	41.7 (793)	71.2 (111) [*]	43.2 (301)	79.5 (73) [*]
Mean visits to Plunket or Public Health Nurse during first year	13.9 (936)	12.5 (170) ⁺	15.2 (328)	12.7 (115) [*]
Percent children not attending Plunket after first birthday	22.6 (964)	44.2 (181) [*]	14.5 (331)	40.2 (122) [*]
Mean number of minor ailments suffered between first and second birthdays	7.4	7.5	6.7	6.7
Percent children treated for poisoning, fractures, burns, or scalds by second birthday	29.8	43.4 [*]	32.9	45.1 ^o
Percent children crying for prolonged periods (>30 minutes) at 1 year	16.3 (983)	23.1 (186) ^o	16.4 (335)	22.4 (125)
Percent children reported by their mothers at 2 years as:				
Saying twenty or more words	84.0 (964)	72.9 (181) [*]	88.2 (331)	77.0 (122) ⁺
Unable to construct a 2-word sentence	15.9	23.2 ^o	10.9	23.8 [*]
Feeding themselves	90.8	87.3	85.8	85.2
Difficult to control	19.8	28.7 ⁺	21.5	29.5
Throwing tantrums	34.6	47.0 ⁺	33.8	47.5 ⁺
Behaviour problems	20.6	32.0 [*]	23.9	34.4 ^o
Aggressive	20.4	26.5	16.6	25.4 ⁺
Shy, anxious, or fearful	11.6	15.5	10.6	25.4 ⁺
Having toilet training problems	20.0	27.6 [*]	21.8	27.0

Source: Christchurch Child Development Study data.

1 Sample sizes are given in parenthesis. Where no sample size is given it remains the same as for the previous item. Variations in sample size are caused by attrition in the initial cohort from one interview in the longitudinal study design to the next, by missing data on individual items, and by items applying only to subsets of a complete nuptiality status/birth order cohort.

Differences which are significant at the 0.001 (*), 0.01 (+), and 0.05 (o) levels are indicated.

Table 5.14

SELECTED MEASURES OF MATERNAL AND INFANT HEALTH AND CHILD DEVELOPMENT
1
BY AGE OF MOTHER: CCDS COHORT

Index	All Births				First Births			
	<18	18-19	20-29	30+	<18	18-19	20-29	30+
Percent mothers attending antenatal classes	39.6 (48)	37.1 (105)	40.4 (856)	28.9 (239) ⁺	40.4 (47) ⁺	41.8 (79) ⁺	74.5 (325)	77.3 (44)
Percent mothers attending antenatal classes whose male partner also attended	42.1 (19) ^o	51.3 (39)	64.9 (345)	43.5 (69) ⁺	42.1 (19) ⁺	51.5 (33) ^o	72.3 (242)	58.8 (34)
Percent mothers first visiting doctor after first trimester	14.6 (48)	15.2 (105)	9.6 (855)	8.8 (239)	14.9 (47)	15.2 (79) ^o	7.7 (325)	2.3 (44)
Percent mothers whose pregnancies were unplanned	95.8 ⁺⁺	71.4 ⁺	32.5 (856)	37.7	95.7 ⁺⁺	78.5 ⁺	32.0	18.2
Percent mothers who were 'worried/anxious' or 'very upset' over pregnancy	60.4 ⁺⁺	32.4 ⁺	12.3	14.2	61.7 ⁺⁺	35.4 ⁺	12.9	6.8
Percent children of low birth weight (<2500 grams) ²	4.2	7.6	4.5 (859)	5.4	4.3	6.3	5.2 (328)	9.1
Percent children with weight gain to 3 months of less than 2000 grams	30.4 (23)	27.8 (72)	30.8 (763)	33.8 (225)	30.4 (23)	29.4 (51)	29.1 (299)	27.3
Percent children with weight gain to 1 year of less than 5000 grams	26.7 (15)	28.2 (39)	31.9 (583)	29.3 (174)	26.7 (15)	32.1 (28)	30.7 (241)	38.2 (34)
Percent children ever breastfed	74.1 (27)	70.5 (88) ^o	80.8 (812)	74.8 (232) ^o	74.1 (27) ^o	76.2 (63) ⁺	89.3 (309)	86.4 (44)
Percent breastfeeders no longer breastfeeding at 4 months	55.0 (20) ^o	78.1 (64) ⁺	45.3 (640)	32.8 (180) ⁺	55.0 (20) ^o	79.6 (49) ⁺	45.1 (268)	29.7 (37)
Mean visits to Plunket or Public Health Nurse during first year	13.4 (25)	11.7 (77) ^o	13.6 (752)	13.7 (215)	13.4 (25)	12.3 (56) ⁺	14.9 (289)	15.3 (43)
Percent children not attending Plunket after first birthday	42.3 (26) ^o	60.2 (83) ⁺	24.2 (773)	19.6 (225)	42.3 (26) ⁺	58.3 (60) ⁺	15.1 (292)	2.3 ^o
Mean number of minor ailments suffered between first and second birthdays	7.2	7.0	7.7	6.4 ⁺	7.2	6.7	6.6	6.3
Percent children treated for poisoning, fractures, burns, or scalds by second birthday	57.7 ⁺	44.7 (85) ^o	32.9 (771)	21.8 ⁺	57.7 ^o	44.3 (61)	35.4 (291)	25.6
Percent children crying for prolonged periods (>30 minutes) at 1 year	11.1 (27)	25.6 (86)	19.2 (787)	8.7 (229) ⁺	11.1 (27)	27.4 (62)	18.3 (295)	7.0
Percent children reported by their mothers at 2 years as:								
Saying twenty or more words	65.4 (26) ^o	81.9 (83)	83.4 (773)	81.6 (223)	65.4 (26) ⁺	80.0 (60)	88.0 (292)	90.7
Unable to construct a 2-word sentence	30.8 ^o	15.7	14.7	21.3 (225) ^o	30.8 ⁺	15.0	11.6	9.3
Feeding themselves	76.9 ^o	89.2	91.1	89.8	76.9	86.7	86.0	83.7
Difficult to control	42.3 ^o	31.3	22.0	11.1 ⁺	42.3 ^o	35.0 ^o	20.9	11.6
Throwing tantrums	57.7 ^o	37.3	36.9	31.6	57.7 ^o	41.7	36.6	20.9 ^o
Behaviour problems	24.6	32.5 ^o	22.8	13.3 ⁺	34.6	38.3 ^o	24.7	11.6
Aggressive	19.2	32.5 ^o	22.5	13.3 ⁺	19.2	36.7 ⁺	16.8	4.7 ^o
Shy, anxious, or fearful	11.5	10.8	11.8	14.2	11.5	11.7	10.3	16.3
Having toilet training problems	19.2	30.1	21.2	17.3	19.2	35.0 ^o	20.9	20.9

Source: Christchurch Child Development Study data.

- 1 Sample sizes are given in parenthesis. Where no sample size is given it remains the same as for the previous item. Variations in sample size are caused by attrition in the initial cohort from one interview in the longitudinal study design to the next, by missing data on individual items, and by items applying only to subsets of a complete age of mother/birth order cohort.
- 2 For all items in the lower panel of the table except this one, births resulting in placement for adoption or with foster parents are excluded.

Differences from the figure for mothers aged 20-29 which are significant at the 0.001 (*), 0.01 (+), and 0.05 (o) levels are indicated. Where one of these three symbols is underlined, the figures for the <18 and 18-19 age groups are significantly different at the level indicated.

Table 5.15

SELECTED MEASURES OF MATERNAL AND INFANT HEALTH AND CHILD DEVELOPMENT

FOR VARIOUS GROUPS OF BIRTHS DEFINED BY PARITY AND NUPTIALITY

1
STATUS OF CONCEPTION AND CONFINEMENT: CCDS COHORT

Index	Premaritally Conceived Nuptial Births ²	Maritally Conceived Nuptial Births	Maritally Conceived Nuptial First Births	Ex-nuptial First Births
Percent mothers attending antenatal classes	61.3 (75)	38.0 (963)*	80.0 (295)*	36.4 (140)*
Percent mothers attending antenatal classes whose male partner also attended	65.2 (46)	63.6 (365)	73.7 (236)	33.3 (51) ⁺
Percent mothers first visiting doctor after first trimester	5.3 (75)	7.5 (962)	3.4 (295)	22.1 (140) ⁺
Percent mothers whose pregnancies were unplanned	73.3	27.1 (963)*	18.3*	84.3
Percent mothers who were 'worried/anxious' or 'very upset' over pregnancy	32.0	9.4*	5.8*	45.0*
Percent children of low birth weight (<2500 grams)	4.0	4.8	4.7	5.7
Percent children with weight gain to 3 months of less than 2000 grams	30.0 (70)	29.7 (933)	27.6 (286)	29.9 (117)
Percent children with weight gain to 1 year of less than 5000 grams	15.2 (66)	24.2 (917)	28.1 (278) ^o	24.1 (79)
Percent children ever breastfed	82.9 (70)	80.0 (933)	89.2 (286)	58.8 (131)*
Percent breastfeeders no longer breastfeeding at 4 months	55.4 (56)	40.8 (737) ^o	40.6 (249) ^o	79.5 (73) ⁺
Mean visits to Plunket or Public Health Nurse during first year	12.8 (60)	13.8 (876)	15.3 (275)*	12.7 (115)
Percent children not attending Plunket after first birthday	39.1 (64)	21.4 (900) ⁺	9.8*	40.2 (122)
Mean number of minor ailments suffered between first and second birthdays	7.8	7.4	6.6	6.7
Percent children treated for poisoning, fractures, burns, or scalds by second birthday	43.1	28.8 ^o	30.9	45.1
Percent children crying for prolonged periods (>30 minutes) at 1 year	24.2 (66)	15.7 (917)	15.5 (278)	22.4 (125)
Percent children reported by their mothers at 2 years as:				
Saying twenty or more words	75.0 (64)	84.7 (900) ^o	90.2 (275)*	77.0 (122)
Unable to construct a 2-word sentence	20.3	15.6	9.1 ^o	23.8
Feeding themselves	86.4	90.9	85.5	85.2
Difficult to control	31.3	19.0 ^o	19.6 ^o	29.5
Throwing tantrums	48.4	33.6 ^o	31.6 ^o	47.5
Behaviour problems	35.9	19.6 ⁺	21.8 ^o	34.4
Aggressive	35.9	19.4 ⁺	13.1*	25.4
Shy, anxious, or fearful	14.1	11.5	9.8	13.9
Having toilet training problems	28.1	19.5	20.7	27.0

Source: Christchurch Child Development Study data.

1 Sample sizes are given in parenthesis. Where no sample size is given it remains the same as for the previous item. Variations in sample size are caused by attrition in the initial cohort from one interview in the longitudinal study design to the next, by missing data on individual items, and by items applying only to subsets of a complete birth type cohort.

2 Because of the nature of the data it was necessary here to define nuptial births as premaritally conceived if they occurred at marriage durations of 0-9 months.

Differences from the figure for premaritally conceived nuptial births which are significant at the 0.001 (*), 0.01 (+), and 0.05 (o) levels are indicated.

pregnancy.

CCDS data do not show statistically significant differences in the incidence of low birth weight by age of mother or nuptiality status of confinement or conception. Neither do they show any tendency for ex-nuptial children, children born to (and kept by) adolescents, or premaritally conceived nuptial children to gain weight unduly slowly during the first year of life. [40]

Ex-nuptial CCDS children were much less likely to be breastfed than nuptial ones (Table 5.13). This difference narrows and loses statistical significance if births leading to adoption are excluded. However, mothers who did breastfeed were substantially more likely to have finished breastfeeding four months after confinement if they gave birth ex-nuptially (Table 5.13) or as older teenagers (Table 5.14). Married, but premaritally pregnant mothers were also more persistent breastfeeders than mothers of ex-nuptial first-born, but were not as persistent as mothers of maritally conceived first-born (Table 5.15). And younger adolescents were more persistent breastfeeders than older adolescents (Table 5.14), perhaps because they were more likely to live with their mothers.

Infant health and development is monitored in New Zealand by Plunket and Public Health nurses. Ex-nuptial children, children of adolescents, and premaritally conceived CCDS children had lower mean

[40] This finding must be treated cautiously, however, because of high incidences of missing data on the weight gain items. Some children were not weighed at 3 months or 1 year, their visits to the Plunket nurse having been irregular or discontinued. The attrition of samples due to this cause may be gauged by comparing sample sizes for the weight gain to 3 months and 1 year items in Tables 5.13-5.15 with those for the 'Percent children ever breastfed' and 'Percent children crying for prolonged periods at 1 year' items respectively.

numbers of visits to these nurses during the first year of life and higher rates of non-attendance thereafter than nuptial children, children of 20-29 year-olds, and maritally conceived first-born (Tables 5.13-5.15). Most differences were statistically significant, and the disadvantage of ex-nuptial children and the children of teenagers was especially marked for first births. The data show no significant differences in the mean number of minor ailments (colds, vomiting, diarrhoea, and ear, throat, chest, or urinary infections) suffered between the first and second birthdays. However, being ex-nuptial or having a teenaged mother increased the likelihood of having required treatment for poisoning, a fracture, burns, or scalds by age two (Tables 5.13 and 5.14). A higher accident rate among premaritally conceived than among maritally conceived first-born just failed to attain significance at the 0.05 level (Table 5.15).

As to developmental indicators, Tables 5.13 and 5.15 suggest that ex-nuptial and premaritally conceived children acquire language more slowly than nuptial and maritally conceived first-born children, while Table 5.14 associates slow development of language with younger adolescent mothers. The data also show ex-nuptial children, children of teenagers (especially younger teenagers), and premaritally conceived children to score highly on the 'Difficult to control', 'Throwing tantrums', and 'Behaviour problems' items. These scores are based on mothers' perceptions of their children's behaviour, and so may reflect a combination of real behaviour differences, different maternal concepts of abnormal behaviour, and differences in the help mothers have with child care. The same caveat applies to findings that ex-nuptial first-born, the first-born of older adolescents, and premaritally conceived children were more aggressive at age two than

nuptial first-born, the first-born of 20-29 year-olds, and maritally conceived first-born (Tables 5.13-5.15).

Education and Employment

As previously noted, widespread concern has recently been expressed over the social consequences of adolescent fertility. From among those consequences the tendency for girls' education to be interrupted has been especially emphasised.

Several American studies have found adolescent childbearing, ex-nuptial childbearing, or early marital childbearing to be associated with fewer years of formal schooling. [41] The critical question they raise concerns the extent to which truncated education is a cause or a result of early childbearing. Chilman (1978), echoing Cutright (1973), believes that the role of pregnancy in shortening girls' education has been exaggerated. She argues that both pregnancy and early school leaving are products of similar background characteristics. The findings of Haggstrom et al (1981) support this view. They conclude, more generally, that the direct effects of teenage parenthood on young people's ambitions and attainments are much less severe than raw comparisons of outcomes for parents and non-parents suggest.

For all this, it is widely maintained that early childbearing does cause girls to be educationally disadvantaged, albeit that in America at least the situation may have improved during the 1970s

[41] See, for example, Coombs et al (1970), Cutright (1973), Bacon (1974), Furstenberg (1976c), Moore and Waite (1977), Card and Wise (1978), Hendershot and Eckard (1978), Presser (1980b), Waite and Moore (1978), and Moore et al (1981).

(Mott and Maxwell, 1981). Russ-Eft et al (1979) found among a sample of American women aged thirty that nearly half of the high school dropouts cited 'pregnancy and marriage' as the reason for dropping out. In a more thorough study, Moore and Waite (1977) (see also Waite and Moore (1978) and Moore et al (1981)) controlled for factors likely to affect educational attainment independently of early childbearing. They concluded that early childbearing was indeed strongly associated with lower attainment. Similar results are reported by Card and Wise (1978), while Hofferth and Moore (1979), examining the comparative economic wellbeing at age twenty-seven of early and late childbearers, find truncated education the major cause of the former's disadvantage where pregnancy actually disrupted schooling. Alexander and Reilly (1981) find early marriage (often associated with early childbearing) detrimental to women's educational attainment.

McVeagh (1976) has discussed the role of the Correspondence School in helping pregnant New Zealand schoolgirls continue their educations. Those enrolled with the school performed better in public examinations than students enrolled for other reasons. However, McVeagh estimates that about forty percent of mothers who become pregnant when aged fifteen or less fail to enrol.

CCDS data show that first parity mothers who gave birth ex-nuptially, as teenagers, and nuptially following premarital conception were much more likely to have no formal qualification than were those who gave birth nuptially, at ages 20-29, and following marital conception (Table 5.16). As well, several other characteristics of the former three groups could be expected to correlate with lower educational attainment. Members of these groups

Table 5.16

SUMMARY MEASURES OF BACKGROUND CHARACTERISTICS OF SELECTED GROUPS
OF FIRST PARITY MOTHERS: CCDS COHORT¹

Index	Nuptial Births (1)	Ex-nuptial Births (2)	<18 (3)	Births to Mothers Aged 18-19 (4)	20-29 (5)	30+ (6)	Premaritally Conceived Nuptial Births ² (7)	Maritally Conceived Nuptial Births (8)
Percentage of mothers:								
With any Maori or Pacific Island blood	3.9 (355) [*]	17.1 (140)	17.0 (47) ^o	8.9 (79)	6.8 (325)	2.3 (44)	11.7 (60)	2.4 (295) [*]
With no formal educational qualification	36.1 [*]	70.0 ⁺	80.9 [*]	63.3 [*]	38.2	31.8	45.0	34.2 ⁺
Roman Catholic	16.3	20.7	23.4	20.3	17.2	9.1	18.3	15.9
Attending church weekly	15.2 ⁺	5.0 ^o	10.6	2.5 ⁺	13.5	22.7	10.0	16.3
From families of five or more children	34.4 [*]	53.6	55.3 ^o	48.1	38.2	20.5 ^o	51.7	29.8 [*]
Not brought up by two natural parents	11.0 ⁺	20.0	21.3	16.5	12.6	6.8	16.7	9.8 ^o
Who lost one or both parents by death before age 16	6.8	11.4	6.4	12.7	7.1	4.5	5.0	7.1
Whose parents divorced or separated permanently before they turned 16	5.9 [*]	17.9	19.1 ⁺	13.9	7.1	4.5	8.3	5.4
Whose relationship with their mother figure in adolescence was 'unsatisfactory'	11.7 (351) ⁺	21.1 (133)	26.1 (46) ^o	19.2 (73)	12.5 (321)	6.8	22.0 (59)	9.6 (292) ⁺
Whose relationship with their father figure in adolescence was 'unsatisfactory'	10.8 (334) ^o	18.1 (127)	18.6 (43)	20.5 ^o	10.8 (306)	7.3	15.5 (58)	9.7 (278)
Rating their childhood 'unhappy'	2.8 (355) ^o	7.2 (139)	2.1 (47)	6.3 (79)	4.0 (324)	2.3	1.7 (60)	3.1 (295)
Rating their parents' discipline 'easy going' or 'lax'	7.3 ⁺	15.3 (137)	10.6	13.0 (77)	9.3	4.5	10.0	6.8
Rating their family's financial situation in adolescence 'below average'	11.0 ^o	18.0 (139)	10.9 (46)	15.2 (79)	13.5 (325)	6.8	11.7	10.8
Mean rank of mothers' fathers on Elley-Irving S.E.S. scale	3.54 (334) [*]	4.02 (127)	4.26 (42) ⁺	3.68 (73)	3.66 (73)	3.13 (40) ^o	3.59 (58)	3.53 (276)
Mean number of homes lived in by mothers to age 16	3.04 (355) ^o	3.91 (140)	3.68 (47)	4.15 (79) ^o	3.07 (325)	2.86 (44)	3.52 (60)	2.94 (295)
Mean number of schools attended by mothers to age 16	3.14 [*]	4.05	4.09 ^o	4.16 ⁺	3.16	3.00	3.65	3.03 ^o

Source: Christchurch Child Development Study data.

- 1 Sample sizes are given in parenthesis. Where no sample size is given it remains the same as for the previous item. Variations in sample size are caused by missing data on individual items and by items applying only to subsets of a complete birth cohort type.
- 2 Because of the nature of the data it was necessary here to define nuptial births as premaritally conceived if they occurred at marriage durations of 0-9 months.
- 3 This is a six-point scale of socio-economic status on which status decreases as the index increases. It was developed specifically for New Zealand conditions by Elley and Irving (1972, 1976).

Differences between values in columns (1) and (2), (2) and (7), (3) and (5), (4) and (5), (6) and (5), and (8) and (7) which are significant at the 0.001 (*), 0.01 (+), and 0.05 (o) levels are indicated. For each comparison listed, significance is marked against the first of the two columns specified.

were more likely to be Polynesian, to have permanently separated or divorced parents, and to have had discordant relations with their parents. They also came from larger families, had lived in more homes, and had gone to more schools. Furthermore, women having first children ex-nuptially and as younger adolescents came from significantly lower socio-economic backgrounds than did those giving

birth nuptially and as 20-29 year-olds (Table 5.16).

School Certificate, the most elementary formal qualification in New Zealand, is generally gained at age sixteen. That a significantly higher proportion of CCDS mothers having first children at ages 18-19 than of those having them at ages 20-29 did not have this qualification indicates that for many early childbearers schooling is terminated before they become pregnant. Pregnancy doubtless does end schooling for some girls, even if it did so more often before abortion services expanded. However, no New Zealand data enable causality to be examined with the rigour that American studies achieve.

Insofar as it prevents girls gaining qualifications they would otherwise have gained, early childbearing obviously restricts employment options. Job prospects are also limited if young mothers do not gain the early work experience that their peers do (Hofferth and Moore, 1979). The demands of child care often preclude employment, while in New Zealand the availability to solo mothers of the DPB, which generally obviates serious hardship (Fergusson and Horwood, 1978), means that full-time work is rarely a necessity.

New Zealand data are again lacking, but it is hard to imagine that adolescent mothers do not occupy lower status occupations later in life. This is the clear finding of Card and Wise (1978), although the relationship is at best only partly a direct causal one. Almost certainly background characteristics of early childbearers also predispose toward lower occupational status.

Standard of Living

The literature on the economic consequences of ex-nuptial childbearing and bridal pregnancy was reviewed earlier. Now CCDS data are used to explore the material wellbeing, in the short-term, of ex-nuptial children, non-adopted children of adolescents, and premaritally conceived nuptial children and their mothers.

These data show that one year after birth the fathers of ex-nuptial children, non-adopted children of teenagers, and premaritally conceived nuptial children rated on average significantly lower on Elley and Irving's (1972, 1976) six-point scale of socio-economic status than did the fathers of nuptial children, non-adopted children of 20-29 year-olds, and maritally conceived first-born (Tables 5.17-5.19). Ex-nuptial children placed initially with cohabiting parents or solo mothers also had lower status fathers than either nuptial or adopted ex-nuptial children (Table 5.17).

Family incomes one year after birth were adjusted for differences in family composition using a household equivalence scale developed by Easton (1980). [42] For first births, but not all births, families into which ex-nuptial children and the non-adopted children of teenagers were born had lower mean adjusted incomes than those into which nuptial children and the non-adopted children of 20-29 year-olds were born (Tables 5.17 and 5.18). Likewise, the families of

[42] Unadjusted family income comprised the sum of the mother's and her husband's incomes from salary/wages and social welfare benefits after tax. Other sources of income and income from other household members were excluded. The household equivalence scale used was based on data from the Department of Statistics' Household Expenditure Survey and has a base value of 1.00 for the income required to support two adults.

Table 5.17

SELECTED MEASURES OF ECONOMIC WELLBEING BY NUPTIALITY OF BIRTH AND
 BY PLACEMENT ARRANGEMENT (EX-NUPTIAL BIRTHS ONLY): CCDS COHORT¹

Index	All Births		First Births		Ex-nuptial Births - Placement With			Significance of Difference Between		
	Nuptial (1)	Ex-nuptial (2)	Nuptial (3)	Ex-nuptial (4)	Cohabiting Parents (5)	Solo Mother (6)	Adoptive Parents ² (7)	(5) (6)	(5) (7)	(6) (7)
Mean fathers' rank on Elley-Irving S.E.S. scale at 1 year ³	3.38 (940) [*]	4.25 (110)	3.33 (322) [*]	4.14 (76)	4.57 (53) [*]	4.76 (17) [*]	3.63 (40)		*	*
Mean adjusted household income (\$) at 1 year ⁴	85.6 (909)	85.6 (177)	103.2 (310)	88.4 (120)	81.8 (63)	88.9 (78)	85.4 (36)			
Percent with investments <\$1000 at 1 year	32.3 (912) [*]	70.1	29.4 (306) [*]	66.1 (118)	69.2 (65) [*]	94.7 (75) [*]	21.6 (37)		*	*
Percent with investments >\$10000 at 1 year	20.5 [*]	9.0	21.6 ⁺	9.3	4.6 ⁺	2.7 [*]	29.7		*	*
Percent finding saving 'very difficult' or 'impossible' at 4 months	50.2 (1002) [*]	65.3 (196)	43.9 (342) ⁺	58.0 (131)	75.4 (69) [*]	67.8 (87) ⁺	42.5 (40)		*	+
Percent rated 'not very well off' or 'obviously poor' at 4 months	6.4 (1003) [*]	23.5	7.3 [*]	20.6	33.3 [*]	26.4 [*]	-		*	*
Percent rated 'not very well off' or 'obviously poor' at 2 years	4.5 (952) [*]	20.0 (180)	3.1 (326) [*]	19.0 (121)	19.4 (62) [*]	30.0 (80) [*]	- (38)		+	*
Percent in non-owned accommodation at 4 months	30.6 (1003) [*]	73.0 (196)	34.2 (342) [*]	72.5 (131)	87.0 (69) [*]	86.2 (87) [*]	20.0 (40)		*	*
Percent in non-owned accommodation at 2 years	21.5 (964) [*]	61.3 (181)	25.7 (331) [*]	64.8 (122)	69.8 (63) [*]	73.8 (80) [*]	21.1 (38)		*	*
Percent whose standard of accommodation rated 'below average' at 4 months	8.4 (993) [*]	29.5 (190)	6.8 (339) [*]	27.2 (125)	42.4 (66) [*]	32.1 (84) [*]	2.5 (40)		*	*
Percent whose standard of accommodation rated 'below average' at 2 years	6.4 (947) [*]	24.9 (177)	3.7 (324) [*]	25.2 (119)	21.0 (62) [*]	37.7 (77) [*]	5.3 (38)		o	o
Percent with two or more changes of residence by 4 months	2.3 (1003) [*]	15.8 (196)	2.6 (342) [*]	15.3 (131)	5.6 (72)	24.7 (93) [*]	8.9 (45) ^o		+	o
Mean number of changes of residence during first two years	0.80 (957) [*]	2.41 (179)	0.99 (328) [*]	2.47 (120)	2.08 (63) [*]	3.28 (79) [*]	1.14 (37)		+	o
Percent mothers employed at 4 months	10.7 (1003)	13.8 (196)	10.8 (342)	16.0 (131)	13.0 (69)	10.3 (87)	22.5 (40) ^o			
Percent mothers employed 20 hours or more at 4 months	2.3 (1001) ⁺	6.6	2.1 (341) ^o	6.9	5.8	8.0 ⁺	5.0			
Percent mothers employed at 2 years	31.9 (963) ⁺	21.2 (179)	28.4 (331)	19.8 (121)	27.0 (63)	14.1 (78) ⁺	26.3 (38)			
Percent mothers employed 20 hours or more at 2 years	7.7	11.7	7.9	11.6	12.7	11.5	10.5			

Source: Christchurch Child Development Study data.

- 1 Sample sizes are given in parenthesis. Where no sample size is given it remains the same as for the previous item. Variations in sample size are caused by attrition in the initial cohort from one interview in the longitudinal study design to the next, by missing data on individual items, and by items applying only to subsets of a complete nuptiality status/birth order or placement arrangement cohort.
- 2 The data in this column are for the adoptive parents and their households. The category also includes one case where the child was placed with foster parents.
- 3 This is a six-point scale of socio-economic status on which status decreases as the index increases. It was developed specifically for New Zealand conditions by Elley and Irving (1972, 1976).
- 4 Adjusted for differences in household composition using the method of Easton (1980). Weekly incomes from employment of father and mother and from welfare benefits are adjusted by a scale which has a base value of 1.00 for the income required to support two adults.

Differences which are significant at the 0.001 (*), 0.01 (+), and 0.05 (o) levels are indicated. Indications of significance marked against columns (5)-(7) refer to comparisons with column (1).

Table 5.18

1

SELECTED MEASURES OF ECONOMIC WELLBEING BY AGE OF MOTHER: CCDS COHORT

Index	All Births				First Births			
	<18	18-19	20-29	30+	<18	18-19	20-29	30+
Mean fathers' rank on Elley-Irving S.E.S. scale at 1 year ²	4.40 (10) ^o	4.40 (55) [*]	3.54 (727)	2.94 (218) [*]	4.40 (10) ^o	4.30 (37) [*]	3.38 (277)	3.20 (41)
Mean adjusted household income (\$) at 1 year ³	78.2 (26)	87.1 (82)	88.5 (740)	84.4 (204)	78.2 (26)	90.6 (60)	104.4 (280)	99.8 (35)
Percent with investments <\$1000 at 1 year	92.0 (25) ^o	71.4 (84) [*]	37.9 (734)	23.9 (209) [*]	92.0 (25) ^o	68.3 (60) [*]	32.3 (279)	17.5 (40)
Percent with investments >\$10000 at 1 year	- ^o	4.8 ⁺	15.8	34.4 [*]	- ^o	6.7 ^o	18.3	35.0 ^o
Percent finding saving 'very difficult' or 'impossible' at 4 months	63.0 (27)	71.6 (88) ⁺	53.6 (812)	42.9 (231) ⁺	63.0 (27)	69.8 (63) ⁺	44.3 (309)	31.8 (44)
Percent rated 'not very well off' or 'obviously poor' at 4 months	25.9 ⁺	25.0 [*]	8.3	6.0 (232)	25.9 ⁺	23.8 [*]	7.4	-
Percent rated 'not very well off' or 'obviously poor' at 2 years	26.9 (26) [*]	17.1 (82) [*]	6.0 (764)	5.4 (222)	26.9 (26) [*]	16.9 (59) ⁺	5.2 (288)	2.4 (42)
Percent in non-owned accommodation at 4 months	88.9 (27) [*]	83.0 (88) [*]	37.3 (812)	18.1 (232) [*]	88.9 (27) [*]	85.7 (63) [*]	39.2 (309)	15.9 (44) ⁺
Percent in non-owned accommodation at 2 years	80.8 (26) [*]	72.3 (83) [*]	28.7 (773)	12.0 (225) [*]	80.8 (26) [*]	71.7 (60) [*]	30.1 (292)	11.6 (43) ^o
Percent whose standard of accommodation rated 'below average' at 4 months	36.0 (25) [*]	31.4 (86) [*]	10.5 (802)	7.8 (230)	36.0 (25) [*]	27.9 (61) [*]	9.3 (301)	- (44) ^o
Percent whose standard of accommodation rated 'below average' at 2 years	34.6 (26) [*]	18.8 (80) ⁺	8.3 (758)	7.2 (222)	34.6 (26) [*]	19.3 (57) ⁺	6.6 (286)	2.4 (42)
Percent with two or more changes of residence by 4 months	14.8 (27) ⁺	15.9 (88) [*]	3.3 (812)	2.2 (232)	14.8 (27) ⁺	17.5 (63) [*]	3.2 (309)	- (44)
Mean number of changes of residence during first two years	3.23 (26) [*]	2.58 (81) [*]	0.96 (768)	0.50 (223) [*]	3.23 (26) [*]	3.02 (59) [*]	1.07 (290)	0.38 (42) ⁺
Percent mothers employed at 4 months	7.4 (27)	9.1 (88)	10.5 (812)	12.9 (232)	7.4 (27)	12.7 (63)	11.7 (309)	6.8 (44)
Percent mothers employed 20 hours or more at 4 months	3.7	4.5	2.2 (811)	4.8 (231) ^o	3.7	6.3	2.6	2.3 (43)
Percent mothers employed at 2 years	11.5 (26) ^o	16.9 (83) ⁺	31.2 (773)	34.2 (225)	11.5 (26) ^o	13.3 (60) ⁺	30.1 (292)	23.3
Percent mothers employed 20 hours or more at 2 years	7.7	9.6	7.8	9.3	7.7	8.3	8.9	9.3

Source: Christchurch Child Development Study data.

- 1 Sample sizes are given in parenthesis. Where no sample size is given it remains the same as for the previous item. Variations in sample size are caused by attrition in the initial cohort from one interview in the longitudinal study design to the next, by missing data on individual items, and by items applying only to subsets of a complete age of mother/birth order cohort. Note that all calculations exclude births following which the child was adopted or placed with foster parents.
- 2 This is a six-point scale of socio-economic status on which status decreases as the index increases. It was developed specifically for New Zealand conditions by Elley and Irving (1972, 1976).
- 3 Adjusted for differences in household composition using the household equivalence scale developed by Easton (1980). Weekly incomes from employment of father and mother and from welfare benefits are adjusted by a scale which has a base value of 1.00 for the income required to support two adults.

Differences from the figure for mothers aged 20-29 which are significant at the 0.001 (*), 0.01 (+), and 0.05 (o) levels are indicated. Where one of these three symbols is underlined, the figures for the <18 and 18-19 age groups are significantly different at the level indicated.

Table 5.19

SELECTED MEASURES OF ECONOMIC WELLBEING FOR VARIOUS GROUPS OF BIRTHS

DEFINED BY PARITY AND NUPTIALITY STATUS OF CONCEPTION AND

1
 CONFINEMENT: CCDS COHORT

Index	2			
	Premaritally Conceived Nuptial Births	Maritally Conceived Nuptial Births	Maritally Conceived Nuptial First Births	Ex-nuptial First Births
Mean fathers' rank on Elley-Irving S.E.S. scale at 1 year ³	3.98 (58)	3.34 (882) ⁺	3.25 (270) [*]	4.14 (76)
Mean adjusted household income (\$) at 1 year ⁴	90.6 (61)	85.3 (848)	105.2 (258)	88.4 (120)
Percent with investments <\$1000 at 1 year	57.6 (66)	30.4 (846) [*]	23.2 (259) [*]	66.1 (118)
Percent with investments >\$10000 at 1 year	12.1	21.2	22.4	9.3
Percent finding saving 'very difficult' or 'impossible' at 4 months	67.1 (70)	48.9 (932) ⁺	39.5 (286) [*]	58.0 (131)
Percent rated 'not very well off' or 'obviously poor' at 4 months	22.9	5.1 (933) [*]	2.8 [*]	20.6
Percent rated 'not very well off' or 'obviously poor' at 2 years	16.1 (62)	3.7 (890) [*]	1.5 (272) [*]	19.0 (121)
Percent in non-owned accommodation at 4 months	75.7 (70)	27.2 (933) [*]	25.5 (286) [*]	72.5 (131)
Percent in non-owned accommodation at 2 years	62.5 (64)	6.8 (900) [*]	8.0 (275) [*]	64.8 (122)
Percent whose standard of accommodation rated 'below average' at 4 months	29.0 (69)	6.8 (924) [*]	3.5 (284) [*]	27.2 (125)
Percent whose standard of accommodation rated 'below average' at 2 years	14.5 (62)	5.9 (885) ⁺	2.6 (270) [*]	25.2 (119)
Percent with two or more changes of residence by 4 months	7.1 (70)	1.9 (933) ⁺	2.1 (286) ^o	15.3 (131)
Mean number of changes of residence during first two years	1.89 (64)	0.73 (893) [*]	0.86 (272) [*]	2.47 (120)
Percent mothers employed at 4 months	17.1 (70)	10.2 (933)	9.8 (286)	16.0 (131)
Percent mothers employed 20 hours or more at 4 months	4.3 (69)	2.1 (932)	1.7	6.9
Percent mothers employed at 2 years	25.0 (64)	32.4 (899)	28.4 (275)	19.8 (121)
Percent mothers employed 20 hours or more at 2 years	15.6	7.1 ^o	6.2 ^o	11.6

Source: Christchurch Child Development Study data.

- 1 Sample sizes are given in parenthesis. Where no sample size is given it remains the same as for the previous item. Variations in sample size are caused by attrition in the initial cohort from one interview in the longitudinal study design to the next, by missing data on individual items, and by items applying only to subsets of a complete birth type cohort.
- 2 Because of the nature of the data it was necessary here to define nuptial births as premaritally conceived if they occurred at marriage durations of 0-9 months.
- 3 This is a six-point scale of socio-economic status on which status decreases as the index increases. It was developed specifically for New Zealand conditions by Elley and Irving (1972, 1976).
- 4 Adjusted for differences in household composition using the household equivalence scale developed by Easton (1980). Weekly incomes from employment of father and mother and from welfare benefits are adjusted by a scale which has a base value of 1.00 for the income required to support two adults.

Differences from the figure for premaritally conceived nuptial births which are significant at the 0.001 (*), 0.01 (+), and 0.05 (o) levels are indicated.

premaritally conceived nuptial children had lower mean incomes than those of maritally conceived first-born (Table 5.19). However, none of these differences was statistically significant at the 0.05 level. [43] The economic disadvantage of the three first-mentioned groups of families is much more marked when percentages with very low (not more than \$1000) and reasonably substantial (more than \$10000) accumulated savings and investments are compared (Tables 5.17-5.19). These differences in asset holdings are generally statistically significant whether all births or just first births are considered.

Sizeable percentages of all subgroups of families found saving 'very difficult' or 'impossible', but those with relatively low accumulated assets were the most likely to do so. Cohabiting parent families, however, did not find saving easier than solo mother families (Table 5.17). Similar patterns of differential wellbeing emerged on an interviewer rating of family living standards four months after confinement. At the two-year interview, percentages rated 'not very well off' or 'obviously poor' had fallen, but the disadvantaged groups remained clearly disadvantaged. Moreover, while cohabiting parent families and the families of older adolescent mothers improved their ratings, solo mother families and the families of younger adolescent mothers did not (Tables 5.17 and 5.18). This may reflect movement out of parental homes by members of the latter two groups.

[43] Note here, too, that in the absence of data on parental incomes solo mothers living with their parents were treated as independent family units. Many were doubtless better off than their personal incomes would suggest.

As expected, the families of ex-nuptial children, non-adopted children of teenagers, and premaritally conceived nuptial children were much less likely to own their homes at the four-month interview than the families of nuptial children, non-adopted children of 20-29 year-olds, and maritally conceived first-born (Tables 5.17-5.19). The position of the first group was even less favourable if adoptive families among them were disregarded (Table 5.17). Home ownership levels had generally risen at the two-year interview but inter-subgroup differentials remained. These were matched, at both four months and two years, by differentials in the incidence of substandard accommodation (Tables 5.17-5.19). [44] Here cohabiting parents and older adolescent mothers again improved their positions between interviews, while solo mothers and younger adolescent mothers did not (Tables 5.17 and 5.18). Parents of premaritally conceived children achieved a similar reduction in their substandard housing score to cohabiting parents (Table 5.19).

Occupants of housing which is rented or inferior are apt to be geographically mobile. Thus the CCDS data reveal differences in residential mobility which are patterned similarly to those in home ownership and housing quality (Tables 5.17-5.19). Most mobile of all were solo mothers, whose moves seem to have been largely unrelated to improving housing quality. Many doubtless involved leaving parental homes, marriage, or establishing cohabiting unions - events less likely to affect other groups of mothers.

[44] Interviewers were asked to rate both the interior and the exterior of each respondent's home on a detailed five-point scale. The results reported in Tables 5.17-5.19 derive from the interior ratings.

The final aspect of economic wellbeing covered is maternal employment status. At the four-month interview adoptive mothers were more likely to be employed than mothers of nuptial children (Table 5.17). Employment for twenty hours or more was distinctly a minority status for all mothers, but was significantly more common among mothers of ex-nuptial children (especially solo mothers) and older adolescent mothers than among mothers of nuptial children and 20-29 year-old mothers (Tables 5.17 and 5.18). At the two-year interview employment was more common virtually across the board. Participation rates had roughly trebled for mothers of nuptial children, mothers aged twenty or over, and mothers who conceived within marriage (Tables 5.17-5.19). However, while these groups were more likely than the mothers of ex-nuptial children, adolescent mothers, and bridally pregnant mothers to be working at all, they were less likely to be working twenty or more hours each week.

Seemingly the former groups of mothers quite commonly enter the work force, but on a restricted basis, while their children are very young. They probably value the therapeutic benefits, economic independence, and career continuity this offers, but are mindful of their children's interests. Mothers who marry during pregnancy, give birth ex-nuptially, or are teenagers at confinement more often have a substantial commitment to employment if they have one at all. This may reflect a different perception of the propriety of such a commitment when children are very young, but is more likely primarily a product of inferior economic status and disincentives to part-time employment in New Zealand's welfare benefit structure (Chapter 9).

Social Wellbeing

Chilman (1978) argues that the consequences of adolescent childbearing for mothers' social wellbeing are slight. Certainly ex-nuptial childbearing does not bring the opprobrium that it once did, but it is reasonable to suppose that early childbearing and unplanned parenthood adversely affect both mothers' social lives and their general life satisfactions. As well, accelerated role transition, a sudden reduction in contact with peers, and hasty entry into unions offering no real companionship might induce loneliness.

CCDS data shed some light on these issues, although they only permit comparisons of groups of mothers, not of mothers and non-mothers. Relatively few members of any of the groups identified in Table 5.20 were dissatisfied with their lives one year after confinement. However, mothers who kept their ex-nuptial children, especially alone, and mothers who married while pregnant were more likely to feel this way than mothers of nuptial children and of maritally conceived first-born children. Older adolescent mothers of first parity, too, had a relatively high probability of being dissatisfied.

Table 5.20 shows that first parity adolescent mothers and mothers who married while pregnant were more likely after one year to rate their social lives as 'almost non-existent' than first parity mothers aged 20-29 and mothers of maritally conceived first-born children. These differences persisted a year later, by which time cohabiting mothers of ex-nuptial children were more likely than the mothers of nuptial children to feel they had no social life as well. Solo mothers do not emerge as feeling especially socially isolated, again

Table 5.20

MEASURES OF MATERNAL SOCIAL WELLBEING FOR SELECTED GROUPS OF MOTHERS
 WHO KEPT THEIR CHILDREN: CCDS COHORT¹

Category of Mother		Percent Dissatisfied With Their Lives 1 Year After Birth	Percent Describing Their Social Life as 'Almost Non-existent'		Percent 'Lonely' or 'Very Lonely'	
			1 Year After Birth	2 Years After Birth	1 Year After Birth	2 Years After Birth
All Births:						
Nuptial	(1)	5.0 (983)	20.2	18.5 (964)	27.0 (983)	20.9 (964)
Ex-nuptial	(2)	12.3 (146)*	25.3	28.0 (143) ⁺	45.2 (146)*	35.0 (143)*
Parents Cohabiting	(3)	9.1 (66)	25.8	33.3 (63) ⁺	42.4 (66) ⁺	34.9 (63) ⁺
Solo Mother	(4)	15.0 (80)*	25.0	23.8	47.5*	35.0 ⁺
Mother Aged <18	(5)	7.4 (27)	25.9	36.0 (25) ^o	40.7 (27)	40.0 (25) ^o
18-19	(6)	11.6 (86)	25.6	28.9 (83) ^o	48.8 (86)*	34.9 (83) ⁺
20-29	(7)	6.1 (787)	18.3	17.5 (773)	28.7 (787)	22.3 (773)
30+	(8)	3.1 (229)	23.1	22.2 (225)	22.7 (229)	17.8 (225)
First Births:						
Nuptial	(9)	5.4 (335)	15.5	15.7 (331)	29.0 (335)	19.3 (331)
Ex-nuptial	(10)	10.9 (92)	16.3	20.0 (90)	39.1 (92)	31.1 (90) ^o
Parents Cohabiting	(11)	10.8 (37)	18.9	25.7 (35)	35.1 (37)	28.6 (35)
Solo Mother	(12)	10.9 (55)	14.5	16.4	41.8	32.7 ^o
Mother Aged <18	(13)	7.4 (27)	25.9 ^o	36.0 (25) ⁺	40.7 (27)	40.0 (25) ^o
18-19	(14)	16.1 (62) ⁺	25.8 ⁺	26.7 (60) ⁺	51.6 (62)*	36.7 (60) ⁺
20-29	(15)	4.7 (295)	10.8	12.3 (292)	26.8 (295)	18.8 (292)
30+	(16)	4.7 (43)	27.9 ⁺	20.9	25.6	11.6
²						
Premaritally Conceived Nuptial Births	(17)	15.2 (66)	28.8	28.1 (64)	45.5 (66)	25.0 (64)
Maritally Conceived Nuptial Births	(18)	4.3 (917)*	18.5 ^o	17.8 (900) ^o	25.6 (917)*	20.6 (900)
Maritally Conceived Nuptial First Births	(19)	4.0 (278)*	13.7 ⁺	13.5 (275) ⁺	26.3 (278) ⁺	17.1 (275)

Source: Christchurch Child Development Study data.

1 Sample sizes are given in parenthesis. Where no sample size is given it remains the same as for the previous value in the same row. Variations in sample size are caused by attrition in the initial cohort between the one-year and two-year interviews of the longitudinal study design.

2 Because of the nature of the data it was necessary here to define nuptial births as premaritally conceived if they occurred at marriage durations of 0-9 months.

Differences between values in rows (2)-(4) and row (1), rows (5), (6), (8) and row (7), rows (10)-(12) and row (9), rows (13), (14), (16) and row (15), and rows (18)-(19) and row (17) which are significant at the 0.001 (*), 0.01 (+), and 0.05 (o) levels are indicated. No significant differences were found between values in rows (5) and (6), (13) and (14), or (17) and (10).

perhaps because some were living with their parents. Most inter-group differences lose statistical significance when percentages rating their social lives 'not very active' are added to the 'almost non-existent' percentages. It seems, though, that mothers who become pregnant as teenagers and those whose pregnancies are unplanned may

feel the impact of parenthood on their social activities especially acutely.

One year after confinement, 'loneliness' was complained of by significantly more mothers of non-adopted ex-nuptial children, older adolescent mothers, and mothers who married during pregnancy than mothers of nuptial children, mothers in their twenties, and mothers of maritally conceived first-born children (Table 5.20). A year later many of the bridally pregnant group had overcome this problem. So had some mothers of ex-nuptial children and some adolescent mothers, but they continued to be more often lonely than mothers in their comparison groups. Undoubtedly loneliness is experienced, for various reasons, by many mothers. However, in the short term the condition seems more pervasive where they are young, where pregnancy is unplanned, and perhaps where there is little help with child care. To what extent these relationships are causal is impossible to say. Certain personality traits may well predispose toward early and unplanned childbearing and postnatal loneliness alike.

Conjugal Stability

The relationship between bridal pregnancy and the stability of marriage in New Zealand is examined fully in Chapter 8. However, CCDS data provide preliminary insights into it, and also allow assessment of the short-term stability of consensual unions into which children are born.

Two years after confinement the parents of premaritally conceived children were much more likely than those of maritally conceived first-born children ever to have separated, and to have been separated

and not reconciled (Table 5.21). Other significant differences in separation rates emerged, irrespective of whether all, or just first births were considered. Parents consensually married at confinement were much more separation prone than those legally married, as were mothers who entered marital or cohabiting relationships during the two years following confinement. [45] Though small this last group recorded the highest separation rates, despite a shorter mean period of exposure to risk, suggesting that solo mothers have acute difficulty establishing two-parent homes for their children. Finally, adolescent mothers were far more likely to have separated and to have separated without being reconciled than 20-29 year-old mothers.

5.4 SUMMARY

This chapter has endeavoured to add a sociological dimension to post-war trends in nonmarital pregnancy and ex-nuptial fertility. Data from three sources showed a marked decline, commencing in the late 1960s, in the proportion of ex-nuptial children placed for adoption. The trend occurred at all maternal ages, but was most pronounced among non-adolescent mothers. It was accompanied, and to a degree preceded, by an increase in the incidence of placement with solo mothers. But the main compensating change, especially among non-Polynesians, has been toward placement with cohabiting parents.

The relative impacts of mechanisms responsible for these trends cannot be precisely determined. Many have assumed an increased preference among unmarried mothers for keeping their babies, implying

[45] Note that categories (2) and (3), and (9) and (10) in Table 5.21 are mutually exclusive.

Table 5.21

SEPARATION RATES TWO YEARS AFTER CONFINEMENT FOR SELECTED GROUPS OF
 1
 MOTHERS WHO KEPT THEIR CHILDREN: CCDS COHORT

Category of Mother		Percent Ever Separated	Percent Separated and not Reconciled
All Births:			
Married at Confinement	(1)	4.7 (952)	2.7
Cohabiting at Confinement	(2)	23.1 (65)*	18.5*
Married or Cohabiting Within Two Years of Confinement	(3)	37.1 (35)*	31.4*
Married or Cohabiting at, or Within Two Years of Confinement and Aged at Confinement			
<18	(4)	37.5 (16)*	37.5*
18-19	(5)	29.0 (69)*	21.7*
20-29	(6)	5.5 (747)	3.3
30+	(7)	1.8 (222)	1.4
First Births:			
Married at Confinement	(8)	5.2 (325)	3.4
Cohabiting at Confinement	(9)	20.0 (35)*	17.1*
Married or Cohabiting Within Two Years of Confinement	(10)	36.0 (25)*	28.0*
Married or Cohabiting at, or Within Two Years of Confinement and Aged at Confinement			
<18	(11)	37.5 (16)*	37.5*
18-19	(12)	31.3 (48)*	25.0*
20-29	(13)	4.3 (279)	2.5
30+	(14)	- (42)	-
2			
Premaritally Conceived Nuptial Births	(15)	15.5 (64)	10.9
Maritally Conceived Births	(16)	3.9 (888)*	2.4*
Maritally Conceived First Births	(17)	2.9 (272)*	1.5*

Source: Christchurch Child Development Study data.

1 Sample sizes are given in the 'Percent Ever Separated' column.

2 Data availability dictated that nuptial births were deemed premaritally conceived if they occurred at marriage durations 0-9 months.

Differences between values in rows (2)-(3) and row (1), rows (4), (5), (7) and row (6), rows (9)-(10) and row (8), rows (11), (12), (14) and row (13), and rows (16)-(17) and row (15) which are significant at the 0.001 (*), 0.01 (+), and 0.05 (o) levels are indicated.

that a decade earlier the same children would have been adopted out. But while there is doubtless truth in this assumption, it is not the whole, or probably even the main explanation. More readily available abortion has almost certainly terminated, in particular, pregnancies which otherwise would have led to adoptions. There is also the trend away from marriage taking place between nonmarital conception and confinement. Although most likely partly due to differential improvement in nonmarital fertility control in serious as opposed to casual relationships and by social class, this trend probably also reflects a growing tendency for unintended pregnancy to lead to consensual, rather than formal marriage. It may also reflect more planned childbearing within consensual unions.

Setting these findings alongside those of Chapter 4 it is striking that changes in the placement of nonmaritally conceived children have occurred over a period when the life cycle probability of conceiving a first child premaritally has peaked and begun to decline sharply. Available data do not permit trends in life cycle probabilities of becoming an unmarried solo mother or a cohabiting unmarried mother to be accurately determined. However, if they have fallen at all they have clearly not done so to anything like the degree that probabilities of premarital conception leading to first confinement have. Equally clearly given the continued rise in the illegitimacy ratio, much higher proportions of New Zealand children now than in the mid-1960s are born to solo mothers and to cohabiting couples.

Studies of placement decisions made by unmarried mothers have generally found those with the best parenting potential the least

likely to keep their children. The fact that adoptions have declined so sharply in New Zealand thus adds weight to speculation that nonmarital fertility control has improved most among better educated women of higher social class. A second explanation is Grow's (1979) contention that societal attitudes have so changed that mothers are not under the same pressure to place for adoption. Both mechanisms have probably had an impact, while a third must also be considered - the fact that the DPB means that mothers are no longer forced to part with their children for purely economic reasons.

After reviewing the literature on the consequences of adoption and placement with solo mothers the former, while not without its risks, seemed to offer the child better prospects. The same conclusion was invited by studies which compared adopted ex-nuptial children with those kept by their mothers, whether alone or with a male partner. It was further established that PMP families seem to fare less well than non-PMP families, both economically and in terms of marital stability, but that their economic problems are not as severe as those faced by many solo mothers. Assuming that these largely American and British findings do not misrepresent the situation in New Zealand, there is perhaps cause for concern that ex-nuptially conceived children have become much less likely to be placed with adoptive or their own legally married parents, and much more likely to be placed with cohabiting parents or solo mothers. The difficulty in making this statement assertively is that the research literature reviewed may have become outdated during the 1970s. Consensual marriage and solo motherhood have acquired new respectability, and the quality of consensually married and single unmarried parents has probably risen. By the late 1970s children born

following nonmarital conceptions were almost certainly more often planned and wanted than was the case during the 1960s.

In section 5.3 a good deal of New Zealand evidence was presented to suggest that early, nonmarital, and early marital childbearing are associated with a variety of adverse indicators of maternal and infant health, child development, living standards, maternal education and social wellbeing, and conjugal stability. The degree to which these relationships are direct causal ones generally is not clear, and it must be remembered that CCDS data cover only a two year period after confinement. However, it is significant that findings are for the late 1970s. In New Zealand at least it would seem that at best the unfavourable correlates of ex-nuptial, adolescent, and early marital childbearing have lately weakened.

Even if only first births are considered, the unmarried solo and cohabiting parental situations into which New Zealand children are increasingly being born are still distinctly less favourable than the conventional two married parents model. Alarmist conclusions must be tempered, however, by the realisation that marital childbearing following premarital conception, for which there remain a number of contraindications, now occurs much less frequently than it did in the mid-1960s. To a degree couples discounting abortion may be responding more rationally to premarital pregnancy than did couples in earlier generations. Hasty marriage to regularise a child's birth status has little to commend it in a society that is increasingly cautious about marriage anyway, and increasingly demanding of personal satisfaction from it.

CHAPTER 6

TRENDS IN THE FORMATION OF CONJUGAL UNIONS

6.1 INTRODUCTION

At several points in preceding chapters reference has been made to a rising incidence of informal cohabitation in New Zealand. [1] There are no data which permit the calculation by age and sex of proportions cohabiting among the not currently married population. [2] However, nobody coming into contact with a cross-section of New Zealand youth in the late 1970s who had some acquaintance with the courtship behaviour of earlier generations could help but be struck by the prevalence of this type of living arrangement and the openness with which it was entered into.

It is to be expected that a major increase in the frequency and social acceptability of informal cohabitation would affect the pattern of entry into formal marital unions. If most of the benefits of

[1] Just what criteria must be met before a couple are said to be cohabiting is obscure. Indeed it is doubtful whether any definition would be satisfactory across all Western cultures and for legal and research purposes alike (Cole, 1977; Macklin, 1978; Trost, 1979b). However, as used here the concept embodies the following: the sharing of living quarters, on a non-temporary basis, by two persons of opposite sex who are not legally married to one another; regular sexual relations between the parties; and a joint household economy. Cohabiting relationships are thus marriage-like, without necessarily being regarded as either trial marriages or substitutes for marriage by the cohabitants. They may or may not involve a commitment to reproduction.

[2] Data will, however, become available when results of the 1981 census are released. This census asked, for the first time, a question on de facto marriage status.

marriage can be enjoyed without tying oneself legally to one's partner, logically some individuals will delay marriage while others might reject it altogether. The first part of this chapter examines changes in patterns of formal marriage over the post-war period, placing particular emphasis on the reversal since the early 1970s of the marriage boom of 1945-71. Several factors other than the growing popularity of living together which have helped bring about this reversal are discussed. But the trend is seen especially in the context of an evolutionary process which, for probably the majority of younger New Zealanders, has now rendered obsolete the norm of premarital chastity.

The latter part of the chapter focuses more specifically on the upsurge in informal cohabitation. Cross-national evidence for this trend is reviewed. Attention is then turned to changes in the pattern and level of coresidence at marriage in New Zealand using data obtained by manual searches of the 1961 and 1976 marriage registers.

6.2 POST-WAR MARRIAGE PATTERNS

Trends in non-Maori marriage patterns up until 1967 have been examined by Jain (1972) using a wide range of measures. Vosburgh (1971, 1973, 1978), too, has discussed them, her analysis being technically less sophisticated but placing greater emphasis on explanation. Finally, the Department of Statistics (1978, 1979) has carried the analysis of post-war marriage patterns through to the mid-1970s. It is proposed in this section to update these studies, to review their interpretations of the data, and to present a full analysis of first marriage trends through the 1970s.

Period Indices

Table 6.1 shows male and female general marriage rates during 1945-78. This index gives the number of marriages per 1000 never married, widowed, or divorced persons of marriageable age. After peaking in 1946, both rates fell during the late 1940s. They remained stable through the 1950s, showed signs of increasing during the early 1960s, then rose sharply between the middle of that decade and 1971. Subsequently they fell even more steeply. By 1979 they were well below their 1950 levels, but in 1980 small increases were recorded again.

Rather similar trends were followed by male and female first marriage rates (Table 6.1). The female rate rose during the early 1950s, and the relative increase in its value during 1950-71 exceeded that in the female general marriage rate. Also, post-1971 declines in first marriage rates have been more spectacular than those in general marriage rates. Standardisation of first marriage rates for age alters the picture slightly. Particularly for males there is evidence of a steady rise in the first marriage rate throughout the 1950s and 1960s. The standardised male first marriage rate peaked in 1971 fifty-three percent above its 1950 level, whereas the unstandardised rate increased by only twenty-six percent over that period.

Age-specific first marriage rates (Table 6.2) allow the analysis to be refined further. For both sexes, first marriage rates increased markedly at ages 16-19 and 20-24 between the late 1940s and the early 1970s. Relative to rates prevailing in 1950, the upward trends for males were especially sharp, increases occurring mainly in the latter half of the 1950s and after about 1964. Most of the upsurge in the

Table 6.1

GENERAL, FIRST, AND STANDARDISED FIRST MARRIAGE RATES BY SEX: TOTAL
1
POPULATION 1945-1980

2 Year	General Marriage Rate		First Marriage Rate		3 Standardised First Marriage Rate	
	Male	Female	Male	Female	Male	Female
1945	77.5	67.9	79.4	83.8	66.1	70.0
1946	91.8	86.5	95.1	108.2	76.7	92.9
1947	81.8	78.7	83.2	98.7	67.3	88.1
1948	76.3	74.0	76.8	93.5	62.2	85.8
1949	74.8	73.1	75.5	93.9	61.1	88.3
1950	74.2	72.9	75.4	95.8	61.8	92.7
1951	74.0	72.8	75.7	97.1	62.5	95.2
1952	74.0	73.0	76.1	98.0	62.6	97.4
1953	74.0	73.2	76.7	100.3	62.7	101.1
1954	75.1	74.2	77.8	102.3	64.9	105.2
1955	75.6	74.8	79.1	104.2	66.9	110.0
1956	73.6	72.8	76.5	101.9	66.3	109.8
1957	72.8	71.7	75.7	100.3	67.6	109.2
1958	74.4	73.3	77.0	102.7	70.6	112.7
1959	73.9	72.6	76.7	102.0	71.6	111.8
1960	76.1	74.3	78.8	105.4	74.4	114.9
1961	77.3	75.6	80.5	108.4	76.5	116.8
1962	76.0	74.4	79.1	107.1	75.9	114.3
1963	75.1	73.2	78.0	104.8	76.2	111.9
1964	76.2	74.3	78.7	105.7	78.3	113.0
1965	78.2	76.0	80.9	108.8	81.6	115.7
1966	81.2	79.1	84.2	113.3	84.9	119.0
1967	82.4	79.9	85.6	116.1	85.9	120.2
1968	84.4	81.1	87.5	118.4	88.0	121.2
1969	87.5	83.5	89.4	120.9	89.9	122.7
1970	89.8	85.6	91.5	124.1	91.9	125.1
1971	93.2	88.5	94.7	128.9	94.7	128.9
1972	90.4	85.6	91.4	123.6	90.5	122.3
1973	85.9	81.5	85.6	116.6	84.3	114.6
1974	80.7	76.6	79.1	108.1	77.3	105.2
1975	76.0	71.9	74.3	100.6	71.8	96.6
1976	73.6	69.3	70.4	95.5	67.7	90.8
1977	67.9	63.8	63.4	86.7	61.9	82.7
1978	66.5	62.5	62.2	84.4	61.0	80.2
1979	65.8	61.4	60.9	82.9	59.8	78.3
1980	66.9	62.4	61.9	84.4	60.1	78.8
Indices (1950 = 100)						
1945	104	93	105	87	107	76
1951	100	100	100	101	101	103
1956	99	100	102	106	107	118
1961	104	104	107	113	124	126
1966	109	108	112	118	137	128
1971	126	121	126	135	153	139
1976	99	95	93	100	110	98
1980	90	86	82	88	97	85

Source: New Zealand Vital Statistics 1945-1980; 1945-76 censuses; unpublished data supplied by the Department of Statistics.

- 1 The General Marriage Rate is defined as the number of marriages per 1000 never married, widowed, or divorced persons aged sixteen and over, and the First Marriage Rate as the number of marriages of bachelors or spinsters per 1000 persons aged sixteen and over. Risk populations were obtained by linear interpolation between census age-specific proportionate distributions of the population by marital status for each sex (except that for 1976-80 linear extrapolation of the 1971-76 intercensal trend was used), the resultant proportions in relevant marital status categories at mid-year being applied to annual estimated mean populations distributed by sex and age. Age-specific risk populations were then summed for each sex.
- 2 Calculations for 1945-47 assume that Maori marriages contracted in those years followed the same distributions by age and previous marital status of bride and groom as Maori marriages for the entire period 1948-51. After 1951, no distinction was made between Maori and non-Maori marriages.
- 3 Standardised to the age distributions of bachelors and spinsters in 1971.

Table 6.2

AGE-SPECIFIC FIRST MARRIAGE RATES BY SEX: TOTAL POPULATION 1945-1980

Year	Males					Females				
	16-19	20-24	25-29	30-34	35+	16-19	20-24	25-29	30-34	35+
1945	6	106	226	168	38	35	167	184	106	18
1946	6	133	248	187	41	47	231	230	119	20
1947	7	118	208	157	35	47	222	192	101	17
1948	6	109	192	141	34	49	211	182	96	17
1949	6	108	186	139	33	50	221	180	91	17
1950	6	113	186	120	32	55	232	180	92	16
1951	7	117	186	120	29	54	246	185	96	14
1952	7	116	185	121	30	56	246	197	98	16
1953	7	117	191	121	28	56	260	205	97	16
1954	8	125	188	117	27	59	271	211	103	16
1955	8	129	195	117	27	62	288	208	105	16
1956	9	128	191	116	25	64	282	212	97	16
1957	9	131	190	124	25	63	282	205	104	15
1958	10	138	197	122	25	68	289	203	100	15
1959	11	140	196	118	27	68	286	198	100	15
1960	13	145	207	120	26	71	292	204	103	15
1961	13	151	205	119	26	76	293	193	104	15
1962	14	151	201	113	25	73	289	194	95	14
1963	13	153	198	114	26	73	283	177	92	15
1964	14	156	208	117	25	73	284	200	90	13
1965	17	164	212	109	25	77	291	188	90	13
1966	19	171	215	111	24	84	291	186	83	13
1967	19	173	219	118	23	84	296	191	84	13
1968	18	183	217	115	22	85	302	179	87	12
1969	20	189	210	108	22	87	304	177	84	12
1970	21	193	215	122	21	89	306	192	87	12
1971	24	198	219	113	21	97	311	186	87	11
1972	22	189	207	114	21	94	287	179	94	10
1973	21	176	194	105	20	89	264	180	90	11
1974	19	160	179	99	20	81	238	175	88	12
1975	16	144	176	103	22	71	224	167	87	11
1976	13	137	174	100	20	63	216	166	87	10
1977	10	126	158	105	18	52	205	155	86	11
1978	9	122	164	102	19	47	206	151	85	10
1979	8	118	169	108	18	43	205	160	79	10
1980	7	115	182	119	19	39	211	175	86	10
Indices (1950 = 100)										
1945	96	94	121	140	121	64	72	102	116	110
1951	103	103	100	100	91	98	106	103	104	87
1956	134	114	102	96	79	117	122	118	106	95
1961	208	134	110	99	82	138	127	107	113	89
1966	292	152	115	93	76	153	126	104	90	78
1971	371	176	117	94	65	176	134	103	94	66
1976	198	122	93	83	63	115	93	92	94	63
1980	116	102	98	99	58	71	91	97	93	61

Source: New Zealand Vital Statistics 1945-80; 1945-76 censuses; unpublished data supplied by the Department of Statistics.

- 1 Risk populations were obtained by linear interpolation between census age-specific proportions of the male and female populations never married (except that for 1976-80 linear extrapolation of the 1971-76 intercensal trend was used), the resultant proportions never married at mid-year being applied to annual estimated mean populations distributed by age and sex.
- 2 Calculations for 1945-47 assume that Maori marriages contracted in those years followed the same distributions by age and previous marital status of bride and groom as Maori marriages for the entire period 1948-51. After 1951, no distinction was made between Maori and non-Maori marriages.

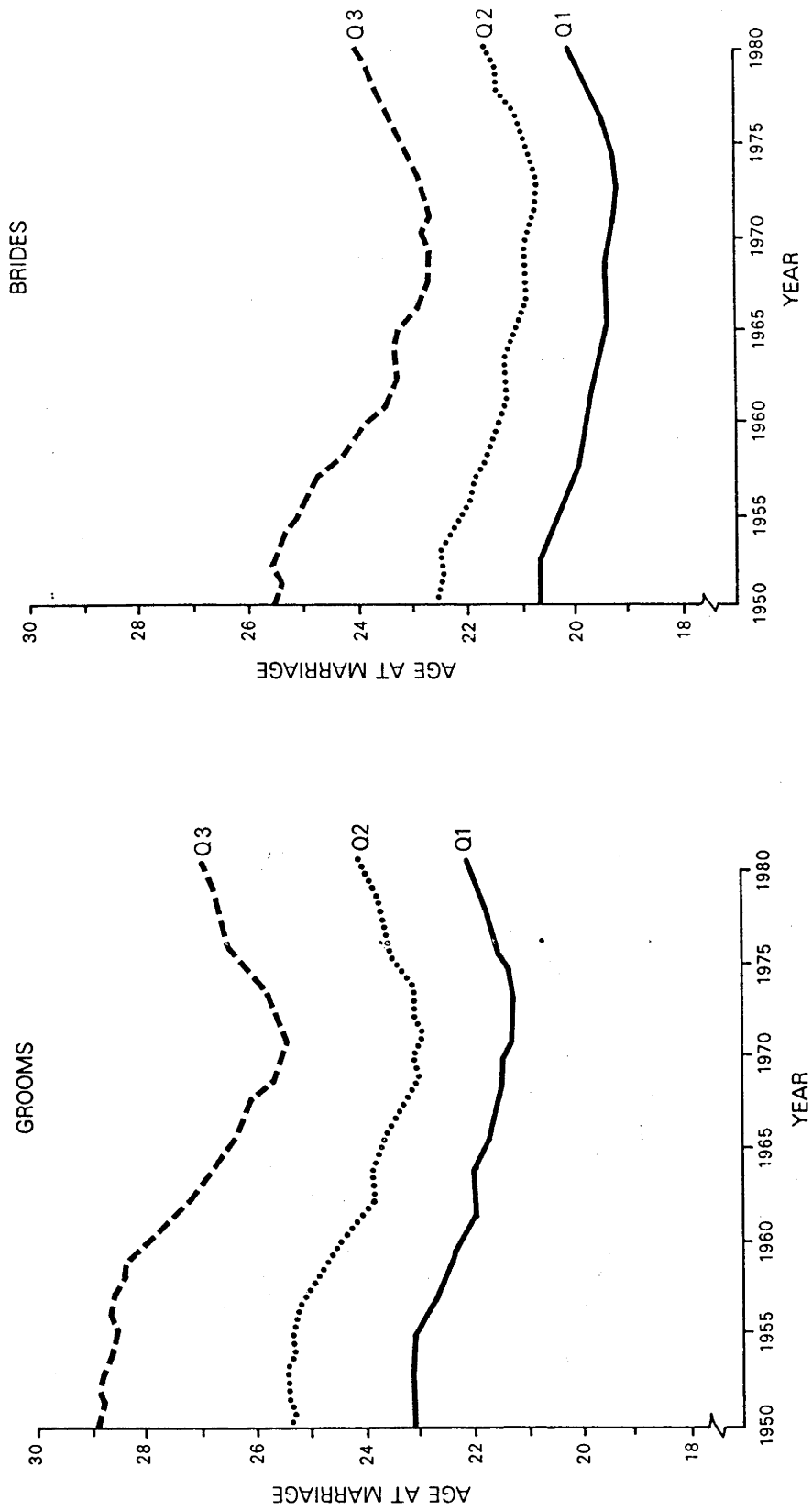
female first marriage rate at ages 20-24 occurred during 1948-55. At ages 16-19 the female rate rose more persistently throughout the 1950s and 1960s, although it stabilised temporarily around 1961-64 as baby boom cohorts reached marriageable age, briefly distorting the age distribution of the population at risk.

The male first marriage rate at ages 25-29 rose steadily, if irregularly, through the 1950s and again during the mid-1960s, while the female rate rose during the early 1950s and thereafter declined, again somewhat irregularly. Since 1971, first marriage rates for both sexes have fallen appreciably at all ages below thirty. For females the declines have been so sharp that gains made during 1950-71 at ages 16-19 and 20-24 were cancelled out in six and four years respectively. By 1980, male first marriage rates at these ages remained higher than in 1950, but only marginally so.

It is clear that marriage took place at younger ages between the late 1940s and 1971. Subsequently both sexes have very definitely tended to delay marriage, if not to reject it altogether. Confirmation of these changing age patterns of first marriage is provided by Figure 6.1. This shows quartiles of the age distributions of bachelors and spinsters marrying in each year to have fallen during the 1950s and 1960s, and to have risen again during the 1970s. Figure 6.1 also suggests that as ages at first marriage declined they compressed into narrower ranges. For females the convergence of the first and third quartiles occurred mainly during the late 1950s. The narrowing of the inter-quartile range for males during the 1960s may, however, be partly an artifact of distortions introduced to the age distribution of bachelors as baby boom cohorts aged.

Figure 6.1

QUANTILES OF THE AGE DISTRIBUTION OF FIRST MARRIAGES BY SEX 1950-1980



Source: New Zealand Vital Statistics 1950-80.

Cohort Indices

Using cohort gross nuptiality tables it is possible to examine the marriage behaviour of birth cohorts. The earliest birth cohort for which a table can be constructed on a total population basis is that of 1932.

The trend toward marriage at younger ages during the first quarter century following the War is readily apparent from Table 6.3. [3] For males, persistent increases in numbers marrying per 1000 attaining marriageable age were recorded at ages 17-22 for birth cohorts of the 1930s, 1940s, and, at younger ages, the early 1950s. In partial compensation, marriages at ages twenty-five and above dropped off. Increments for females were concentrated in the age range 16-20 years, but were not as continuous as those for males. Upward momentum slackened off as the birth cohorts of the early 1940s passed through their late teens, but was re-established by the cohorts born later in that decade. This may stem from there having been two main groups of causes of the trend toward earlier marriage (see section 6.3). It may be that among female birth cohorts of the early 1940s one set of forces, having to do with the assertion of generational independence, had more or less run its course whilst the other, having to do with the pill's impact on couples' ability to

[3] Similar tables to Tables 6.3 and 6.4 were published by the Department of Statistics (1979). However, the method used to construct them is deficient in at least one respect. The tables are based on probabilities that a never married person aged x years at the beginning of year y married during year y . Some marriages under these conditions take place at age $x+1$ (i.e. between exact ages $x+1$ and $x+2$), and yet the probabilities obtained are represented as probabilities of marrying at age x . What should have been derived were probabilities that a never married person attaining exact age x during year y married before his or her next birthday.

Table 6.3

NUMBER OF FIRST MARRIAGES AT EACH AGE PER 1000 PERSONS ATTAINING
EXACT AGE 16: 1932-1963 BIRTH COHORTS BY SEX

Birth Cohort	Age at First Marriage																			
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
Males																				
1932	0	2	6	19	36	91	113	124	111	94	75	58	45	35	25	19	15	12	10	7
1933	0	1	7	17	37	94	115	125	112	97	75	57	42	32	25	19	14	14	9	6
1934	0	2	8	18	40	97	120	132	114	96	75	55	39	30	24	17	14	12	7	7
1935	0	2	8	20	43	100	124	131	117	95	70	51	39	30	22	16	14	10	8	7
1936	0	2	8	22	45	103	127	130	119	92	67	50	41	30	22	16	13	10	9	6
1937	0	2	9	25	48	108	131	135	114	88	65	50	38	29	22	15	12	10	8	6
1938	0	2	10	26	50	112	135	133	109	89	67	50	36	28	22	15	13	10	8	6
1939	0	3	12	28	50	118	135	127	107	89	67	50	37	27	22	15	13	9	7	6
1940	0	3	12	30	54	119	131	128	110	86	64	48	35	27	21	14	12	8	7	6
1941	0	3	13	31	59	117	130	131	112	85	62	47	33	29	19	14	11	9	6	6
1942	0	4	16	34	62	123	139	138	109	83	60	45	32	25	17	12	9	8	6	5
1943	0	4	17	36	62	121	141	133	103	80	60	46	32	23	17	14	10	8	6	5
1944	0	5	17	38	66	127	146	132	104	79	59	43	29	21	16	13	10	7	5	5
1945	0	5	18	40	72	132	148	132	102	78	55	38	26	21	15	13	10	7	6	
1946	0	5	19	41	74	133	146	131	96	76	50	37	26	21	16	13	11	8		
1947	0	6	22	44	77	142	148	128	93	72	47	36	27	20	16	13	11			
1948	1	6	23	44	81	147	149	119	88	65	46	37	28	21	18	15				
1949	1	7	22	46	86	152	143	111	82	63	48	35	27	23	21					
1950	1	6	24	48	95	147	132	100	77	63	48	36	30	25						
1951	1	7	26	52	103	137	121	94	76	61	49	40	33							
1952	1	8	27	55	102	126	112	91	76	62	52	45								
1953	1	8	27	53	96	113	106	92	80	68	58									
1954	1	9	26	48	86	102	103	93	85	74										
1955	1	8	27	50	75	93	98	96	91											
1956	1	8	20	37	67	89	100	100												
1957	1	6	16	31	60	85	100													
1958	1	5	12	27	56	83														
1959	1	3	10	25	52															
1960	0	3	9	22																
1961	0	2	8																	
1962	0	2																		
1963	0																			
Females																				
1932	10	28	65	102	125	183	132	94	65	43	31	20	14	12	8	7	5	4	3	3
1933	10	28	66	105	134	192	129	88	60	39	31	19	13	11	8	6	5	3	4	3
1934	10	30	67	110	142	191	124	85	57	39	29	19	14	11	8	6	5	3	3	3
1935	11	32	66	114	145	185	125	81	57	41	28	18	13	11	8	6	5	4	3	3
1936	12	34	71	119	144	185	121	79	54	41	26	18	14	10	7	6	5	3	3	3
1937	13	35	76	120	148	182	118	79	49	37	27	18	14	10	8	6	5	3	4	3
1938	14	37	78	124	152	177	115	76	50	37	27	18	14	10	7	6	5	4	3	3
1939	13	39	79	129	154	181	111	72	50	38	24	18	13	10	7	5	5	4	3	3
1940	14	38	76	123	155	181	112	75	55	35	24	16	12	10	8	6	5	4	4	3
1941	15	37	75	124	156	175	114	78	57	33	25	16	12	10	8	6	5	4	3	2
1942	16	41	85	129	155	177	113	75	49	32	23	16	12	9	7	5	4	4	3	2
1943	17	44	89	126	148	173	110	71	47	35	25	18	13	10	8	6	5	4	3	3
1944	19	48	89	128	151	168	106	69	46	38	25	18	12	10	7	6	4	4	3	3
1945	21	50	85	130	154	164	105	71	48	37	23	18	13	10	7	6	4	4	3	3
1946	19	48	85	132	154	160	104	73	52	35	23	18	13	10	7	6	4	3		
1947	20	47	89	136	157	162	103	71	50	31	22	16	13	9	7	6	4			
1948	21	50	93	139	158	160	100	68	46	31	22	16	13	9	8	6				
1949	23	52	96	143	162	157	92	63	43	31	23	16	12	9	8					
1950	23	51	96	147	170	143	83	58	42	31	24	17	13	11						
1951	22	53	98	150	172	129	77	58	42	32	25	19	15							
1952	23	55	105	150	162	117	76	59	42	33	26	20								
1953	24	60	109	148	148	109	79	59	47	35	31									
1954	25	60	106	140	137	105	79	62	52	41										
1955	27	55	98	128	129	103	83	69	57											
1956	26	49	87	119	126	107	93	78												
1957	23	42	76	110	123	114	99													
1958	19	36	69	100	123	118														
1959	15	28	61	95	127															
1960	11	23	55	93																
1961	8	20	49																	
1962	6	16																		
1963	5																			

Source: New Zealand Vital Statistics 1948-80; 1945-76 censuses; unpublished data supplied by the Department of Statistics.

delay the first birth, had not yet become firmly established.

Cumulative marriage intensities (Table 6.4) show the increase in early marriage even more clearly than do age-specific intensities. Whereas 26.7 percent of males born in 1932 married before their twenty-third birthdays, 45.7 percent of those born in 1949 did. Similarly, 32.9 percent of females born in 1932 married before age twenty-one compared to 49.6 percent of those born in 1951. There is some suggestion here that the trend toward earlier marriage was stronger among males. This ties in with the fact that earlier marriage was accompanied by a marked narrowing of the age difference between brides and grooms, especially during the 1960s (Table 6.5). The trend toward earlier marriage affected cohorts born before 1932 as well as those born after (Figure 6.2). It could be argued that the marriage boom began with the passing of the Depression, which, it will be recalled from Chapter 2, followed the less than prosperous 1920s in New Zealand. World War 2 naturally interrupted the trend, and it is interesting that wartime disruptions to first marriage patterns left a more lasting impression on cohorts than at the prime ages for marriage than did the disruptions during the Depression. Probably war disabilities made some men permanently unattractive as marriage partners, while some women whose intended spouses were killed may have decided not to marry.

Figure 6.2 indicates that, for females, the trend toward earlier marriage was a phenomenon of distinct phases. For female birth cohorts born between 1910 and the early 1930s the main tendency was for relatively more first marriages to take place at ages 20-24 and relatively fewer at ages 25-29. For cohorts born between the

Table 6.4

CUMULATIVE NUMBER OF FIRST MARRIAGES AT OR BELOW EACH AGE PER 1000
PERSONS ATTAINING EXACT AGE 16: 1932-1963 BIRTH COHORTS BY SEX

Birth Cohort	Age at First Marriage																
	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	35	40
Males																	
1932	0	2	8	27	63	154	267	391	502	596	671	729	774	809	834	897	920
1933	0	1	8	26	63	158	272	397	510	607	682	739	781	814	839	901	923
1934	0	2	10	28	68	165	285	417	531	627	702	757	795	826	850	908	928
1935	0	2	10	30	73	173	297	429	546	640	711	761	801	830	853	908	926
1936	0	2	11	33	78	180	307	437	556	648	715	765	805	836	858	912	929
1937	0	3	12	36	85	192	323	458	573	661	726	776	814	843	865	916	933
1938	0	3	13	39	88	200	335	468	576	666	732	782	818	846	868	920	936
1939	0	3	15	43	93	212	347	474	581	670	737	787	824	851	873	923	938
1940	0	3	16	45	99	218	349	477	587	672	737	784	820	847	868	916	
1941	0	4	17	48	106	224	354	485	597	682	744	792	825	853	872	918	
1942	0	4	20	54	117	239	378	516	625	708	768	813	845	870	886	926	
1943	0	5	22	58	120	241	382	514	617	697	757	803	835	858	875	918	
1944	0	6	23	61	127	254	400	532	636	715	774	816	845	865	882	922	
1945	0	5	23	63	135	267	415	546	648	726	781	819	845	866	882		
1946	0	5	24	65	139	272	418	549	646	722	771	808	835	856	872		
1947	0	6	28	71	148	290	437	565	658	730	777	813	840	860	876		
1948	1	7	30	74	155	302	451	570	658	723	770	806	834	855	874		
1949	1	8	30	76	162	314	457	568	650	713	761	796	824	847	867		
1950	1	7	31	79	175	322	454	554	631	694	741	777	807	832			
1951	1	8	33	86	188	325	446	540	615	676	725	764	798				
1952	1	8	35	91	193	319	430	522	598	660	712	757					
1953	1	9	37	89	186	299	405	497	577	645	703						
1954	1	10	36	84	170	272	376	469	554	628							
1955	1	10	37	87	162	255	353	448	539								
1956	1	9	29	66	133	222	323	423									
1957	1	7	23	54	114	199	299										
1958	1	6	18	45	100	183											
1959	1	4	14	40	91												
1960	0	3	12	34													
1961	0	3	11														
1962	0	2															
1963	0																
Females																	
1932	10	38	103	205	329	512	644	738	803	846	877	897	912	923	931	954	961
1933	10	38	104	209	343	536	665	753	814	853	884	903	916	927	935	956	964
1934	10	40	107	217	359	550	673	758	815	854	883	902	916	927	935	955	963
1935	11	43	109	224	368	553	678	759	816	856	884	902	915	926	934	954	962
1936	12	46	116	235	379	564	686	765	819	860	885	903	917	927	934	954	962
1937	13	48	125	245	393	575	693	772	821	858	885	902	916	927	934	955	963
1938	14	50	128	252	404	581	695	771	821	858	886	904	918	928	936	956	964
1939	13	52	131	260	414	595	706	778	828	866	890	908	921	931	938	958	966
1940	14	51	128	251	406	586	698	773	828	862	886	902	914	924	932	954	
1941	15	52	127	251	407	582	696	775	831	865	889	905	917	927	934	954	
1942	16	57	142	272	426	603	716	791	841	873	896	913	925	934	941	959	
1943	17	60	149	275	423	596	706	777	824	860	885	903	916	927	935	955	
1944	19	67	156	284	435	603	710	778	825	862	888	906	918	928	936	956	
1945	21	71	156	286	440	603	708	779	828	865	888	906	920	929	936		
1946	19	67	152	284	438	598	702	775	827	861	884	902	915	925	933		
1947	20	68	157	293	450	612	715	785	835	866	889	905	918	927	935		
1948	21	71	164	303	461	621	721	789	834	865	888	904	917	925	933		
1949	23	75	171	314	476	633	724	787	830	861	884	900	912	921	929		
1950	23	74	170	317	488	631	714	772	814	846	870	887	900	911			
1951	22	75	174	324	496	626	703	760	802	835	859	878	893				
1952	23	79	184	334	496	613	690	749	791	824	850	870					
1953	24	84	194	341	490	598	677	736	783	819	850						
1954	25	85	191	330	467	572	651	714	766	807							
1955	27	81	180	308	437	540	623	692	749								
1956	26	75	162	281	407	514	607	685									
1957	23	65	142	252	374	488	587										
1958	19	55	123	224	347	465											
1959	15	43	104	199	326												
1960	11	34	89	181													
1961	8	28	77														
1962	6	23															
1963	5																

Source: New Zealand Vital Statistics 1948-80; 1945-76 censuses; unpublished data supplied by the Department of Statistics.

Table 6.5

PERCENTAGES OF BRIDES AGED 16-22 MARRYING GROOMS FOUR OR MORE YEARS
 OLDER THAN THEMSELVES: SELECTED MARRIAGE COHORTS 1953-1971

Marriage Cohort	Bride's Age at Marriage						
	16	17	18	19	20	21	22
1953	78.4	70.1	65.6	55.8	47.6	44.6	35.4
1956	69.0	67.8	63.1	56.4	48.1	42.8	35.8
1959	65.7	59.5	53.5	50.1	45.5	40.1	36.0
1962	59.4	56.7	49.7	43.2	38.8	33.6	32.7
1965	54.9	46.6	46.2	44.6	36.4	34.1	27.1
1968	46.7	42.9	38.4	36.1	30.5	29.7	28.8
1971	46.3	38.8	36.1	32.0	28.2	24.8	26.4

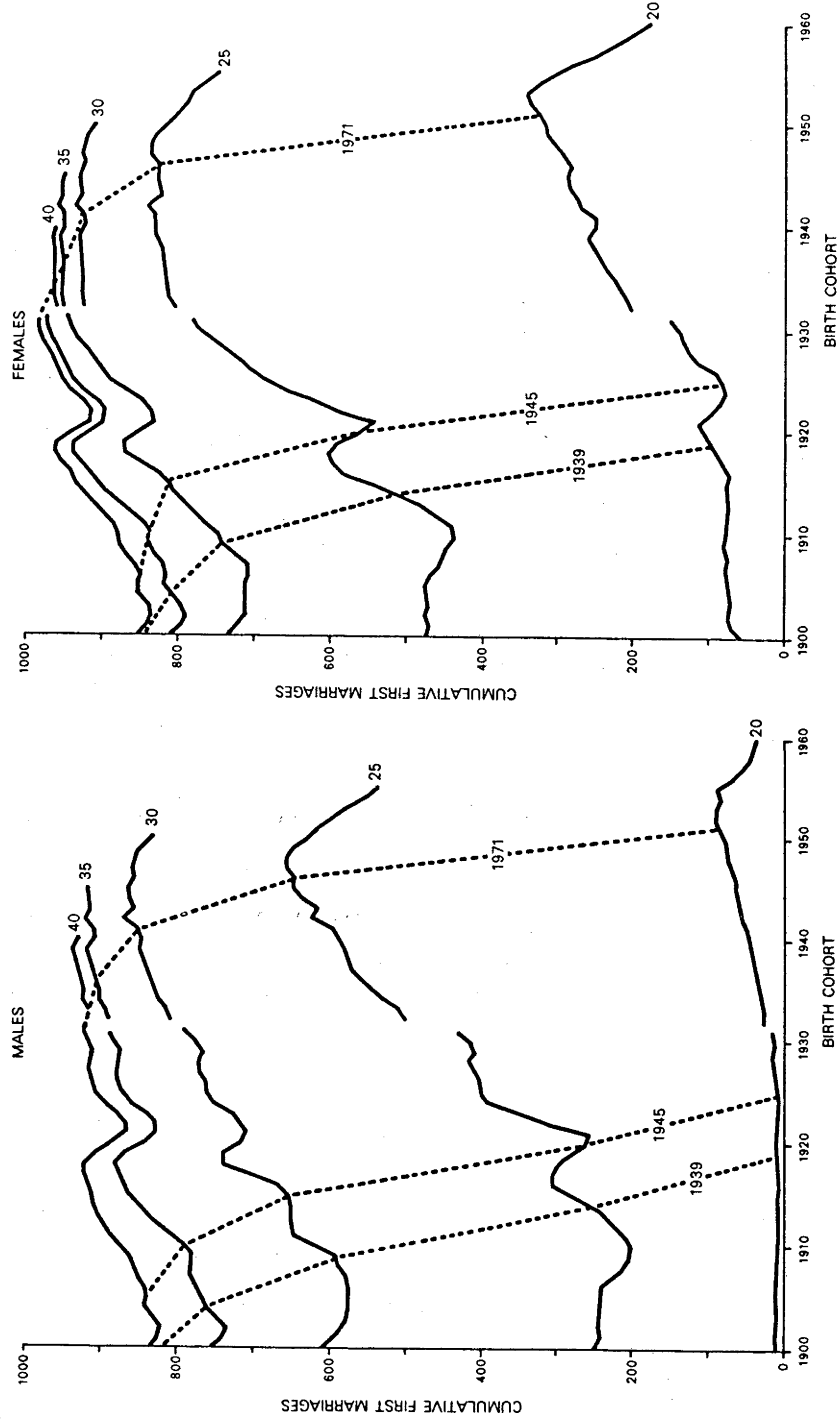
Source: Department of Statistics (1979: Table 6).

mid-1930s and the late 1940s there was little change in the likelihood of marrying before age twenty-five, but a marked increase in the probability of marrying before age twenty. The picture for males is dominated by the replacement of the 25-29 age group by the 20-24 age group as the one within which most first marriages occur.

Recent declines in cohort age-specific and cumulative first marriage intensities have essentially been period phenomena (Figure 6.2). Different cohorts were affected at different ages from about the same point in time. Increases in female first marriage levels at ages 16-20 between the 1932 birth cohort and birth cohorts of the early to mid-1950s were cancelled out in six years (Table 6.3). Declines in male first marriage intensities at younger ages have been equally spectacular, and in but seven or eight years both male and

Figure 6.2

CUMULATIVE NUMBERS OF FIRST MARRIAGES BELOW SELECTED EXACT AGES PER 1000 PERSONS ATTAINING AGE 16 BY SEX: NON-MAORI
(1900-1931) AND TOTAL POPULATION (1932-1960) BIRTH COHORTS



Source: Jain (1972: 285-286); New Zealand Vital Statistics 1948-80; 1945-76 censuses; unpublished data supplied by the Department of Statistics.

female cumulative first marriage levels to ages 21-22 have fallen by some hundred and fifty marriages per 1000 persons attaining marriageable age (Table 6.4).

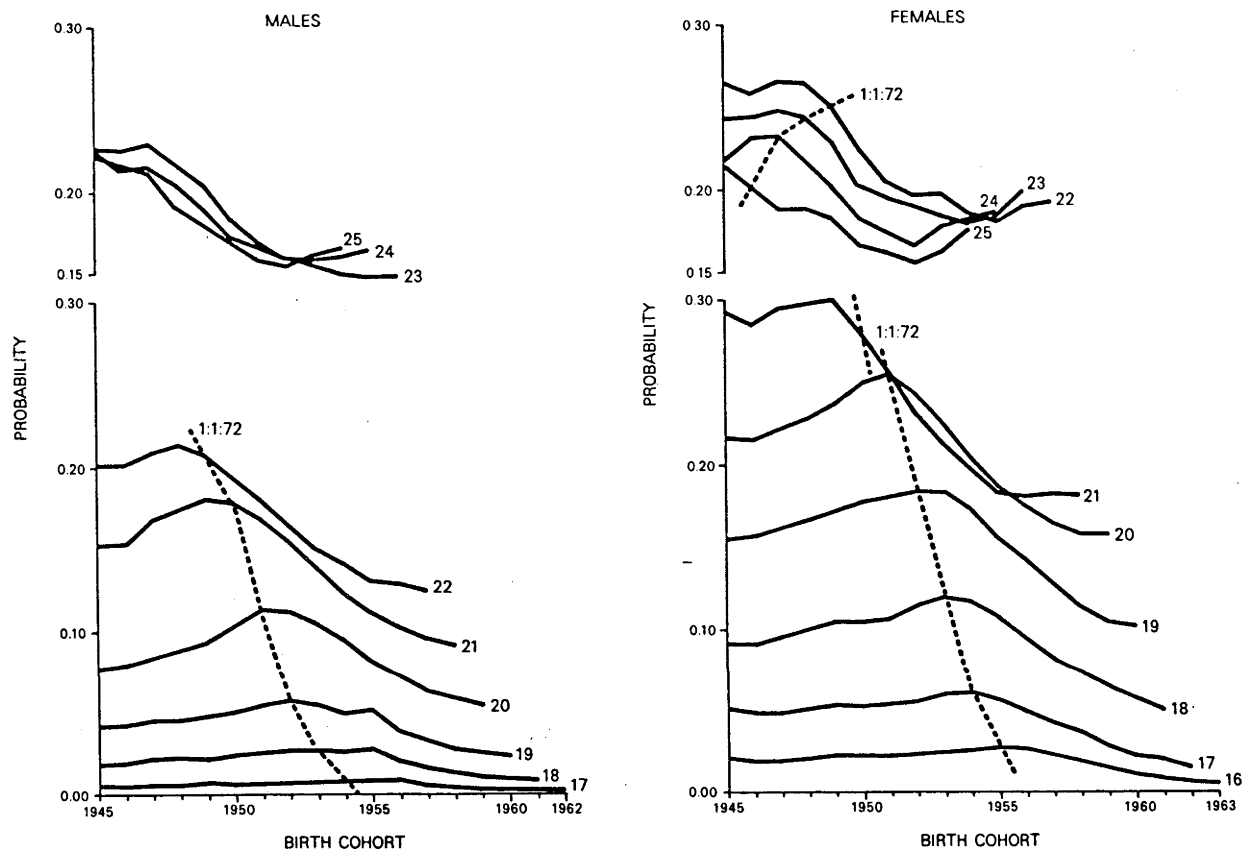
Figure 6.3 allows the timing of the reversal of the downward trend in age at first marriage to be examined more closely. The pattern for females is clearcut at ages twenty and under. Without exception first marriage probabilities declined in 1972, and have continued to do so since. At ages 21-25 declines in most cases began a year earlier, as they did for males at these ages. Male first marriage probabilities at ages nineteen and twenty have basically fallen since 1972, but at younger ages the first decisive drops did not come until 1974. More recently, first marriage probabilities have begun to rise again at ages 22-25 for females and 24-25 for males. Apparently some first marriages which did not take place at younger ages earlier in the 1970s began to be caught up toward the end of the decade. Table 6.3 also attests to this deferment of marriage. The most recent cohorts to reach ages from twenty-two upward (males) and from twenty upward (females) have begun to marry in greater numbers at those ages again. However, as yet cumulative marriage intensities for cohorts of prime marrying age during the 1970s continue to trend downward (Table 6.4). The extent to which these cohorts have delayed, as opposed to rejected, formal marriage therefore remains uncertain.

6.3 EXPLANATIONS FOR THE MARRIAGE BOOM

What Others Have Said

The post-war marriage boom took demographers, who expected it to be a temporary phenomenon, by surprise. As it persisted relatively

Figure 6.3
AGE-SPECIFIC PROBABILITIES OF FIRST MARRIAGE BY
SEX: 1945-1953 BIRTH COHORTS



Source: New Zealand Vital Statistics 1961-80; 1961-76 censuses; unpublished data supplied by the Department of Statistics.

little attention was paid to its causes, it tending to be taken for granted that post-war economic prosperity lay behind it. However, this simple view failed to grasp that the War had really interrupted a trend toward earlier marriage which originated well before it broke out (McDonald, 1974).

In a recent review of the Australian experience, Caldwell et al (1981) argue that the post-war marriage boom was part of a longer run trend dating from the 1920s which saw a progressive substitution of

marital fertility control for nuptiality control. This was facilitated by a contraceptive revolution based not on technological advance, but on growing acceptance of existing methods. Earlier, McDonald (1974) had suggested that the temporary events of World War 2 accounted for the rapidity of declines in age at marriage which occurred in Australia during 1945-55. Caldwell et al (1981) also attach significance to development of 'the feminine mystique'; the idea that a woman's fulfilment existed in her being a healthy, attractive, educated wife and mother, which Friedan (1963: 16) contends became 'the cherished and self-perpetuating core' of American culture during the late 1940s and the 1950s.

Of the studies of the post-war marriage boom in New Zealand, that of Jain (1972) offers regrettably little in the way of interpretation or explanation. The most recent analysis (Department of Statistics, 1978, 1979) places heavy emphasis on the concept of a 'marriage squeeze' affecting females. According to this argument, spinsters of prime marrying age for some years following the War faced an under-supply of potential mates, and hence a very competitive marriage market. One problem with this explanation is that it is generally supposed that a tight marriage market for one sex tends to delay marriage for that sex (Akers, 1967; Carter and Glick, 1976; Frieden, 1974), and yet females married younger.

But quite apart from this issue, the notion of a marriage squeeze affecting females is not sustained by the evidence. Rather, quite the reverse situation obtained during much of the period when male and female ages at first marriage were falling. As evidence for a tight female marriage market the Department of Statistics presents ratios of

the sizes of the female birth cohorts of 1938-61 to male cohorts born two, three, and four years previously. It also claims that the narrowing of the age difference between brides and grooms (Table 6.5) attests to a female marriage squeeze. But it makes little sense to compare the sizes of cohorts at birth knowing that immigration was a significant factor in New Zealand's population growth from the late 1940s until the mid-1960s (Farmer, 1979). The Department acknowledges this immigration factor, but bluntly asserts that it 'would not have completely eliminated' female overrepresentation in the marriage market. As to the narrowing of the age difference between brides and grooms, there are perfectly plausible social explanations. [4]

The measurement of marriage squeezes is a complex problem (Muhsam, 1974; Goldman and Westoff, 1982; Schoen, 1982). The most common practice has been to compute ratios of the number of marriageable males to marriageable females at the prime marrying ages. In this type of exercise, the specification of the 'prime marrying ages' for each sex is crucial. Because those eligible to marry are concentrated heavily at younger ages within any seemingly reasonable age range, ratios are highly sensitive to the lower limits of the ranges chosen for each sex. As a general rule, the probabilities of marriage at lower limit ages should be as nearly equal as possible. [5] The other point which needs to be appreciated is that the prime marrying ages may change through time.

[4] For example, rejection of the notion that a man should be well established in a career before marrying; a greater tendency, given reduced parental control over dating behaviour and longer formal schooling, for the sexes to interact socially with those about their own age; and the likelihood of more and earlier premarital sexual experimentation leading to forced marriages where the groom was relatively young and little, if any, older than the bride.

The strategy adopted here was to identify for each sex in each year the ten-year age range within which the largest proportion of first marriages occurred. Over the period 1945-67 this age range shifted from 21-30 through 20-29 to 19-28 years for males, and from 18-27 through 17-26 to 16-25 years for females, the transitions coinciding to within a year for the two sexes (Table 6.6). On the strength of this pattern three sets of ratios of bachelors per 100 spinsters were calculated (Table 6.6). The ratio of bachelors aged 21-30 to spinsters aged 18-27 would seem the most appropriate during 1945-53, the ratio of bachelors aged 20-29 to spinsters aged 17-26 during 1954-61, and the ratio of bachelors aged 19-28 to spinsters aged 16-25 during 1962-67. Table 6.6 thus indicates that males faced an increasingly tight marriage market through the late 1940s and into the mid-1950s. By the late 1950s an approximate equilibrium had been restored, and by the mid-1960s females appeared to face a marriage squeeze. One further point should be noted, though. For each of the ratios computed, the percentage of male first marriages falling within the nominated age range was always lower than the percentage of female first marriages doing so (Table 6.6). Were the male age ranges to be extended so that these percentages were more nearly equal, the male marriage squeeze during the 1950s would appear even more severe, while the female squeeze during the 1960s would be less so, and might even disappear.

[5] Vosburgh (1973, 1978), for example, uses the ratio of single males aged 20-29 to single females aged 16-24 to establish a New Zealand marriage market that was roughly balanced during the first half of the 1950s, and deteriorated for females thereafter. It is an inappropriate index because a male is much more likely to marry at age twenty than is a female at age sixteen. Had Vosburgh fixed the male age range at 19-28 or the female range at 17-25 (or even 17-26) she would have obtained a very different picture.

Table 6.6

1

SELECTED MEASURES OF THE STATE OF THE NEW ZEALAND MARRIAGE MARKET 1945-1967

Year	Percentage of Bachelors Marrying at Ages			Percentage of Spinsters Marrying at Ages			Bachelors Aged 19-28 per 100 Spinsters Aged 16-25		Bachelors Aged 20-29 per 100 Spinsters Aged 17-26		Bachelors Aged 21-30 per 100 Spinsters Aged 18-27	
	19-28	20-29	21-30	16-25	17-26	18-27	19-28 per 100	Spinsters Aged 16-25	20-29 per 100	Spinsters Aged 17-26	21-30 per 100	Spinsters Aged 18-27
1945	63.7	68.4	70.0	68.8	73.8	76.9	99.1	99.1	99.1	99.1	99.3	99.3
1946	67.9	72.4	74.2	72.3	77.3	79.6	98.7	98.7	99.7	99.7	99.7	99.7
1947	70.0	73.5	75.2	74.9	79.1	80.9	103.5	103.5	102.1	102.1	101.5	101.5
1948	71.1	74.2	74.9	74.6	78.9	80.2	107.2	107.2	105.8	105.8	104.7	104.7
1949	71.8	75.1	75.9	75.7	79.3	80.5	110.2	110.2	110.5	110.5	109.4	109.4
1950	74.5	77.4	77.6	77.0	80.3	81.5	113.6	113.6	114.7	114.7	115.8	115.8
1951	75.6	78.3	78.5	77.8	80.8	81.8	115.6	115.6	118.6	118.6	120.7	120.7
1952	75.2	77.6	77.7	77.2	80.2	81.0	117.8	117.8	122.8	122.8	127.3	127.3
1953	75.4	78.4	78.4	77.6	80.7	81.0	117.9	117.9	123.7	123.7	130.3	130.3
1954	76.2	78.7	78.6	78.3	80.8	80.8	115.5	115.5	122.7	122.7	130.5	130.5
1955	76.3	78.8	78.7	79.2	81.6	81.2	112.0	112.0	120.0	120.0	129.4	129.4
1956	76.0	78.4	77.8	80.0	82.2	81.3	107.3	107.3	116.4	116.4	126.8	126.8
1957	75.7	77.4	76.6	80.6	82.2	80.8	102.6	102.6	111.2	111.2	122.8	122.8
1958	76.1	77.4	76.0	82.3	83.5	81.7	99.4	99.4	105.2	105.2	116.0	116.0
1959	76.4	77.0	75.3	82.9	84.2	82.3	99.7	99.7	100.6	100.6	107.9	107.9
1960	77.2	77.5	75.2	84.3	85.2	82.8	99.1	99.1	100.7	100.7	102.3	102.3
1961	78.1	78.1	74.3	85.9	85.8	83.0	98.4	98.4	102.6	102.6	105.3	105.3
1962	79.2	78.6	74.6	86.9	87.1	83.1	93.5	93.5	100.4	100.4	105.9	105.9
1963	79.9	78.8	74.9	87.3	86.7	82.6	89.4	89.4	94.3	94.3	102.5	102.5
1964	80.7	79.2	74.9	87.9	87.7	83.3	87.4	87.4	89.2	89.2	95.1	95.1
1965	81.7	79.7	74.6	89.0	88.6	84.1	88.3	88.3	87.0	87.0	89.3	89.3
1966	82.6	79.9	73.8	89.5	88.8	84.5	89.9	89.9	87.9	87.9	86.9	86.9
1967	83.8	80.4	73.5	89.6	89.4	85.2	89.6	89.6	88.0	88.0	86.2	86.2

Source: New Zealand Vital Statistics, 1945-67; Jain (1973).

1 Percentages of bachelors and spinsters marrying at specified ages are total population figures, while ratios of bachelors per 100 spinsters are derived from Jain's (1973) non-Maori population estimates by age, sex, and marital status.

Vosburgh's (1971, 1973, 1978) study of New Zealand marriage trends only covers the period to the mid-1960s, but drawing on the ideas of Hajnal (1965) and Davis and Blake (1962) she sees trends during the post-war period as the product of changing social and economic conditions. Increased employment among married women was the crucial factor, because it undermined the idea that a man should make independent economic provision for a family before marrying. It became more acceptable to marry with few possessions and to work jointly toward acquiring more before having a first child. Vosburgh goes on to argue that the trend toward earlier marriage was self-reinforcing through peer group pressure, that improved marital contraception enabled couples to plan marriage on the basis of two incomes with some confidence, and that during the 1950s a rising level of premarital pregnancy tended to increase the frequency of marriage at younger ages. Counteracting these forces to some extent was a housing shortage which was not really overcome until the 1960s.

An Alternative Perspective: The 1940s and 1950s

In pondering reasons for the trend toward earlier marriage in New Zealand during the first quarter century post-war, it is well to recognise that it began in the middle and late 1930s (Figure 6.2). Without doubt the hardships of the Depression, following a decade during which economic conditions were not exactly favourable to marriage, began to undermine the concept of a 'proper time' to marry. World War 2 convinced the young even more that life was not predictable enough to warrant their attaching the significance to economic preparedness for marriage that their parents and grandparents had. The traditional prescription had been especially severe on

males, who had to be able to support a wife and family at a respectable level. It is entirely consistent with the rejection of this prescription that declines in age at first marriage should have been accompanied by a marked narrowing of the age difference between brides and grooms (Table 6.5).

Self-perceived readiness for marriage became the main determinant of age at marriage for both sexes. That it did undoubtedly owes much to the new independence which young people derived from World War 2. The crucial role they played in winning the War, the experience of getting away from home, and the realisation that life was not as predictable as they had been told convinced them that they could make their own decisions in life, and a grateful older generation was in no position to resist their demands for self-determination (Caldwell, 1980a).

Post-war economic prosperity provided an ideal environment within which to assert this new independence. Despite substantial immigration, the combined effect of war losses, the entry into the labour market of small depression cohorts, and an expanding economy created a situation of overfull employment (Carmichael, 1979b). Jobs were secure, and a general air of optimism prevailed. Certainly the building industry struggled for a while to satisfy the demand for housing created by changing marriage and fertility patterns and immigration. This is attested to by deficiencies in the planning of post-war suburban expansion around New Zealand's major cities, which Franklin (1978) attributes to the rapidity with which that expansion took place. But successive post-war governments saw housing as an area of prime electoral significance, so that cheap first mortgage

finance was generally readily available to first home buyers.

There is little doubt either that the familistic forces described by Friedan (1963) operated in New Zealand during the 1950s as they did in the United States, Australia, and elsewhere. Vosburgh (1971, 1978) alludes to them when discussing the self-perpetuating quality of the downward trend in the female age at first marriage. Marriage, a family, and a home were the goals of most young women, and considerable pressure was exerted by the media, schools, church and community leaders, and peers to pursue them.

There are no data for New Zealand comparable to those for Melbourne, Australia which enabled Caldwell and Ware (1973) and Young and Ware (1979) to show that among wives in their mid-twenties, forty-five percent practised birth control in 1935-39 and seventy percent in 1945-49. However, broad similarity in the demographic histories of the two countries since 1900 makes it likely that New Zealand data would yield a similar finding. That there was considerable agitation in New Zealand by the mid-1930s for marital contraception to be de-stigmatised is clear from the McMillan Report of 1937. This acknowledged a widespread tendency to denounce the virtues of large families in favour of the greater material benefits which could be offered to children in smaller ones. It concluded that:

... whether the motives be worthy or selfish, women of all classes are demanding the right to decide how many children they will have. Methods which depend on self-control are ruled out as impracticable. Contraceptives are largely used, and, judging by the marked decline in the birth-rate in recent years, are in many cases successful. (McMillan et al, 1937: 11)

The Australian data suggest that a major increase in the practice of

contraception within marriage occurred during and immediately following the War itself. If this was also the New Zealand experience, couples who married in the 1950s were perhaps the first to take for granted their right and ability to limit the number of children they had. Feeling that one could stop having children when desired may have been partly responsible for earlier marriages.

The argument that the post-war decline in female age at first marriage stemmed from a marriage squeeze affecting that sex has been shown to be not sustainable. However, the severe marriage squeeze which males faced during the 1950s (Table 6.6) could well have been an important factor in causing females to marry earlier. Few single women in their late teens and early twenties would have lacked suitors during this period, especially as males had broken free from constraints which had previously caused them to marry late. Indeed, it is not unreasonable to suggest that many females married early because males were looking to marry younger at a time when prospective wives were in short supply. The courtship system remained one in which men 'made the play', so it is perhaps appropriate to think of the forces which Friedan (1963) describes more in terms of the willingness of women to accept proposals of marriage than in terms of their actively seeking to snare husbands at the earliest opportunity.

Finally, the role of increased premarital pregnancy in lowering age at first marriage during the 1950s must be considered. The 1950s were characterised in Chapter 4 as a decade during which the morality based on female premarital chastity began to be undermined by more frequent initiation of coitus during engagement. It is impossible to assess numerically the impact of this trend on female age at first

marriage, because one can only guess how much later premaritally pregnant brides would have married had pregnancy not occurred. But it is nonetheless certain that, for both sexes, earlier marriage resulted partly from changing standards of premarital sexual behaviour.

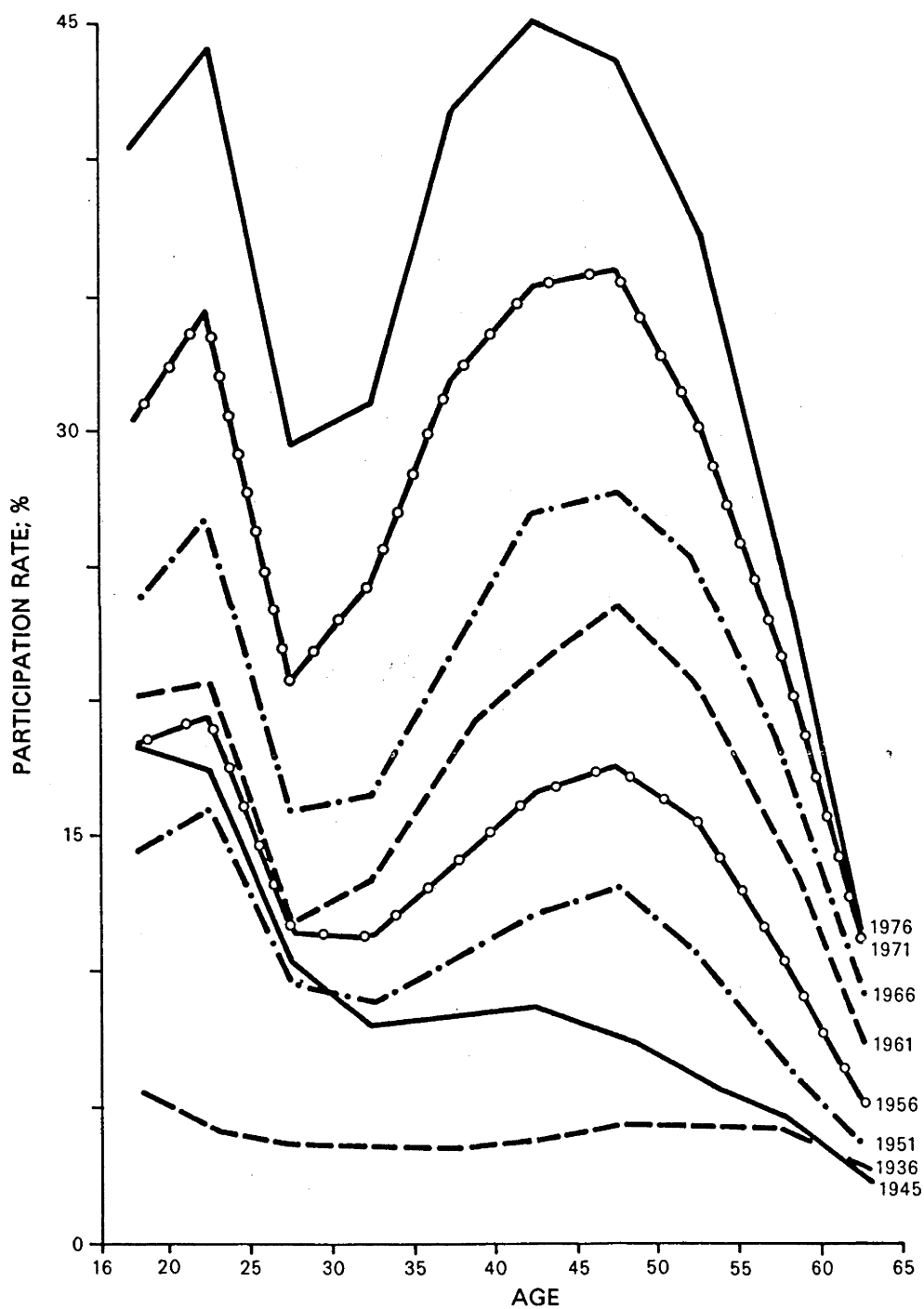
An Alternative Perspective: The 1960s

Vosburgh (1971, 1973, 1978) credits a trend toward wives continuing to work for a period following marriage with being the key to the destruction of the concept of a 'proper time' to marry in New Zealand. However, she overemphasises the importance of this factor in explaining marriage trends through the late 1940s and the 1950s. It becomes much more crucial when considering why the decline in age at first marriage continued through the 1960s. There is no doubt that World War 2 helped legitimise the employment of women between marriage and first confinement. But during 1945-61 it was mainly the practice of returning to the work force when one's youngest child attained school age that became more common (Figure 6.4). As in Australia (Ruzicka and Choi, 1981), substantial lengthening of the first birth interval did not occur until after the pill became available in 1961.

Support for this contention is provided by an analysis of the distributions of successive female marriage cohorts by marriage duration at first nuptial confinement (Ruzicka, 1976a). Data showing annual distributions of first nuptial confinements by age of mother and duration of marriage are not available for New Zealand for marriage durations beyond the first year. However, marginal totals for this cross-tabulation are published, and satisfactory input data were obtained by assuming that nuptial first confinements at marriage

Figure 6.4

AGE-SPECIFIC LABOUR FORCE PARTICIPATION RATES FOR MARRIED
 1
 FEMALES 1936-1976



Source: 1936-76 censuses.

1 Trend lines for 1936 and 1945 relate to non-Maoris only.

durations one year and over for mothers aged x years followed the same distribution by single years of marriage duration as in Australia in the same year, then iterating to adjust cell frequencies to conform with both sets of marginal totals.

A second problem was that these data pertained to the non-Maori population until 1961, and to the total population thereafter. This dictated that computed marriage duration-specific percentages of brides confined nuptially for the first time were variously percentages for non-Maori brides, all brides, and weighted averages of the two within individual marriage cohorts. [6] Finally, it needs to be kept in mind that the sizes of marriage cohorts are not adjusted for subsequent mortality and migration, whereas numbers of nuptial confinements at a given marriage duration effectively are. Other things being equal, this affects the accuracy of percentages to an increasing extent as marriage duration increases, and may give rise to cumulative percentages which exceed one hundred.

Despite these drawbacks, the results presented in Tables 6.7 and 6.8 are unequivocal. As was shown in Chapter 2, confinement within the first eight months of marriage became increasingly common through the 1950s and on into the early 1960s. It began to become less common again later in that decade, this trend accelerating after 1970 (Table 6.7). Percentages of brides first confined at longer marriage durations, and especially durations up to two years, remained

[6] Fortunately this does not seem to have introduced many untoward discontinuities into the results. Transitions across the diagonals marked on Tables 6.7 and 6.8 are reasonably smooth, but the change to a total population basis of calculation may have had some impact on the 1960-62 trend for brides marrying at ages 16-19 and experiencing a confinement within the first year of marriage (Figure 6.6).

Table 6.7

PERCENTAGES OF ALL BRIDES AGED 16-39 WHO HAD FIRST NUPTIAL CONFINEMENTS
 AT SPECIFIED MARRIAGE DURATIONS: 1951-1977 MARRIAGE COHORTS¹

Marriage Cohort	Marriage Duration in Completed Months or Years						
	0-7 Months	8-11 Months	1 Year	2 Years	3 Years	4 Years	5-9 Years
1951	14.7	21.4	28.3	10.6	5.4	3.0	4.8
1952	15.2	22.1	28.2	10.4	5.3	3.2	4.9
1953	15.5	22.5	28.0	10.1	5.2	3.1	4.6
1954	16.3	22.1	27.6	10.4	5.2	3.2	4.3
1955	16.9	22.6	26.9	10.3	5.3	3.0	4.0
1956	17.5	22.5	27.2	10.5	5.3	2.8	3.9
1957	18.4	22.8	27.4	10.3	4.9	2.6	3.6
1958	19.3	21.3	26.8	9.9	4.6	2.4	3.2
1959	20.3	21.0	26.5	10.1	4.7	2.5	3.5
1960	20.7	21.0	26.3	9.8	4.6	2.6	3.8
1961	23.1	20.7	25.9	10.0	4.8	2.7	3.7
1962	26.0	18.5	24.3	10.6	5.4	3.0	4.0
1963	27.1	16.6	23.2	11.4	6.2	3.3	4.3
1964	26.9	14.3	22.2	11.9	6.4	3.5	4.5
1965	27.5	12.7	21.4	12.5	7.0	3.8	4.7
1966	27.4	11.2	20.5	12.8	7.5	4.1	4.8
1967	27.1	10.0	20.0	13.1	7.8	4.5	5.2
1968	26.4	9.2	20.0	13.4	8.3	4.8	5.6
1969	25.4	8.1	20.5	13.8	8.5	5.0	
1970	25.1	7.9	20.0	13.2	8.4	5.1	
1971	24.5	7.3	17.9	12.6	8.4	5.1	
1972	22.0	6.3	16.7	12.5	8.3	5.5	
1973	19.1	6.0	16.1	11.9	8.4	5.8	
1974	17.4	6.2	15.5	11.7	8.7		
1975	15.3	6.0	15.0	11.1			
1976	13.7	5.7	14.0				
1977	13.7	5.6					

Source: New Zealand Vital Statistics 1951-78; Jain (1973).

- 1 Based on period data for the non-Maori population (including Jain's (1973) estimates of the sizes of non-Maori female marriage cohorts during 1951-61) until 1961, and for the total population thereafter. Figures lying above the marked diagonal pertain to non-Maori brides. For marriage durations 0-4 years, the figure immediately below the diagonal relates a combination of non-Maori and total population first nuptial confinements to a weighted average of the relevant non-Maori and total population female marriage cohorts. For marriage duration 5-9 years, the five figures below the diagonal are sums of single-year marriage duration percentages, some of which pertain to each of the non-Maori and total populations, and a combination of both. All other figures below the diagonal pertain to the total population.

Table 6.8

PERCENTAGES OF NON-PREGNANT BRIDES AGED 16-39 WHO HAD FIRST NUPTIAL
 CONFINEMENTS AT SPECIFIED MARRIAGE DURATIONS: 1951-1977

1

MARRIAGE COHORTS

Marriage Cohort	Marriage Duration in Completed Years					
	0	1	2	3	4	5-9
1951	25.1	33.1	12.5	6.3	3.6	5.6
1952	26.1	33.3	12.2	6.2	3.7	5.7
1953	26.7	33.2	11.9	6.1	3.6	5.5
1954	26.4	33.0	12.4	6.2	3.8	5.1
1955	27.2	32.3	12.4	6.3	3.7	4.8
1956	27.3	33.0	12.7	6.5	3.4	4.8
1957	27.9	33.5	12.6	6.0	3.2	4.4
1958	26.4	33.2	12.3	5.7	3.0	4.0
1959	26.3	33.2	12.7	5.9	3.2	4.4
1960	26.5	33.2	12.4	5.8	3.2	4.8
1961	27.0	33.7	13.0	6.3	3.6	4.8
1962	25.1	32.8	14.4	7.3	4.1	5.4
1963	22.8	31.8	15.6	8.5	4.5	5.6
1964	19.6	30.4	16.2	8.8	4.8	6.1
1965	17.5	29.5	17.2	9.6	5.3	6.4
1966	15.4	28.2	17.6	10.3	5.6	6.6
1967	13.6	27.4	17.9	10.6	6.2	7.2
1968	12.5	27.2	18.3	11.3	6.5	7.7
1969	10.9	27.4	18.5	11.3	6.7	
1970	10.6	26.7	17.6	11.2	6.8	
1971	9.6	23.7	16.8	11.2	6.7	
1972	8.1	21.5	16.0	10.6	7.1	
1973	7.4	19.9	14.8	10.4	7.1	
1974	7.5	18.7	14.2	10.5		
1975	7.1	17.7	13.2			
1976	6.6	16.2				
1977	6.5					

Source: New Zealand Vital Statistics 1951-78; Jain (1973).

1 Figures above and below the marked diagonal pertain variously to the non-Maori and total populations. See footnote 1 to Table 6.7 for details.

remarkably stable for the marriage cohorts of 1951-61. Percentages confined within 8-11 months of marriage then fell steeply through the 1960s, and continued to fall into the early 1970s. Confinement in the second year of marriage also declined for the marriage cohorts of 1960-66, and again for those of 1970-76. There were partly compensating increases in percentages confined at longer marriage durations over this period, although at duration two years this trend reversed for cohorts married after 1969.

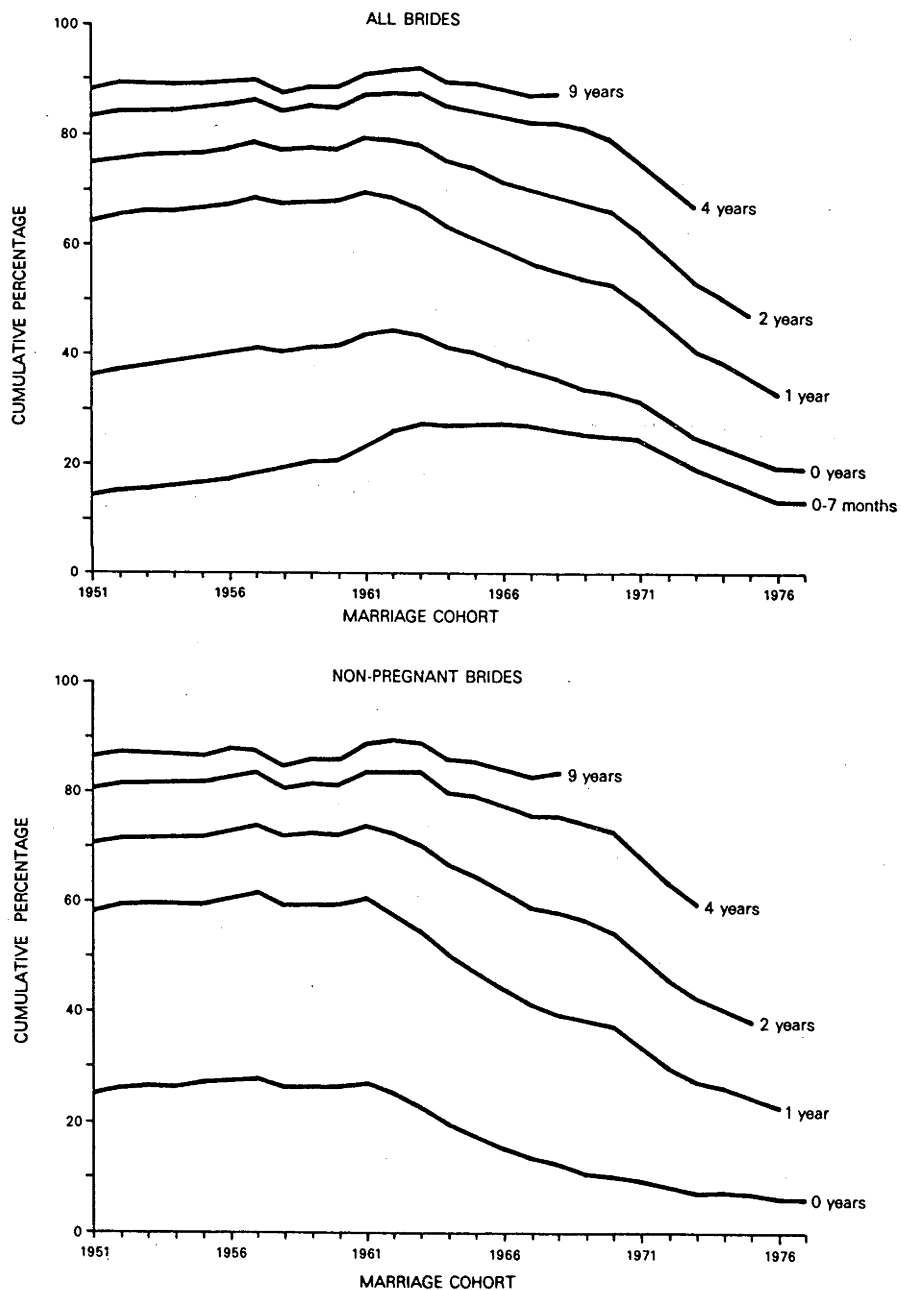
Table 6.8 shows first confinement patterns by marriage duration for brides who were not pregnant at marriage. Through the 1950s and up until 1961 over one-quarter of such brides bore a child within the first year, and a further one-third gave birth before their second wedding anniversary. For non-pregnant brides married in 1976, these figures had respectively fallen by more than seventy-five and fifty percent. Indeed, among those married in the 1970s, even the likelihoods of confinement during the third and fourth years of marriage dropped off.

In Figure 6.5 the data from Tables 6.7 and 6.8 are plotted cumulatively. The constant behaviour of non-pregnant brides of the 1950s is clear. However, between the 1961 and 1976 marriage cohorts confinement within two years dropped from sixty to under twenty-three percent, and between the 1961 and 1973 cohorts confinement within five years declined from eighty-three to sixty percent.

In Figure 6.6 the changes just described are refined by age at marriage. Although 16-19 year-old brides have consistently been the most likely both to be pregnant and to have a child within two years if not pregnant, they have displayed the same tendency to postpone the

Figure 6.5

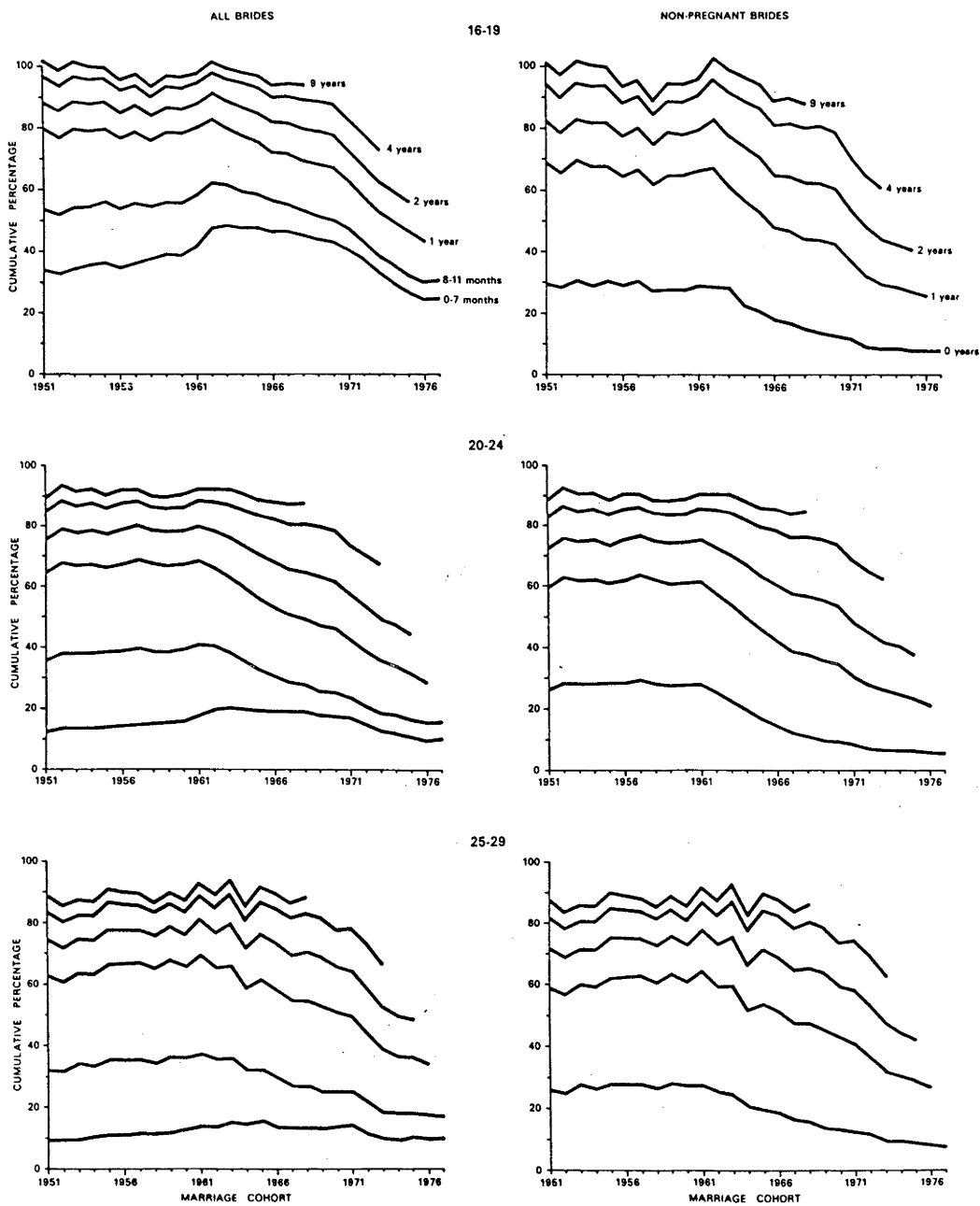
CUMULATIVE PERCENTAGES OF ALL AND NON-PREGNANT BRIDES AGED 16-39
 WHO HAD A FIRST NUPTIAL CONFINEMENT AT OR BELOW SPECIFIED
 MARRIAGE DURATIONS: 1951-1977 MARRIAGE COHORTS



Source: New Zealand Vital Statistics 1951-78; Jain (1973).

Figure 6.6

CUMULATIVE PERCENTAGES OF ALL AND NON-PREGNANT BRIDES WHO HAD A FIRST NUPTIAL CONFINEMENT AT OR BELOW SPECIFIED MARRIAGE DURATIONS BY AGE AT MARRIAGE: 1951-1977 MARRIAGE COHORTS



Source: New Zealand Vital Statistics 1951-78; Jain (1973).

first birth since 1961 that older brides have. For the 1961 marriage cohort over eighty percent of teenaged brides, and over sixty-five percent of those not pregnant, were mothers before they had been married two years. For the 1976 marriage cohort, these figures had dropped to less than forty-five percent and fractionally over twenty-five percent.

The timing of the trend toward deferring the first birth clearly implicates the introduction of the pill in its onset. This substantially reduced the risk of accidental conception early in marriage, when less reliable and less convenient methods could be expected to have especially high failure rates. Because of the arbitrary method by which premarital conceptions are distinguished from marital ones, the dramatic decline in confinements at marriage durations 8-11 months may also reflect lower conception rates associated with coitus in anticipation of marriage. The practice of starting to use the pill several weeks before marriage would have afforded greater protection in these circumstances.

From the perspective of trends in age at first marriage, oral contraception virtually assured couples that they could avoid having children until they chose to have them. The talk so far has been of deferment of the first nuptial birth, and there are sound reasons for interpreting the lengthening of the first birth interval in this way. [7] But it is also reasonable to suppose that part of this lengthening reflects, at least through the 1960s, the advancing of

[7] For example, the increased emphasis on tertiary education, the increased commitment of women to the work force, the rising cost of housing, and the growing importance attached to the quality of marital relationships.

marriage to facilitate regular sexual contact earlier. It is quite probable that for some couples, and especially some women, earlier marriage was a way of coping with the sexual revolution. Marriage was the obvious answer for those caught between parental and religious teaching concerning premarital chastity and peer group pressures to be sexually active.

The certainty with which the pill enabled couples to plan a two-income start to married life doubtless also contributed to the continued downward trend in age at first marriage through the 1960s. It became less essential to put together the deposit on a home before marriage. Rather, couples could marry, live in rental accommodation, and work together toward acquiring homes of their own. It was not new for wives to be involved in this initial accumulation of capital, but during the 1950s they tended to make their contributions before marriage, then abandon this role for a domestic one.

The other major factor which prolonged the decline in age at first marriage until the early 1970s was further increase in the incidence of premarital pregnancy. Vosburgh (1971, 1973, 1978) claims that it ceased to have much impact after 1962, and possibly earlier, but errs in basing her argument on trends in age-specific bridal pregnancy ratios. [8] The multiple decrement analysis of Chapter 4 showed, for synthetic cohorts, that during the first half of the 1960s

[8] These do not employ an appropriate risk population. A rising incidence of pregnancy resulting in nuptial confinement among never married women may be only one of several factors promoting earlier marriage over a period, the others causing non-pregnant spinsters to marry earlier as well. Depending on the relative strength of these other forces, age-specific bridal pregnancy ratios may remain constant or even decline.

age-specific probabilities of premarital conception leading to nuptial confinement continued to increase at ages 16-18, although they stabilised at older ages (see Table 4.2). It will be recalled from Figure 6.2 that during the 1960s the probability of a spinster marrying before her twentieth birthday increased appreciably, while the probability of her marrying before her twenty-fifth birthday changed relatively little. Thus it cannot be claimed that age at first marriage was unaffected by higher incidences of premarital pregnancy, despite marital resolution of such pregnancies having become less common.

6.4 EXPLANATIONS FOR RECENT DECLINES IN FIRST MARRIAGE RATES

What Others Have Said

Little has been written as yet about the reversal of the marriage boom in New Zealand. The Department of Statistics (1978, 1979) has, however, speculated as to its causes. The notion of a tight marriage market for females is again given attention, its impact on age at marriage having curiously reversed. It is also suggested that economic recession during 1967-69 initiated a trend toward delaying marriage, but this argument rests on data which are clearly in error. [9] Other factors mentioned have probably been much more

[9] The Department of Statistics (1978: Table 8) quotes first marriage rates for never married females aged 20-24 of 299.6, 355.8, 354.0, and 313.6 per 1000 for the years 1966-69. The middle two figures are grossly at variance with equivalent indices presented in Table 6.2, and the trend followed by these first marriage rates bears no relation to that followed by rates relating all marriages of females aged 20-24 to all exposed-to-risk females of that age which the Department presents in a later table.

important: greater emphasis by women on tertiary education and establishing careers, growth of the 'living together' lifestyle, and the deterrent effect of an awareness of a soaring divorce rate.

Discussing post-1970 marriage trends in Australia, McDonald (1980) comments that with the ready availability of efficient contraception and abortion, marriage has been losing its function as the approved setting for sexual gratification. Living together is now widely practised and condoned, and there has been a return to the conservative ethic of a 'proper time' to marry. The decision to marry has reverted to being a very calculated one in which two broad groups of factors are taken into account. Economic preparedness for marriage has once again become important in a period of high unemployment and rapidly increasing housing costs, and the decision to marry is perhaps increasingly taken in conjunction with that to have a family. McDonald also refers to there being a psychologically proper time to marry today, this being when one's personality and individuality are fully developed 'through travel, career and freedom of relationship with a broad range of people' (McDonald, 1980: 18).

Caldwell et al (1981) see massive increases in unemployment among the young as the underlying cause of the marked decline in early marriage in Australia during the 1970s. Assisting this economic disincentive have been a marked reduction in the level of bridal pregnancy and greater freedom of entry into stable de facto unions. A unique feature of the current trend in nuptiality is seen to be its unrelatedness to changes in marital fertility control, this indicating that the institution of formal marriage itself is under attack.

First marriage rates have been declining, and age at first marriage has been rising, for rather longer in some Western European countries and the United States than in Australasia. In Western Europe the trends appeared first in Sweden and Denmark about 1965, and have since spread to most other countries of the subcontinent. [10] They have been accompanied by rising levels of informal cohabitation, and have been interpreted by French demographers as the latest manifestation of a process which has seen marriage become an increasingly private institution, stripped of many of its traditional meanings, and emphasising instead the mutual happiness of couples (Roussel, 1975, 1979; Roussel and Bourguignon, 1978; Festy, 1980a, 1980b). Gorer (1971) detects similar trends in England.

It appears that many young people in Sweden and Denmark have simply rejected formal marriage. Trost (1978a: 303) writes that in Sweden, marriage 'has become something almost dubious', while Festy (1981: 196) demonstrates that among consensually married Swedish and Danish women 'the arrival of, or the desire for, a child does not seem a sufficient reason for legalising a union'. Elsewhere in Western Europe, informal cohabitation seems as yet to be mainly a childless period before marriage (Festy, 1980a).

An interesting finding of Festy (1981) is that, in Sweden, Denmark, England and Wales, and the Netherlands, the trend toward delaying marriage first involved marriages of pregnant brides, then began to affect non-pregnant women two or three years later. It was not that the premaritally pregnant merely chose more often to have

[10] See Prioux-Marchal (1974a, 1977), Blayo and Festy (1975), Roussel (1977), Trost (1979b), Festy (1980b, 1981), and Wunsch (1981).

their babies outside marriage. Rather improvements in nonmarital fertility control preceded, and may have prompted, the decline in first marriage rates.

Age at first marriage increased throughout the 1960s in the U.S., the trend accelerating noticeably after 1972. [11] Part of the reason for the earlier end to the marriage boom is that, with age at first marriage already 'uniquely' low following the War, there was limited scope for further decline (McDonald, 1974). But it did not stabilise through the 1960s; it began to rise again.

Early explanations of this phenomenon highlighted a marriage squeeze affecting females (Akers, 1967; Parke and Glick, 1967; Carter and Glick, 1970; Frieden, 1974). Significance is still attached to this argument (Glick and Norton, 1977), but it is recognised that other factors have been more important, especially into the 1970s (Sweet, 1977). A unique factor in the U.S. was the Vietnam War, which caused young men to delay marriage because of military service or because they prolonged their educations to avoid it. Young women, too, placed more emphasis on formal schooling, and much of the upward shift in the female age at first marriage through the 1960s can be accounted for statistically in these terms (Rindfuss and Sweet, 1975). Interrelated with this factor have been an improved labour market position for young women relative to young men and ideological change brought about by the Women's Movement. The former has meant that women can afford not to marry (Preston and Richards, 1975), and Cherlin (1980) has argued that a growing female career

[11] See Carter and Glick (1976), Glick and Norton (1977), Sweet (1977), Wilson and Hume (1979), and Kitagawa (1981).

orientation has had a major impact on marriage patterns. The latter has tended to stress women's ability to find fulfilment, particularly through employment, outside of marriage (Sweet, 1977).

Longer schooling has been associated, too, with a tighter job market, which is said to have made some young people wary of their ability to establish a home and provide for a family (Glick and Norton, 1977). Easterlin's (1962, 1973, 1976) hypothesis that the young assess the economic implications of marriage in terms of conditions they knew while growing up has been invoked in this context (Sweet, 1977). As elsewhere in the West it has also been argued that improved contraception and easier access to abortion have reduced 'forced' marriages, and that with couples increasingly living together, 'the rising age at marriage reflects the failure of our legal forms and statistical concepts to keep pace with social reality' (Sweet, 1977: 372).

Recent Declines in First Marriage Rates in New Zealand

The timing of the commencement of declines in first marriage probabilities in New Zealand through the 1970s points to improved access to abortion having been crucial to their initiation. It was shown in Chapter 3 that age-specific bridal pregnancy ratios began to decline during the late 1960s, and that these declines accelerated noticeably after 1971. Whilst improved premarital contraception and rejection of the norm that the proper thing to do when premaritally pregnant was to marry may have contributed to this trend, it is difficult not to see abortion as largely responsible for speeding it up. Of the marriages which would have taken place since 1971 had

first marriage rates in that year persisted, but have not done so, a substantial proportion have been marriages involving bridal pregnancy.

During 1971-76 the annual number of marriages in which the bride was pregnant fell by more than three thousand, or slightly over fifty percent. The number of marriages of non-pregnant brides remained almost constant, but this represented a flattening out of the pre-1971 upward trend. A better perspective on marriage trends by pregnancy status of bride is gained from Figure 6.7. This presents results from double decrement nuptiality tables constructed under the assumption that the proportions of spinsters and of all brides marrying at age x in year y who were pregnant were identical. [12]

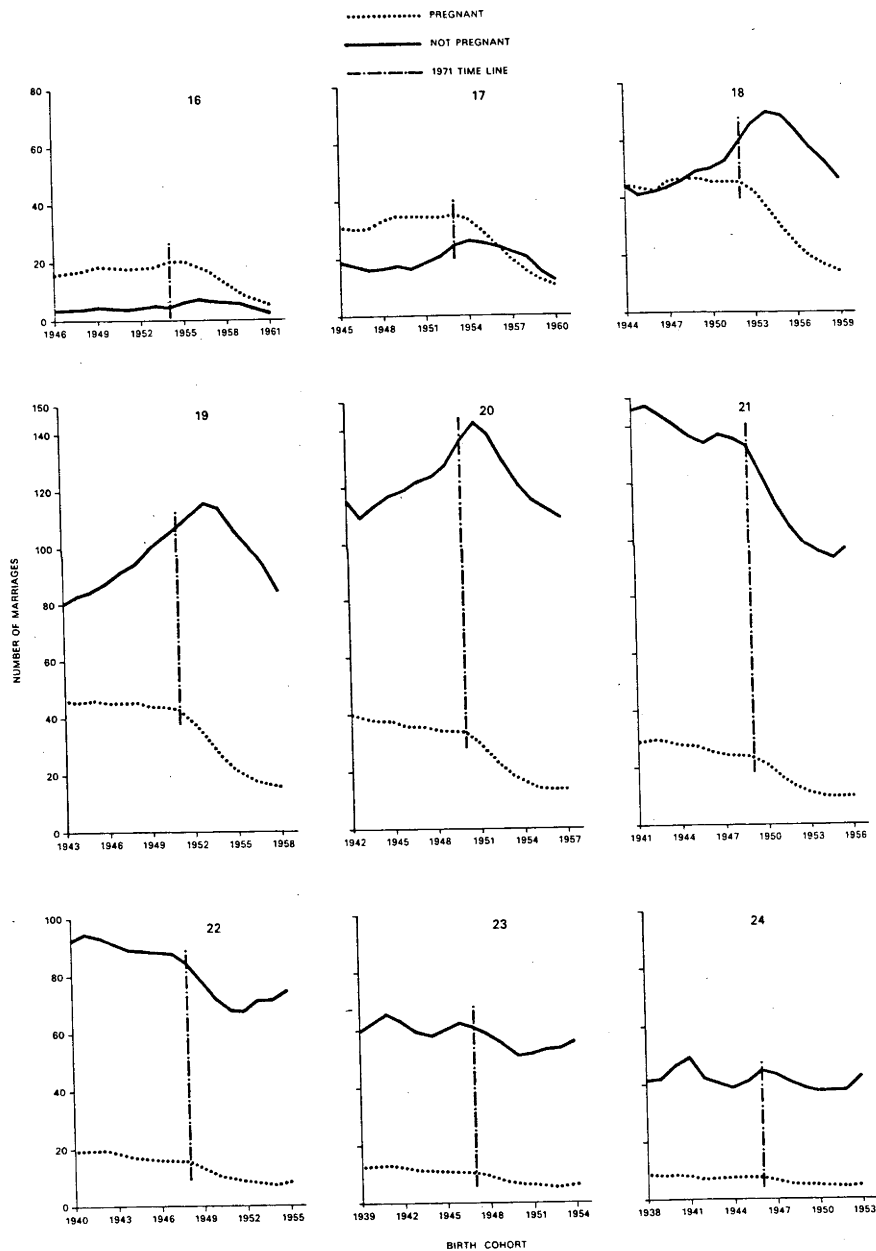
For successive birth cohorts attaining ages 16-18 during the middle and late 1960s trends in the proportions marrying pregnant at those ages were gently upward. At ages 19-24 they were moderately downward, suggesting improved premarital contraception, an increased tendency to carry premarital pregnancies to ex-nuptial confinement, or both (assuming no drop in premarital sexual activity). After 1971, proportions marrying pregnant at ages 16-18 turned sharply downward, while the earlier declines at ages 19-24, and especially ages 19-21, accelerated noticeably.

Cohorts attaining ages 17-20 in the years leading up to 1971 participated in steep upward trends in probabilities of marrying non-pregnant at those ages. These trends continued on for a year or two after that date, then reversed emphatically. Thus Figure 6.7

[12] This assumption is necessary because data giving nuptial confinements at marriage durations 0-7 months by age of mother, from which annual distributions of pregnant brides by age are estimated, are not available separately for first marriages and remarriages.

Figure 6.7

NUMBERS OF FIRST MARRIAGES PER 1000 FEMALES ATTAINING AGE 16
WHICH TOOK PLACE AT AGES 16-24 BY PREGNANCY STATUS AT
MARRIAGE AND BIRTH COHORT



Source: New Zealand Vital Statistics 1962-78; unpublished data supplied by the Department of Statistics.

suggests that, initially, the post-1971 upturn in female ages at first marriage reflected a sharp reduction in marriages of pregnant women. This trend was then supplemented by declines at younger ages in probabilities of first marriage when not pregnant. Marriages of non-pregnant women at ages twenty-one and twenty-two had been declining for some time by 1971, probably because they had been increasing at younger ages. These declines accelerated after 1971, but for the most recent birth cohorts to reach ages 21-24 trend lines have turned upward, as marriages deferred at younger ages are made up.

It is possible that the decline in 'shotgun' marriages due to better access to induced abortion acted as a catalyst to the slightly later decline in first marriages of non-pregnant women. Perhaps women who had avoided marriage in this way preached the virtues of having retained their independence to their peers. One tends to take the view, though, that improved access to abortion affected the non-pregnant mainly through the debate which arose over the morality of this method of fertility control. This debate seems to have helped the young suddenly to articulate more coherently the moral code that had been evolving throughout the post-war period. It was a debate which gave rise to frequent public opinion polls (Trlin, 1975a; Royal Commission on Contraception, Sterilisation and Abortion, 1977), and these soon made it clear that the older, religiously based morality was widely considered to be outdated.

The ingredients for an attack on the institution of marriage as traditionally constituted had been building up for some time. The spread of feminist ideology, extension of the period devoted to formal education, women's increased career consciousness and economic

independence, a decline in religious observance, and dislike for the furtive, guilt-ridden nature of much premarital sexual activity were obviously important. [13] With the pill making it possible to defer parenthood indefinitely, and with a rising divorce rate showing marriage to have become a less stable institution, it was only a matter of time before some young people began to query the sense of marrying without first testing a relationship's durability by living together. The trend was a logical extension of the one which had seen the first birth interval lengthen and the early years of marriage become characteristically childless. Other young people may simply have become sceptical of the relevance of legal and religious rites to their relationships (Caldwell, 1980c). Still others undoubtedly saw marriage as no competitor with a lifestyle which combined the maximum opportunity for sexual gratification with complete personal freedom. The abortion debate probably helped crystallise these attitudes to the point where they were perceived as widely held among peers, and thus as appropriate principles on which to base one's own behaviour.

Another factor which may have encouraged more critical assessment of the place of formal marriage in relationships with the opposite sex may well have been changing parental attitudes to the lifestyles of the young. Most parents of young people of prime marrying age in the early 1970s had themselves married during the first decade post-war. They had been critical of their own parents' standards on the timing

[13] Of school leavers in 1960, 6.8 percent of boys and 3.1 percent of girls had definite plans to attend university full-time. Comparable figures for 1970 were 15.1 and 7.8 percent, and in that year 18.7 percent of boys and 21.6 percent of girls intended to pursue some form of tertiary education full-time. In 1960, the sex ratio among internal university students was 313. By 1970 this had dropped to 232, and by 1975 it was down to 168.

of marriage and, to a lesser extent, the propriety of premarital coitus. Thus, they were probably less openly hostile than earlier parental generations to young people working out their own lifestyles in accordance with the technology and social realities of their day. Some may even have actively promoted the concept of a psychologically proper time to marry to which McDonald (1980) refers.

Without question, New Zealand youth has become more reluctant to give up the freedom which comes with being single. This is probably especially true of better educated young women. Whether the young are coming to associate marriage more closely with the decision to have a family, where in the 1950s having a family tended to follow from the decision to marry, is difficult to tell. If such were indeed the case, the first birth interval for women marrying in their middle to late twenties should narrow again. As yet there is no evidence that this is happening (Figure 6.6), but it may do so in the near future.

As already noted, explanations of first marriage trends during the 1970s in Australia have attached considerable importance to economic factors. One is somewhat sceptical of McDonald's (1980) claim that the concept of an economically proper time to marry has emerged again. Moreover, in the New Zealand context increased youth unemployment during the middle and late 1970s perhaps accelerated, but certainly did not initiate, declines in first marriage rates at younger ages. [14] Instead the key economic force behind these declines was probably the increased cost of housing. The Urban House Property Price Index (1973 base = 1000) had a value of 665 for the six months ended June 1971. For the six months ended June 1974 its value was 1322. Prospects for newly-weds acquiring their own homes

deteriorated rapidly over this period. Mortgages became harder to get, larger deposits were required, and interest rates rose appreciably. Loan repayments moved beyond the reach of many couples, while for others the sacrifice in lifestyle necessary to finance a home became too great.

The objection to McDonald's emphasis on a return to the concept of an economically proper time to marry is to the implication that material standard of living following marriage became all-important again. What happened was more negative; home ownership simply ceased to be the attainable goal it had been. Combined with the disincentive to having children it constituted and the changes which had taken place in premarital sexual behaviour, this virtually obliterated all distinctions between premarital and postmarital lifestyles for many couples. The event of marriage thus began to lose importance. Whereas once it had been associated with departure from the parental home, initiation of a regular sex life, the transition to parenthood, and attainment of the status of home owner, these now tended often to be quite independent happenings in the individual life cycle.

[14] Until the late 1960s, unemployment in post-war New Zealand was minimal (Carmichael, 1979b). The mean monthly number of registered unemployed and persons engaged on government special work projects (designed to combat unemployment) rose to 0.8 percent of the estimated April labour force in 1968, dropped to 0.2 percent in 1970, rose again to 0.6 percent in 1972, and then fell to 0.1 percent in 1974. It was only thereafter that a concerted upward trend developed, with annual rates during 1975-79 being 0.6, 0.9, 1.2, 3.0, and an estimated 3.4 percent. Increased youth unemployment was a major factor in this trend (Department of Labour, 1977a, 1977b, 1980), persons aged 15-20 accounting for between 38.8 and 50.5 percent of the registered unemployed in September of the years 1975-79. At the 1976 census, unemployment rates among 15-19 and 20-24 year-olds were 4.9 and 2.8 percent for males, and 8.1 and 3.7 percent for females. However, youth unemployment as an ongoing problem of some magnitude did not really manifest itself until after recent marriage trends had begun.

6.5 INFORMAL COHABITATION AND THE CHANGING PATTERN OF CORESIDENCE AT MARRIAGE

In accounting for trends in first marriage since 1971 it was implied that, at least insofar as they involve couples not affected by premarital pregnancy, they probably do not reflect later or less widespread entry into cohabiting unions. Rather they signify a growing reluctance, for various reasons, to formalise such unions. Conclusive proof for this assertion is not available. A trend toward informal cohabitation has, however, been the common experience of many Western societies since the mid-1960s, and it can be demonstrated for New Zealand that couples marrying in 1976 were much more likely to have lived together before marriage than those marrying in 1961.

Living Together: A Cross-national Perspective

Many Western countries share with New Zealand a lack of hard data attesting to increases in informal cohabitation. The data that are available are summarised in Table 6.9. They are sufficient to show that similar trends have been experienced in a number of societies, although they have been most marked in Scandinavia, and especially in Denmark and Sweden (Roussel, 1977; Trost, 1979b, 1981). [15]

The rapidity with which living together has become an integral component of the courtship system in Sweden and Denmark is attributed by Trost (1978a, 1979b) to historical precedent and the limited impact of christianity. Evidently the courtship process in certain areas has

[15] For more detailed data on the frequency of informal cohabitation in Scandinavia and France around the middle to late 1970s see Table A2.17, Appendix 2.

Table 6.9

EVIDENCE OF RECENT INCREASES IN INFORMAL COHABITATION FOR SELECTED
WESTERN COUNTRIES

AUSTRALIA: A Department of Demography, Australian National University survey of 493 Melbourne women married during 1968-77 shows that 8.0 percent (N = 125), 17.6 percent (N = 187), and 23.8 percent (N = 181) of those married in 1968-70, 1971-73, and 1974-77 respectively lived with their husbands before marriage.

DENMARK: In 1974 about 8 percent of all cohabiting couples and 46 percent of cohabiting females aged 20-24 were unmarried (Koch-Nielson, 1975 cited by Trost, 1979). By early 1977 these figures had risen to 10 and 57 percent respectively (Trost, 1979). Hansen (1978) claims that 13 percent of all married couples in October 1977 were consensually married, compared to 9 percent in early 1974.

FINLAND: Some 12-15 percent of couples publishing their bans in the town of Tampere in the mid-1960s had lived together before marrying. The figure for 1975 was 58 percent (Sivho, 1976).

FRANCE: Among women interviewed for the World Fertility Survey, 13 percent, 22 percent, and 31 percent of those married during 1966-70, 1971-75, and 1976-77 respectively had lived with their husbands before marriage (Leridon, 1980).

GREAT BRITAIN: Among women interviewed for the World Fertility Survey, 3 percent and 9 percent of those married during 1966-70 and 1971-75 had lived with their husbands before marriage (Dunnell, 1979).

NORWAY: Among women aged 18-44 interviewed for the World Fertility Survey, 24.4 percent had ever cohabited with a man to whom they were not married. The percentage of women with this experience declined from a peak of 42 percent for those aged twenty-three to 20 percent for those aged 30-34 (Brunborg, 1978).

SWEDEN: Trost (1979) estimates that during the 1950s a maximum of 1 percent of cohabiting couples were unmarried. He cites Nasholm (1972) as fixing the figure in 1969 at about 7 percent, whereas the 1975 census estimate was about 11 percent. This Trost regards as conservative. He estimates that by 1979 15-16 percent of all cohabiting couples were unmarried, and that no more than 1 percent of couples married without first having lived together.

UNITED STATES: During 1970-79 the number of unmarried couples (i.e. unrelated adults of the opposite sex living in the same household with no other adults present) more than trebled to 1.6 million (Spanier, 1980). Sweet (1979) puts the incidence of living together perhaps twenty percent higher when couples with at least one other adult in their households are considered. See also Glick and Norton (1977), Glick and Spanier (1980), and Kitagawa (1981).

long permitted couples to cohabit before marrying (see also Bjornsson, 1971; Brunborg, 1978). In Sweden cohabitation was also encouraged by adverse economic conditions late last century and by legislation which until 1909 made no provision for civil weddings.

If New Zealand follows other countries in matters such as the trend toward living together, it probably follows Australia, Great Britain, and the United States. Dunnell's (1979) World Fertility Survey (WFS) data indicate that while proportionately more brides in recent British marriage cohorts lived with their husbands before marriage, cohabitation still began after the wedding for the overwhelming majority (Table 6.9). Indeed, only 2.3 percent of 20-24 year-olds in the British WFS sample were unmarried cohabitants, as against 10.4 percent of the French sample (Leridon, 1980). On the other hand Australian data from a 1977 survey of 493 Melbourne women married during 1968-77 show a sharp upward trend after 1970 in the percentage of brides who lived with their husbands before marriage (Table 6.9). [16]

An extensive American literature on informal cohabitation has accumulated since the late 1960s. Unfortunately the overwhelming majority of this deals only with college students. Reviewing this literature, Macklin (1978) suggests that perhaps one-quarter of all undergraduate students in the late 1970s had already cohabited. Approval in principle of living together is considerably more widespread (Arafat and Yorburg, 1973; Bower and Christopherson,

[16] Note, however, that the Melbourne sample excluded women whose marriages had broken down. If women who cohabit before marriage are more prone to marital breakdown at short durations the sample may be biased in favour of showing the trend summarised in Table 6.9.

1977), and Macklin concludes that experience reflects opportunity more than it does overt demographic characteristics. Studying a 1974-75 nationwide sample of males aged 20-30, Clayton and Voss (1977) found college students no more likely to be living together than non-students. Glick and Norton (1977) also show that only one-quarter of unmarried couples aged under twenty-five in 1970 included a college student, while Spanier (1980) concludes that cohabitation became much more widely accepted in mainstream American society during the 1970s. However, if American youth has directly influenced New Zealand youth at all, it has probably done so via media reports of emerging lifestyles among the educated middle class.

The New Zealand Evidence

In Chapter 5 it was shown that since the late 1960s the proportion of ex-nuptial children placed with cohabiting natural parents has increased appreciably. Over the same period the illegitimacy ratio also rose. It is not possible, however, to draw conclusions from these trends as to the trend in informal cohabitation. More widespread cohabitation is only one of several possible explanations for them (Chapters 3 and 5). Moreover, living together may for most couples be a childless phase of their lives.

Potentially, New Zealand census data offer the prospect of obtaining the sort of evidence Glick and Norton (1977), Spanier (1980), and Kitagawa (1981) present for the United States (Table 6.9). Unfortunately, official production from recent censuses does not permit this potential to be realised. Non-family households comprising two unrelated persons of opposite sex aged, say, sixteen or

over (plus any children) cannot be isolated. The requisite data could be obtained for a ten percent sample of households at the 1976 census only. However, the expense involved was not warranted. [17] Trend data would not have been obtained, and the estimated incidence of living together yielded would have been of unknown accuracy. [18]

Table 6.10 presents, for the marriage cohorts of 1961 and 1976, high and low estimates of the percentages of brides and grooms who were coresident at marriage by age and marital status. It derives from comparisons of residential addresses of brides and grooms made when searching marriage registers for those years, these being addresses given at the time of applying for a marriage licence. The low estimates take in all marriages where the addresses were identical and where a house number was specified. The high estimates add in those marriages where the addresses were identical, but consisted only of a locality or a street name with no house number. Many of these were rural addresses, which typically take more general forms. Marriages where both parties clearly lived in an institution (bible college, home for the aged, etc) were excluded, but such situations may not always have been detectable. It is also possible that some couples gave intended future addresses, and that some mobile individuals gave their intended spouses' addresses.

[17] It will be recalled from Chapter 1 that special tables from 1976 census household samples are produced on a user pays basis by the Department of Statistics.

[18] It would have excluded couples who returned themselves as 'married', even though they were not legally married to one another, and included couples who, although coresident, were not sleeping together. The value of census data of the type outlined is in indicating the scale of change, not in providing an accurate point estimate of the incidence of informal cohabitation.

Table 6.10

COMPARATIVE LEVELS OF CORESIDENCE AT MARRIAGE BY AGE, SEX, AND MARITAL STATUS: 1961 AND 1976 MARRIAGE COHORTS

Age	Brides				Grooms							
	Percent Coresident				Number of Marriages		Percent Coresident				Number of Marriages	
	Low Estimates		High Estimates		1961	1976	Low Estimates		High Estimates		1961	1976
Never Married												
16	10.0	22.2	16.5	26.4	411	387	0.0	25.0	0.0	25.0	8	12
17	8.1	26.9	14.7	31.0	795	948	12.2	28.3	19.4	33.6	98	113
18	8.8	22.3	14.1	25.4	1456	2031	12.3	28.2	21.5	33.1	284	390
19	6.6	18.3	11.1	20.7	2290	3134	7.9	26.5	12.6	29.4	593	972
20	5.6	21.4	9.8	24.0	2784	3372	7.3	22.9	11.9	25.3	1106	1988
21	5.6	22.3	8.8	25.0	2986	2636	7.3	20.9	11.8	23.2	2073	2643
22	7.3	27.6	11.2	30.4	1732	1978	6.3	21.1	9.7	23.4	2115	2735
23	8.7	28.9	12.6	32.2	1145	1430	6.1	22.6	10.3	25.7	2067	2308
24	9.5	32.7	13.9	36.7	718	972	6.6	23.5	10.1	27.2	1688	1878
25	10.9	31.1	14.3	34.6	586	745	7.1	26.1	11.0	29.5	1350	1510
26	8.7	34.8	14.6	37.4	391	589	8.2	27.5	12.0	30.5	1046	1209
27	12.2	33.5	16.8	36.2	303	436	8.7	30.4	13.7	33.4	841	981
28	10.6	29.6	16.7	32.9	216	368	9.5	29.2	13.5	33.3	681	781
29	9.0	33.1	16.7	36.8	210	269	7.4	35.2	12.6	38.8	594	546
30-34	12.9	38.1	19.6	42.4	628	538	11.8	30.5	16.5	34.2	1626	1138
35-39	12.4	41.5	19.7	43.2	299	183	15.7	34.8	23.9	38.6	594	391
40-44	10.5	32.5	18.4	37.5	152	80	15.3	33.7	24.4	38.8	242	178
45-49	10.0	48.1	16.0	50.0	100	54	17.8	35.0	25.3	39.2	146	120
50+	17.4	28.7	27.1	34.5	144	87	24.5	31.5	38.9	35.1	216	168
Total	7.8	25.2	12.4	28.2	17346	20237	8.4	25.1	13.0	28.1	17368	20061
Divorced												
16-19	0.0	0.0	0.0	0.0	1	3	-	-	-	-	0	0
20-24	32.9	58.9	37.1	62.5	70	304	0.0	49.4	0.0	53.8	11	93
25-29	26.8	58.5	34.5	65.0	168	778	22.8	51.6	28.1	56.8	114	607
30-34	32.2	64.7	40.3	70.3	258	580	24.3	57.1	30.4	61.1	214	714
35-39	36.0	60.0	45.8	64.7	225	417	18.5	60.5	24.1	65.8	232	517
40-44	37.7	54.7	44.8	57.5	183	285	33.7	66.3	43.5	72.8	193	338
45-49	37.1	52.3	42.7	56.0	143	243	28.9	60.7	39.0	65.2	159	333
50+	34.4	49.7	41.7	55.6	151	286	33.1	53.3	42.4	58.2	278	550
Total	33.9	58.3	41.5	63.5	1199	2896	27.0	57.1	34.8	62.1	1201	3152
Widowed												
16-29	9.2	32.5	19.7	34.9	76	83	23.1	28.0	30.8	28.0	26	25
30-34	17.0	31.4	26.4	34.3	53	70	8.8	36.4	20.6	39.4	34	33
35-39	24.4	31.1	33.3	36.5	78	74	9.8	41.2	17.1	44.1	41	34
40-44	17.6	31.6	31.4	34.7	102	98	24.5	37.5	36.7	40.6	49	64
45-49	15.2	32.1	24.1	35.7	112	112	13.8	26.5	27.6	31.6	87	98
50+	18.9	24.5	26.7	26.7	460	584	15.6	21.4	22.3	24.3	620	687
Total	17.9	27.7	26.9	30.4	881	1021	15.6	24.4	23.6	27.5	857	941
Total												
16	10.0	22.2	16.5	26.4	411	387	0.0	25.0	0.0	25.0	8	12
17	8.1	26.9	14.7	31.0	795	949	12.2	28.3	19.4	33.6	98	113
18	8.8	22.2	14.1	25.4	1457	2032	12.3	28.5	21.5	32.8	284	390
19	6.6	18.3	11.1	20.7	2291	3136	7.9	25.5	12.6	28.4	593	972
20	5.7	21.6	9.9	24.2	2789	3381	7.3	22.9	11.9	25.3	1107	1992
21	5.7	22.7	8.9	25.4	2992	2667	7.3	21.0	11.8	23.3	2074	2647
22	7.5	28.2	11.3	31.1	1754	2032	6.3	21.1	9.7	23.4	2115	2745
23	9.0	31.0	12.9	34.3	1172	1521	6.1	22.9	10.2	26.0	2073	2333
24	10.5	35.4	15.0	39.4	746	1119	6.5	24.3	10.0	27.9	1695	1931
25	12.1	35.5	16.3	39.8	627	891	7.1	27.3	10.9	30.7	1367	1585
26	9.9	38.7	15.2	41.8	435	751	8.8	29.4	12.5	32.6	1072	1308
27	13.9	40.9	19.0	45.0	353	614	9.0	32.7	14.0	36.3	866	1119
28	13.5	38.6	16.2	42.6	260	549	10.1	33.4	14.0	37.1	706	931
29	10.5	41.9	18.8	46.1	256	434	8.6	38.1	14.1	42.4	637	713
30-34	18.4	50.7	25.7	55.6	939	1188	15.4	41.0	18.2	44.5	1874	1885
35-39	22.8	52.1	31.6	56.4	602	674	16.1	49.3	23.6	53.8	867	942
40-44	23.6	46.2	32.5	49.5	437	463	23.1	53.1	33.3	58.8	484	580
45-49	22.5	46.7	29.3	49.9	355	409	21.4	49.0	31.4	53.5	392	551
50+	21.9	32.4	29.8	36.1	755	957	21.7	35.1	30.5	38.9	1114	1405
Total	9.9	29.2	14.9	32.5	19426	24154	9.9	29.2	14.9	32.5	19426	24154

Source: New Zealand Marriage Register 1961 and 1976; New Zealand Vital Statistics 1961 and 1976.

Depending on whether the high or low estimates are taken, the percentage of marriages preceded by coresidence more than doubled from 14.9 to 32.5, or trebled from 9.9 to 29.2 between 1961 and 1976. Among those marrying for the first time the increases were from 12.4 to 28.2 percent for brides and from 13.0 to 28.1 percent for grooms (high estimates), or from 7.8 to 25.2 percent and from 8.4 to 25.1 percent (low estimates). Substantial increments also occurred in the proportions of remarrying divorcees already living with their partners (Table 6.10). As to remarrying widows and widowers, low estimates indicate increases in coresidence of around ten percentage points, but high estimates suggest less dramatic change. [19]

Among bachelors and spinsters, premarital coresidence is least common at the most popular ages for first marriage. Its incidence is higher for those who marry very young, and increases again for brides who delay marriage till their mid-twenties and grooms who first marry in or after their late twenties (Table 6.10). This pattern is detectable in both 1961 and 1976, but is more pronounced at the later date. It is consistent with the proposition that living together delays formal marriage, and hence with the claim that one reason for the increase in age at first marriage during the 1970s has been a trend toward living in informal unions. Higher coresidence at very

[19] This finding draws attention to the fact that, as a rule, the differences between low and high estimates in 1961 in Table 6.10 exceed the differences in 1976, despite the 1976 figures being higher. Possibly the 1961 marriage cohort was less urban than the 1976 cohort, so that general rural addresses were more common. But in working through the marriage registers it also seemed that the 1961 cohort was more conscious that living together was socially disapproved of. On occasion it appeared that less than full addresses had been given so as to avoid openly admitting to being coresident. Other couples may well have sought to hide their living arrangements by furnishing false, or non-current addresses. Tables 6.10-6.13 must be interpreted with these points in mind.

young ages may stem from overrepresentation of ethnic minorities which traditionally have been more accepting of such behaviour.

Not unexpectedly, divorcees were easily the most likely group to be coresident at marriage in both 1961 and 1976. By 1976 coresidence was the norm for both sexes at virtually all ages (Table 6.10). Moreover, whereas total marriages were less than twenty-five percent higher in 1976 than in 1961, marriages of divorcees were about two-and-a-half times as numerous, which helps explain why overall increases in coresidence were as sharp as they were. It is of interest, too, that increments in the numbers of divorcees remarrying at ages 20-29 were especially steep (Table 6.10). Doubtless the trend toward earlier marriage during 1961-71, changes in age structure, and legislative changes which shortened the divorce process (Chapter 7) partly explain these. But they also hint that the marriage market for young never marrieds expanded to take in married and unmarried alike to some extent. Perhaps, too, some recently weds began, in retrospect, to treat the early years of marriage as a trial period. The tendency for the first birth interval to widen would have assisted both trends.

In Table 6.11, levels of coresidence by relative marital status of bride and groom are shown for 1961 and 1976. The incidence of living together where neither party had previously been married more than doubled or trebled in this time, depending on whether high or low estimates are compared. In both years the never marrieds most likely to be coresident were those whose partners were divorced, and by 1976 the majority of such parties to marriage were coresident. In 1961 a bachelor marrying a divorced woman was clearly more liable to be

Table 6.11

COMPARATIVE LEVELS OF CORESIDENCE AT MARRIAGE BY RELATIVE MARITAL
STATUS OF BRIDE AND GROOM: 1961 AND 1976 MARRIAGE COHORTS

Marital Status of Groom		Marital Status of Bride					
		Never Married		Widowed		Divorced	
		1961	1976	1961	1976	1961	1976
Never Married	Low Estimate (%)	7.3	23.1	17.0	27.3	32.8	52.1
	High Estimate	11.7	25.9	27.8	30.9	40.3	57.6
	Number of Marriages	16404	18470	306	256	658	1335
Widowed	Low Estimate	9.3	22.3	14.5	16.1	29.3	38.5
	High Estimate	17.6	25.0	22.2	18.7	37.1	42.5
	Number of Marriages	290	188	400	454	167	299
Divorced	Low Estimate	20.6	49.6	27.4	45.0	38.0	69.6
	High Estimate	28.2	55.0	36.0	46.9	45.7	74.7
	Number of Marriages	652	1579	175	311	374	1262

Source: New Zealand Marriage Register 1961 and 1976; New Zealand Vital Statistics 1961 and 1976.

coresident than a spinster marrying a divorced man. However, by 1976 this difference had almost disappeared. The situation in 1961 mainly reflected higher coresidence levels among divorcees aged 30-49 who married bachelors than among spinsters of that age who married divorcees (Table 6.12). [20] A similar, though less marked, difference is apparent at bridal ages 25-39 in 1976, but at younger ages spinsters who married divorcees were the more likely to already live

[20] The production of Tables 6.12 and 6.13 required crosstabulations of age of bride by age of groom for each possible combination of marital statuses of the parties except those involving widows or widowers. All that were available were crosstabulations of age of bride by age of groom by marital status of the bride only. The required data were therefore estimated using a two-stage iteration procedure which is described in Appendix 11.

Table 6.12

COMPARATIVE LEVELS OF CORESIDENCE AT MARRIAGE BY AGES OF BRIDE AND GROOM AT MARRIAGE: SELECTED
 MARITAL STATUS COMBINATIONS 1961 AND 1976

Bride's Age	Bachelors Spinsters 1961		Bachelors Divorcees Spinsters 1976		Divorcees Spinsters 1961		Divorcees Spinsters 1976		Groom's Age		Bachelors Spinsters 1961		Bachelors Divorcees Spinsters 1976		Divorcees Spinsters 1961		Divorcees Spinsters 1976	
	L	H	L	H	L	H	L	H	16-19	20-24	25-29	30-39	40-49	50+	L	H	L	H
16-19	L	7.6	20.5	-	-	36.4	69.2	-	-	16-19	9.7	26.2	-	-	75.0	-	-	-
	H	12.8	23.4	-	-	81.8	76.9	-	-		15.9	29.6	-	-	100.0	-	-	-
	N	4942	6440	1	3	11	65	-	-		983	1487	-	-	4	-	-	-
20-24	L	6.3	22.9	30.9	48.6	30.0	59.8	50.0	91.2	20-24	6.5	20.8	45.2	76.8	-	43.2	-	87.5
	H	10.0	25.6	35.3	51.8	34.7	65.8	50.0	96.5		10.4	23.3	50.0	85.3	-	48.9	-	87.5
	N	9171	9790	68	257	150	567	4	57		8998	11365	42	224	11	88	-	8
25-29	L	9.5	30.1	24.1	51.7	21.0	40.7	40.9	70.7	25-29	7.3	26.1	28.1	54.7	21.6	43.8	27.3	80.7
	H	14.0	32.6	29.7	58.3	29.4	46.0	54.5	77.4		11.5	29.1	33.1	61.3	25.5	48.8	45.5	87.2
	N	1534	1795	145	489	143	567	22	270		4301	4482	160	486	102	502	11	109
30-39	L	11.9	37.0	35.6	55.2	14.8	43.1	30.7	70.5	30-39	9.1	29.3	33.3	40.4	16.9	54.1	28.4	66.2
	H	17.9	40.1	43.8	62.4	22.0	47.2	41.1	74.7		14.2	32.7	41.4	44.3	22.7	59.2	33.6	70.3
	N	630	392	292	420	236	288	163	518		1817	1000	324	438	295	667	134	518
40-49	L	13.8	36.6	37.1	50.8	13.8	50.0	41.3	63.3	40-49	9.0	34.3	28.7	41.2	21.6	59.1	38.3	70.2
	H	24.5	41.5	44.8	53.2	21.8	53.0	46.9	67.3		16.1	42.4	35.6	43.4	32.7	66.2	47.4	75.5
	N	94	41	116	126	87	66	143	300		223	99	101	136	153	198	154	392
50+	L	36.4	57.1	36.1	52.5	32.0	42.3	52.4	68.4	50+	22.0	43.2	48.4	44.7	31.9	37.9	56.0	70.2
	H	57.6	78.6	50.0	55.0	40.0	50.0	54.8	76.9		39.0	48.6	67.7	48.9	45.1	43.5	64.0	77.0
	N	33	14	36	40	25	26	42	117		82	37	31	47	91	124	75	235

Source: New Zealand Marriage Register 1961 and 1976; New Zealand Vital Statistics 1961 and 1976.

1 L = low estimates (percent), H = high estimates (percent), and N = number of marriages.

together. Combined with that group's more youthful age distribution, this had a balancing effect on coresidence levels over all ages. From the perspective of the groom's age (Table 6.12), whereas in 1961 divorcees aged 30-39 who married spinsters were half as likely to be coresident as bachelors of that age who married divorcees, by 1976 they were fifteen percentage points more likely to be coresident. Apparently a crucial factor in the emergence of the living together phenomenon has been the greater willingness of younger women to enter such relationships.

The probability of coresidence is clearly greatest where both parties are divorced (Table 6.11). It increased by some thirty percentage points during 1961-76, until nearly three-quarters of remarrying divorced couples already lived together. The chances of coresidence were even higher where either the bride or the groom was especially young (Table 6.12). This perhaps reflects two things: generational differences in attitudes favourable to premarital cohabitation, and a tendency for the remarriage process to more often effectively bring about separation when marriages break down at younger ages.

In 1976, as in 1961, coresidence among remarrying widows and widowers was most frequent when the new spouse was divorced (Table 6.11). The likelihood of coresidence increased more markedly over the fifteen-year period among widows marrying divorced men, pointing again to the liberalising of women's attitudes to non-traditional lifestyles. Perhaps because spinsters who marry widowers are younger than widows who marry bachelors, coresidence rose more among the former group. As to widows who married widowers, the trend is

confused, but suggests minimal change. [21]

Finally, coresidence levels may be differentiated and changes in levels may be examined by the relative ages of bride and groom (Table 6.13). [22] Considering all marriages, a similar pattern emerges in both 1961 and 1976. Living together was most common where the bride was considerably older than the groom. It was much less common where she was about the same age, least common where she was 2-3 years younger, then became more common again where she was more than five years younger. Similar U-shaped relationships are evident for marriages of bachelors, spinsters, and bachelors to spinsters.

The U-shaped relationship between relative age and coresidence is also apparent for divorced women in 1976. For divorced men it takes a modified form in that year (Table 6.13), the level of coresidence being lowest where the bride was 2-3 years older than the groom, and highest where she was more than five years younger. Where bachelors married divorcees in 1976, premarital coresidence was most common when the bride was older, and least common when she was more than five years the younger partner. Conversely, where divorcees married spinsters, coresidence was highest among brides four or more years younger than their grooms. In short, marriages between divorced and never married parties in 1976 were most often preceded by coresidence

[21] Coresidence levels for this relative marital status category are especially apt to mislead by including unidentifiable instances of joint residence in institutions.

[22] Table 6.13 covers only marriages of brides aged 16-39 to grooms aged 16-49. This is because these were the widest age ranges for which data on the relative ages of brides and grooms were available by single years of age for both 1961 and 1976.

Table 6.13

COMPARATIVE LEVELS OF CORESIDENCE AT MARRIAGE AMONG BRIDES AGED 16-39 MARRYING GROOMS AGED 16-49 BY RELATIVE
 1
 AGES OF THE PARTIES: SELECTED MARITAL STATUS CATEGORIES 1961 AND 1976

Bride's 2 Relative Age	Bachelors		Spinsters		Divorced Men		Divorced Women		Bachelors Spinsters		Bachelors Divorcees		Divorcees Spinsters		Divorcees Divorcees		All Marriages		
	1961	1976	1961	1976	1961	1976	1961	1976	1961	1976	1961	1976	1961	1976	1961	1976	1961	1976	
More Than 3 Years Older	L	19.3	49.0	14.4	34.5	14.3	58.3	33.0	70.4	15.1	34.7	35.6	71.1	-	33.3	25.0	70.0	18.8	49.9
	H	25.9	54.8	19.6	37.6	22.9	63.1	42.2	79.6	20.6	37.8	43.7	81.1	-	36.7	40.0	76.0	25.5	53.2
	N	436	630	341	417	35	84	109	280	325	386	87	228	15	30	20	50	474	718
2-3 Years Older	L	13.4	40.6	10.6	34.6	16.1	43.2	43.5	64.9	10.5	35.3	48.0	66.9	10.0	22.9	30.0	61.4	13.7	40.7
	H	18.5	43.6	16.2	36.6	19.4	45.3	46.8	70.2	15.8	37.5	52.0	72.5	15.0	22.9	30.0	65.9	18.9	43.5
	N	687	923	650	817	31	95	62	188	626	767	50	142	20	48	10	44	725	1023
Between 1 Year Older and 1 Year Younger	L	8.0	24.5	7.2	23.1	13.9	48.6	28.1	62.8	7.2	22.9	30.8	58.2	7.5	31.4	21.6	74.0	8.1	25.7
	H	12.4	27.2	11.4	25.7	17.6	52.0	37.0	68.1	11.4	25.4	41.3	65.1	10.4	35.6	24.3	76.3	12.5	28.5
	N	4537	6300	4440	6202	108	331	184	411	4363	6001	143	275	67	194	37	131	4660	6643
2-3 Years Younger	L	6.7	20.8	6.4	20.9	20.2	49.1	29.6	50.3	6.3	20.3	27.1	36.2	13.1	37.9	38.1	67.6	7.0	22.4
	H	10.2	23.2	9.9	23.4	25.0	53.4	33.3	54.7	9.8	22.8	30.6	40.8	18.0	42.2	42.9	72.1	10.5	25.0
	N	4596	5966	4571	5986	84	352	108	316	4499	5771	85	174	61	206	21	136	4693	6335
4-5 Years Younger	L	6.8	23.2	6.8	24.1	21.9	57.9	30.5	60.5	6.5	22.1	25.0	49.6	18.1	50.9	33.3	72.7	7.4	26.8
	H	10.9	26.3	10.9	27.3	28.1	63.1	35.4	64.5	10.5	25.2	26.8	52.6	22.2	56.1	47.6	78.2	11.6	30.0
	N	3139	3246	3152	3335	96	347	82	256	3065	3095	56	137	72	228	21	110	3256	3615
More Than 5 Years Younger	L	8.1	25.4	9.3	33.7	28.9	63.8	30.7	55.9	7.7	25.4	26.8	28.3	27.2	61.7	34.8	73.4	10.3	36.7
	H	13.6	29.2	15.2	38.2	39.4	70.4	42.9	61.1	13.1	29.2	34.1	32.2	37.1	68.2	49.3	79.2	16.6	41.3
	N	3500	2618	3709	3156	363	1078	163	565	3372	2381	82	205	272	718	69	327	3949	3790

Source: New Zealand Marriage Register 1961 and 1976; New Zealand Vital Statistics 1961 and 1976.

- 1 Calculations are confined to the age ranges indicated because these are the ranges for which marriages by relative ages of the parties and marital status of the bride are published by single years of age for both the 1961 and 1976 marriage cohorts. The marital status categories selected were those that embraced reasonable numbers of marriages where the bride and groom were in the specified age ranges.
- 2 Relative ages have been determined on the assumption that an individual aged x years was aged x+0.5 years exactly.
- 3 L = low estimates, H = high estimates, and N = number of marriages.

where the divorcee was the older party. But where both parties were divorced, relative age seems to have had limited significance for premarital living arrangements (Table 6.13).

The pattern of increases in coresidence levels by relative age of bride and groom during 1961-76 differs depending on whether absolute or relative increase is examined (Table 6.13). [23] For all marriages, absolute increases follow a similar U-shaped pattern to the levels of coresidence themselves; they are highest where the bride was much older or much younger than the groom and lowest where she was 2-3 years younger. However, ratios of 1976 to 1961 coresidence levels rise as one moves from the bride being more than three years older to her being 4-5 years younger, before dropping slightly again. The key to the pattern of absolute increments seems to be remarriages of divorcees to partners several years younger. Taking low coresidence estimates (high ones yield a similar result), the increments over all marriages for the 'more than 3 years older', '2-3 years younger', and 'more than 5 years younger' relative-age-of-bride categories were 31.1, 15.4, and 26.4 percentage points, while over marriages of bachelors to spinsters they were 19.6, 14.0, and 17.7 percentage points. The pattern of relative increases in coresidence, too, seems to have been determined largely by remarrying divorcees and their partners. Low coresidence estimates yield 1976 to 1961 coresidence ratios for bachelors marrying spinsters in the range 3.18 to 3.40 for relative-age-of-bride categories other than the 'more than 3 years older' one, whereas for all marriages the range is from 2.97 to 3.62.

[23] Measures of absolute and relative increase are not shown, but may be calculated readily from Table 6.13.

6.6 SUMMARY

The decline in age at first marriage in New Zealand through the late 1940s and the 1950s undoubtedly reflected a rejection of the prescription which required men to be firmly established in careers and of some means before marrying. The hardships of the 1920s and early 1930s seem to have initiated the trend. The War then produced a generation of young men who, by their mid-twenties, had had little opportunity to accumulate wealth. Both sexes had also suffered deprivations during wartime which made marriage and parenthood particularly attractive prospects. They thus went ahead and married anyway, establishing firmly the principle that a couple's feelings for one another should dictate the timing of marriage.

Overfull employment, favourable government housing policies, and modest material aspirations assisted the young to assert their independence. Age at first marriage for males was probably affected most by this trend, but the fact that males faced a quite severe, immigration-induced marriage squeeze during the 1950s ensured that female age at first marriage also fell significantly. Once initiated, these declines were partly self-reinforcing. If Australian evidence is any guide, couples who married during the 1950s were perhaps the first to widely take for granted their ability to limit family size through contraception. Times were prosperous, and marriage had become more egalitarian. It was thus unprecedentedly attractive to a generation raised during hard times; especially to women, who came to see it and motherhood as their ultimate sources of self-fulfilment.

The assertion of generational independence in deciding when to marry was the first step in the evolution of the morality which New

Zealand youth began practising in the 1970s. It was accompanied by more liberal premarital sexual behaviour, which via the norm that one should marry in the event of becoming pregnant was in itself a factor in lowering age at first marriage until the mid-1960s. Introduction of the pill in 1961 permitted a new force, the ability to control as never before the timing of the first birth, to prolong the decline in age at first marriage. Couples could now plan to marry and work jointly toward the acquisition of their own home. They could also enjoy regular coitus in a socially approved setting with little fear of an unplanned pregnancy occurring. Early marriage thus offered a means of coping with the sexual revolution. It was a rational response to conflicting pressures exerted by the peer group and the advocates of traditional morality at a time when premarital sexual encounters were often furtive, hazardous, and guilt-laden.

Reversal of the downward trend in age at first marriage after 1971 marked the maturing of the new morality. Almost certainly the capacity which improved access to abortion gave for avoiding marriage in the event of premarital pregnancy was the key to its timing. But perhaps more importantly, public debate over the abortion issue led to more coherent articulation of a moral code which assumed an absolute ability to control fertility. Now able to express their sexuality with the threat of unplanned parenthood removed, young people demanded the right to do so openly and without guilt. A rising divorce rate showed marriage to have become a less stable institution, formal education took longer, women were more career conscious and less enamoured of becoming mothers, real estate values were soaring, and it had become important to develop and maintain one's individuality. It seemed increasingly illogical to commit oneself to a lifetime

relationship in one's teens or early twenties. During the 1960s it had become the norm for the early years of marriage to be childless. In the 1970s, informal cohabitation seemed different from marriage to many young people only in that it enabled unsatisfactory relationships to be terminated with a minimum of fuss. Formal marriage came to be regarded in some quarters not as a licence for cohabitation, but as either irrelevant or a mark of final commitment between partners who had tested their compatibility.

The data are rather imprecise, but the level of coresidence at marriage rose appreciably between 1961 and 1976. The scale of this increase probably understates the degree to which living together became more common, since it pertains only to couples who married and since in 1976 probabilities of first marriage were still falling at ages under thirty for both sexes. No data were collected for dates between 1961 and 1976. However, cursory examination of marriage registers for intervening years suggested that the upward trend in coresidence really gathered momentum after the late 1960s.

Marriages involving divorcees, those where the bride is older or very much younger than the groom, and first marriages at ages outside the modal five-year age range seem especially likely to formalise living together relationships. However, coresidence levels increased substantially during 1961-76 for virtually all age, marital status, relative age, and relative marital status categories. There were indications in the sharper increases in coresidence among divorcees who married spinsters and widows than among bachelors and widowers who married divorcees that the rise in cohabitation owes much to the changing attitudes of women to such living arrangements. There was

also tentative evidence of transitional conflict between the traditional and the new courtship systems, with large increases in the numbers of younger divorcees of both sexes who were marrying partners they already lived with.

Because of the nature of the New Zealand evidence it is difficult to make comparisons with other countries. In 1976 New Zealand came nowhere near emulating Denmark and Sweden, where premarital cohabitation was by that time overwhelmingly the norm among marrying couples (Roussel, 1977; Trost, 1979b, 1981). By the same token, living together before marriage was a good deal more common than Dunnell's (1979) data suggest was the case in Great Britain. But to keep matters in perspective, it has yet to be demonstrated that the traditional courtship system under which cohabitation begins at marriage has ceased to be the dominant model in New Zealand.

CHAPTER 7

TRENDS IN DIVORCE AND IN THE REMARRIAGE OF DIVORCED PERSONS

Can I not see in our increasing divorce rate ... a necessary involvement of that 'democratization' of the family which makes it, in its essential part, the pure prolongation of a love affair, a relation of such intimate and fragile beauty that divorce must be the more often called in - to free us for a fresh attempt? (Nixon, 1954: 40)

7.1 INTRODUCTION

Chapter 6 has dealt with post-war trends in the rates and ages at which New Zealanders have entered marriage. It has also established that in recent years marriage has come less often to mark the commencement of cohabitation than it used to, while earlier chapters imply that it has lost much of its significance as a licence for sexual activity as well. From this point the emphasis turns to divorce, the main underlying theme being the diminishing permanence of marriage. In this chapter the history of legal provision for divorce in New Zealand is outlined and trends in the formal dissolution of marriage by divorce are examined. Linkages between the two are accorded special attention, for crucial questions in any analysis of divorce trends concern the extent to which they reflect genuine social change as distinct from change in the law, and the extent to which each type of change promotes the other. Finally, trends in the propensity of divorced persons to remarry are investigated to determine whether, as marriage has become more fragile, divorcees have become more wary of re-entering the estate.

7.2 DIVORCE LEGISLATION

Divorce law in New Zealand dates from the Divorce and Matrimonial Causes Act 1867. Fearing an electoral backlash from Catholics the government of the day was unwilling to sponsor this legislation, but it allowed a Private Member's Bill to be debated and passed on a conscience vote. The Act was a carbon copy of England's Matrimonial Causes Act 1857, which had transferred jurisdiction over matrimonial grievances from ecclesiastical courts and parliament to a more widely accessible Court for Divorce and Matrimonial Causes. [1] In theory New Zealanders had recourse to this Court, but they had to return to England to plead their cases.

In 1867 divorce became obtainable on proof of adultery by one's wife, or of adultery by one's husband in combination with some other 'aggravation' (incest, bigamy, rape, sodomy, cruelty, or desertion for five years). [2] It was required, however, that petitions be heard by at least three judges. All cases thus had to be heard in Wellington, often at considerable extra cost, until in 1881 the law was amended to allow judges sitting alone to determine petitions. This was the only

[1] Until 1857, full divorces permitting remarriage were available in England only by an Act of Parliament. They were prohibitively expensive for all but the most wealthy, so that between 1715 and 1852 a mere 184 were granted, all but four of them in favour of male petitioners. See McGregor (1957) for a fuller account.

[2] The Court was, however, precluded from granting a divorce if the petitioner was an accessory to, or had connived at the respondent's adultery; if the adultery was condoned; or if the petition was presented in collusion with the respondent. It also had discretionary power not to grant a divorce if the petitioner was also guilty of adultery; if the respondent was deserted before the adultery; if the petitioner was guilty of wilful neglect or misconduct; or if there had been 'unreasonable' delay in bringing the petition.

significant change made until 1898, although after 1880 there were several unsuccessful attempts to extend the grounds for divorce. [3]

Chiefly responsible for the amending legislation of 1898 was John MacGregor, a social idealist who capitalised on favourable changes in the membership of the Legislative Council, the success of the Suffragette Movement in 1893, and changes in Australian divorce laws. [4] MacGregor's Private Member's Bill of 1894, which drew heavily on legislation passed in Victoria, met with vehement opposition from the Presbyterian, Anglican, and Catholic churches. Like earlier Bills it was stifled procedurally. A substantially modified version met the same fate in 1895, and ironically the Bill which finally succeeded was not introduced by MacGregor. However, it contained essentially the provisions he favoured and was vigorously supported by him. [5]

[3] In 1881 a proposal that desertion for seven years be made a ground for divorce was defeated. It aimed to regularise the position of deserted spouses who could remarry after seven years if the deserting party was presumed dead, but whose second marriages became void (and the children of them illegitimate) if that party later showed up again. Then, during 1885-89 one Oliver Samuel made several attempts to have the grounds for divorce extended (see Mansell, 1970). In 1891 John Joyce, a lawyer, stressed the problem of desertion associated with colonial mobility, particularly as over the preceding few years there had been severe depression in New Zealand but comparative prosperity in Australia. However, he, too, met with no success.

[4] One impediment to earlier reformers had been that an Act liberalising the grounds for divorce in New South Wales had continually been refused royal assent. Assent was finally given in 1892, in which year similar legislation was also successfully enacted in Victoria.

[5] Mansell (1970) attributes the successful passage of this Bill largely to its receiving a second reading late in 1897, so that it had a 'flying start' in 1898, and to the speed with which the Premier, Richard Seddon, expedited its final consideration. As a result the procedural stonewalling tactics of its opponents were ineffective.

The Divorce Act 1898 saw matrimonial fault accepted as the underlying principle of divorce law. Adultery by either spouse became a sufficient ground for divorce. Desertion for five years, habitual drunkenness for four years coupled with failure to maintain and cruelty, and imprisonment for seven or more years for the attempted murder of the petitioner also became grounds for divorce. So did failure to comply with an order for the restitution of conjugal rights (ORCR). It was required under this ground that a petitioner make genuine efforts to have the deserting spouse resume cohabitation, but inevitably it often was used to hasten dissolution (Sandford, 1937).

The main concern of early twentieth century reformers was to have insanity accepted as a ground for divorce. Arguing that insanity was hereditary, and that therefore it was not desirable that the insane procreate, their efforts finally bore fruit with the passage of the Divorce and Matrimonial Causes Act Amendment Act 1907. The main purpose of this Act was to remove failure to comply with an ORCR as a ground for divorce, but it also provided for divorce from a spouse who had been of unsound mind for ten of the previous twelve years or who had been convicted of murdering a child of the marriage.

In 1912 the required period of insanity was reduced to seven of the previous ten years. Further changes to the law were not made until after World War 1, when three prominent reformers seized the opportunity to substantially liberalise the grounds for divorce. The Divorce and Matrimonial Causes Amendment Act 1920 was passed with surprising ease. [6] It gave the Court discretion to dissolve marriages where the parties had been separated by a decree of judicial separation, a separation order or agreement, or mutual consent for

three years. The ground failure to comply with an ORCR was reinstated, and divorce was extended to petitioners whose spouses had been sentenced to seven or more years imprisonment for wounding them or a child of the marriage.

The discretion attached to the three-year separation provision soon created difficulties. After a public outcry over a case in which the husband petitioned successfully despite the opposition of his 'wronged' wife, legislation was passed in 1922 precluding divorce under this provision if the 'innocent' party objected. [7] This backtracking showed the 1920 Act to have been less than an enlightened piece of social legislation representing the considered opinions of legislature and electorate. New Zealand had at that time the most liberal divorce law in the British Empire, and not surprisingly the grounds for divorce were not further extended until 1953.

In the interim, the provision allowing divorce in the event of non-compliance with an ORCR continued to be regarded rather uneasily.

Apart from the fear that the provision amounted to divorce by consent there were three main complaints. Effectively such a law allowed rapid divorce for those who could afford the expense of two suits ... but not to those of more modest means. Further, the provision conflicted with the general policy of the divorce legislation which was to maintain a three year locus poenitentiae before divorce was sought as a result of separation. Finally it

[6] This has been attributed partly to public attention being focused at the time more on an amendment to the Marriage Act designed to impel the Catholic Church to recognise remarriages of divorced persons (Mansell, 1970). The presence of three ardent divorce law reformers, MacGregor, Samuel, and Wilford, in the House at the one time was also important, and the fact that insertion of the ground 'failure to comply with an ORCR' into the 1898 Act had not brought a deluge of divorces probably helped too.

[7] The case in question, *Mason v Mason*, is recounted in the New Zealand Law Review, 1921: 955.

presented a standing temptation for collusion by the parties, and collusion which the judiciary felt itself powerless to control. (Mansell, 1970: 151-152).

The major impetus to reform came after World War 2, when this ground was used in about twenty percent of all divorce cases. Judges frequently bemoaned its abuse, but as drafted the Divorce and Matrimonial Causes Bill 1953 made no reference to it. [8] The Bill was amended to abolish the troublesome ground, and also to add the new ground of seven years continuous separation with little likelihood of reconciliation. This was proposed to cater for petitioners whose wrongful act had precipitated separation or who could not prove desertion or that a separation agreement existed. It was rendered largely ineffective by addition of a proviso that a petition was to be dismissed if the respondent could prove that the petitioner's wrongful conduct caused the separation.

The absolute nature of this proviso drew frequent adverse judicial comment. Judges were finally granted discretion to waive it by the Matrimonial Proceedings Act 1963. That Act also added two minor new grounds for divorce and modified some of the less frequently used existing grounds, so that there were now twenty-four grounds embracing a mixture of the irreconcilable breakdown and matrimonial offence principles of divorce law.

The Minister of Justice, Ralph Hanan, proceeded subsequently to espouse the former principle. In moving toward its acceptance he

[8] The original Bill provided that being certified insane did not terminate a period of desertion; that mere conviction for an act of violence against the petitioner or a child of the marriage, or any conviction for murder was grounds for divorce; and that the period of certified insanity on which a divorce petition could be based be reduced to five years if there was little chance of recovery.

initiated the Matrimonial Proceedings Amendment Act 1968, which reduced the waiting period for establishing desertion, the various separation grounds, and habitual drunkenness from three to two years and the period of living apart from seven to four years. The rapid rise in the divorce rate through the late 1960s and the 1970s ensured further change. Introduction of the Domestic Purposes Benefit (DPB) saw the State accept responsibility for the dependants of broken marriages irrespective of blame. Then, with the passing of the Family Proceedings Act 1980, irreconcilable breakdown of marriage, as evidenced by two years' continuous separation, became from October 1981 the sole ground for divorce. This Act, passed following a comprehensive review of matrimonial law (Webb, 1977), marked the final step in the transition from a law which upheld the Christian doctrine of marriage as a religious sacrament to one which sees it as a social contract subject to the wills of its signatories (Lloyd, 1978; Atkins and McBride, 1979).

7.3 TRENDS IN DIVORCE

Until recently, trends in divorce in New Zealand had attracted limited scholarly attention. Nixon (1954) examined changes in divorce petitions filed per 100000 existing marriages during 1887-1950. Later, Jain (1972) employed cross-sectional data for 1921-67 to investigate divorce trends both in period terms and in terms of the experience of successive birth cohorts. Jain's is a technically competent analysis, but is limited with respect to interpretation. In contrast, three more recent studies (Lloyd, 1978; Vosburgh, 1978; Phillips, 1981) show more insight, but are demographically unsophisticated. Finally, in a series of brief papers Dickinson and

Christensen (1978) and Dickinson (1979, 1980) have attempted to examine divorce trends from the perspective of marriage cohorts. The aim in this section is to present an analysis which combines and extends the best features of these earlier studies.

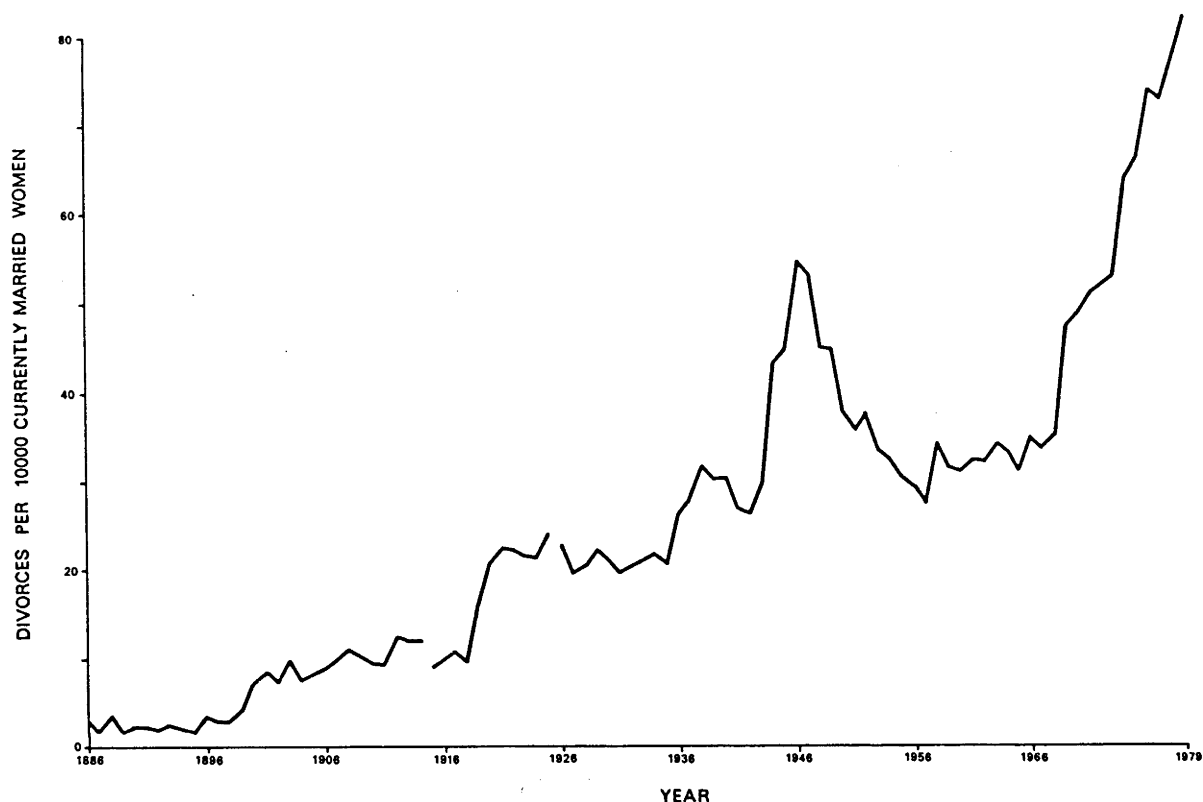
The Divorce Rate

The incidence of divorce in a year may be measured in several ways. The number of decrees absolute granted may change simply because the size and demographic character of the married population changes. Likewise the crude divorce rate, which measures decrees absolute per 10000 of mean population, is affected by changes in a population's composition by marital status (Chester, 1977b). A third measure, the ratio of decrees absolute per 100 marriages celebrated, has a denominator which in no sense constitutes the population at risk of divorcing, and is easily misinterpreted as indicating the probability that a marriage contracted in a given year will end in divorce.

The population at risk of divorcing consists of legally married couples. Consequently the divorce rate is most appropriately measured as the number of divorces granted per 10000 existing marriages. In Figure 7.1 'existing marriages' have been equated with 'currently married women'. It will be noted that the trend line is broken at two points. The first break marks a switch from decrees nisi to decrees absolute as the measure of the number of divorces granted. The second marks change from a non-Maori to a total population denominator. [9]

[9] Annual series of the measures discussed in this and the previous paragraph are given in Table A2.18, Appendix 2.

Figure 7.1
DIVORCE RATE 1886-1979



Source: Statistics of the Colony of New Zealand 1886-1906; Statistics of the Dominion of New Zealand 1907-20; New Zealand Justice Statistics 1921-79; 1886-1976 censuses; unpublished data supplied by the Department of Statistics.

Trends in the Divorce Rate

Data on divorce decrees made under the 1867 Act are available only from 1886 (Figure 7.1). Few marriages were dissolved under this legislation, but social historians are unanimous in the view that this understates the frequency of marriage breakdown during the nineteenth century. Sutch (1941: 46) describes wife desertion as 'common' from the 1840s onward (see also Sharp, 1930; Grimshaw, 1973), and in a

later volume (1973: 72) writes that 'deserted wives were long a part of the nation's social pattern'. Similarly Olssen and Levesque (1978: 3) note that 'for most wives ... the threat of personal assault was real'. Many husband-wife relationships were (p 4) 'formal and emotionally constipated', and especially among the lower social strata desertion was both an easy and a common method of escape from unhappy marriages, particularly during the gold rushes and periods of depression. Lloyd (1978) concurs that the major social dislocations of 1870-1900 had serious repercussions for the stability of the New Zealand family.

No figure can be put on the frequency of wife desertion, but the colonial environment hardly made for conjugal harmony.

Throughout the nineteenth century, the imbalance between the sexes, linked with the many physical challenges of a new environment, encouraged a community of male-centred interests which precluded the easy acceptance of women and things feminine. Loyalty to one's mates, equally preoccupied in wresting a living from the virgin soil, and the camaraderie of the binge at the bar was frequently substituted for the nostalgically-recalled forms of life left behind in the homeland. ... Drink was itself an anodyne - a means of blotting out the harsh discomforts of colonial living. (Houston, 1970: 32)

Two indirect indicators that the problem of wife desertion was severe are parliament's frequent concern with the destitute and the rise after 1880 of the 'cult of domesticity' (Olssen and Levesque, 1978).

An 1846 Ordinance for the support of destitute families and illegitimate children, and later the Destitute Persons Act 1877, provided for the making of court orders for maintenance. Revisions of this legislation in the mid-1890s then introduced separation orders for the physical protection of wives. Recourse apparently was had much more frequently to these forms of marital relief than to the

divorce courts (Cripps, 1973; Lloyd, 1978). There was also the Married Woman's Property Act of 1884, which permitted married women to own property. Previously a deserting husband could return and claim anything his wife had acquired in his absence, then leave again.

The 'cult of domesticity' was spawned by two things: concern, mainly among women, at the intemperance and violence which afflicted domestic relations, and the fact that the very maleness of society served to encourage the formation of a wide variety of charitable and reform-oriented women's organisations.

Starting with the Women's Christian Temperance Union, founded in 1885, women formed dozens of organisations to promote child welfare, protect the weak, eradicate specific evils and glorify the role of motherhood. ... Their main goal was to establish the family and the home as the seat of stability and the bulwark of morality, and to make it attractive to men. ... Good quality homes promised deliverance from the problems of illegitimacy, divorce, larrikinism, wife-desertion, general immorality and crime. (Olssen and Levesque, 1978: 8-9).

Various crusades, the most notable being the campaign for prohibition (Grigg, 1978; Bunkle, 1980), were mounted which claimed the need to save the family as a major justification.

Extension of the grounds for divorce and equalisation of access to it for the sexes in 1898 brought an immediate, permanent rise in the divorce rate (Figure 7.1). The next major increase occurred during 1918-20 after the social upheaval of World War 1. This might have been a temporary rise, but with the grounds for divorce being extended in 1920 a divorce rate of around twenty per 10000 currently married women persisted until 1935-38, when the rate rose again. This time it did so because of the Depression, although not until couples could afford the cost of a divorce and until those who relied on

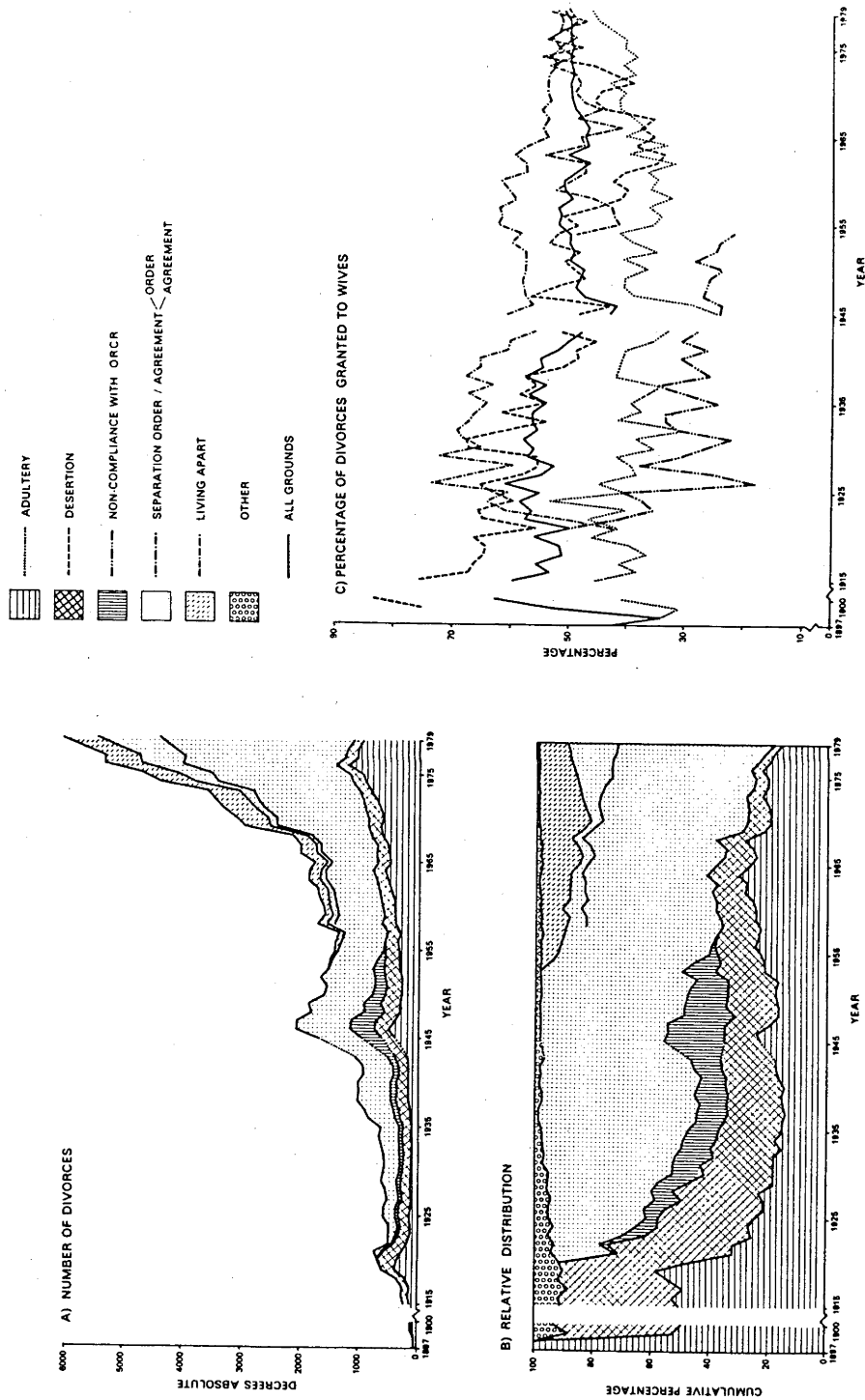
grounds of separation or desertion had satisfied the prescribed waiting periods. By now less than one-fifth of divorces were being granted on the ground of adultery, while more than half were being granted on the ground of three years' separation (Figure 7.2(b)).

Early in World War 2 the divorce rate declined. It then doubled between 1942 and 1946, the main increments occurring in 1944 and 1946 (Figure 7.1). The former of these followed the first phase of demobilisation of the armed forces, and the latter the return of the overseas contingent of servicemen (Baker, 1965). As divorces ending marriages which foundered during wartime passed through the courts the divorce rate declined again. By the mid-1950s it was below its immediate pre-war level, partly at least because an unusually large proportion of marriages were so recent as to be unlikely yet to be the subject of divorce proceedings. A sharp rise in the divorce rate between 1957 and 1958 probably reflects the dropping of failure to comply with an ORCR as a ground for divorce, this requiring the grounds of separation or desertion for three years to be used instead. Thereafter the divorce rate remained relatively stable until 1968.

From 1968 there commenced an upward trend in the divorce rate which has yet to level off. Its causes will shortly be discussed more fully, but clearly one factor was shortening of the periods required to be waited before petitioning on the grounds of desertion, a separation order or agreement, or having lived apart (section 7.2). Another was the introduction in 1968 of the DPB. Its upgrading in 1974 to a statutory benefit reduced the Department of Social Welfare's discretionary powers to reject benefit applications.

Figure 7.2

DIVORCE BY GROUNDS: 1897-1900 AND 1915-1979



Source: Statistics of the Dominion of New Zealand 1915-20; New Zealand Justices Statistics 1921-79; Phillips (1981).

Interpretation of Trends in the Divorce Rate

Many writers have warned against inferring from divorce rates changes or differences in levels of marital disharmony and incidences of marriage breakdown (for example, Day (1979) and Crosby (1980)). Earlier discussion leaves no doubt that the low divorce rate during the nineteenth century does not mean that unhappy or unstable marriages were rare. It is also significant that following major liberalisations of the divorce laws in New Zealand the divorce rate has risen permanently. One argument based on this observation has been that divorce law reform typically has catered to a pre-existing public demand (Lloyd, 1978). However, it may also have caused some marriages to be dissolved, which is not to say that because divorce became easier the quality of some marital relationships deteriorated. Rather the argument is that each liberalisation of the law was interpreted as marking a new level of public acceptability of divorce, and that this reduced the amount of marital disharmony or dissatisfaction some individuals were prepared to tolerate. [10]

Chester (1977b), expressing ideas similar to those advanced by Day (1965), distinguishes between the formal, or legal availability of divorce, its effective availability, which takes in matters such as cost and access to the courts, and its normative availability, which has to do with the attitudes of individuals and society at large. Different divorce law reforms in New Zealand have had different impacts at the formal and normative levels. Those of 1898 and 1920

[10] A similar argument was advanced by Nixon (1954) when he stressed 'imitation of example' as the major explanation for both temporal increases and a pronounced North Island-South Island differential in the incidence of divorce in New Zealand.

extended divorce to large new groups of unhappily married persons, whereas the Matrimonial Proceedings Amendment Act 1968 merely allowed many couples to divorce more quickly. [11] Following both earlier reforms there was rapid movement toward the newly created grounds for divorce (Figure 7.2(b)), while after 1898 the sex ratio of petitioners for divorce changed dramatically in favour of women (Figure 7.2(c)). One cannot assume that all who used the new or extended grounds would not otherwise have divorced, but this probably would have been true in many instances.

Conceivably the Matrimonial Proceedings Amendment Act 1968 influenced some couples, who otherwise would not have bothered, to formally end failed marriages. This mechanism apart, however, it is difficult to imagine it having had other than a temporary impact, except through its effect on perceptions of public attitudes to divorce. It is important to distinguish here between the concepts of marital disharmony and dissatisfaction, and marital breakdown to the point of separation. The 1968 law change cannot reasonably be held to have affected the quality of marital relationships. But what it may have done, through publicity and debate surrounding both the law change and the inevitable short-term response to that change, is trigger downward shifts in the amount of marital disharmony and the degree of non-fulfilment of expectations deemed to justify separation and divorce in the eyes of the unhappily married.

[11] Chester (1977b) similarly asserts for England and Wales that the argument that increases in the divorce rate following changes in law reflect a transfer from informal breakdown to public manifestation via divorce, and not any increased fragility of marriage, carries more weight in the historical past than it does for the modern period.

If indeed this happened it did so because a number of social and demographic trends had laid the groundwork. Marriages now lasted longer; they took place at considerably younger ages (Chapter 6), and compared to the late nineteenth century widow(er)hood occurred much later. Gibson (1971: 147) quotes non-Maori life expectancies at exact age fifteen in 1880-82 of 48.0 years for males and 50.6 years for females, these figures rising to 53.1 and 54.9 in 1921-22 and to 56.3 and 61.2 in 1960-62. To some extent divorce may have become a substitute for death in limiting the duration of unhappy marriages (Phillips, 1981), but as will shortly be shown the upsurge in the divorce rate after 1968 mainly involved marriages of under twenty years' duration. The real significance of earlier marriage and longer life expectancies was that by the late 1960s there had developed an awareness that 'till death us do part' meant something very different from what it had to one's grandparents. It meant agreeing to live together for perhaps forty to fifty years. Moreover, fewer children spaced closer together (O'Neill, 1979) who were likely to leave home in middle or late adolescence implied that much of that time would be spent as a twosome. With that prospect the quality of the marital relationship assumed a new importance.

A second set of social and demographic changes relates to the functions of the family, expectations of marriage, the capacity of wives to live independently, and parental control over mate selection and the timing of marriage. Arranged marriages were never the norm in New Zealand, but from the early stages of European settlement parents endeavoured to exercise close control over courtship.

Courtship was very important and subject to communal supervision. Among the wealthier families supervision proved easy to maintain once the first frontier became a settled network of

communities. ... the sojourn to Europe and finishing school ensured that their daughters did not fall in love with unacceptable young men. Within New Zealand, private girls' schools played a similar role. ... Beneath the relatively small stratum of wealth and status families tried to attain the same control, to preserve their daughters' virtue and ensure that they married prudently. In small cohesive communities and stable rural areas most families enjoyed considerable success in supervising courtship and marriage. (Olssen and Levesque, 1978: 2-3)

The undermining of parental influence over courtship has been mainly a post-World War 2 phenomenon. It has probably affected the stability of marriage principally via two mechanisms: firstly, earlier marriage (Chapter 6), which has meant couples have been less mature when taking on family responsibilities; and secondly, marriage precipitated by pregnancy (Chapters 2-4), which probably impaired careful assessment of couples' compatibility.

In the nineteenth century the family remained rather more of an economic unit in New Zealand than it did in Britain (Olssen and Levesque, 1978; Phillips, 1981). For two reasons eventual urbanisation did not pose the threat to conjugal stability it did in some other Western countries. Industrial development was on a comparatively small scale, so that places of work were not, as a rule, highly impersonal. Secondly, the phenomenon of male 'mateship' (Ritchie and Ritchie, 1973), which Day (1964) identified as a likely reason for the much lower divorce rate in Australia than in the United States, reduced the pressure on wives to become companions, and they in turn were prepared to rely on their children for emotional solace. The barrenness of husband-wife relations is a prominent theme in New Zealand literature, which tends to idealise childhood (Alcock, 1970). Alcock goes on to conclude (pp 272-273) that New Zealand literature reveals:

... an extensive documentation of parental estrangement or frustration and a consequent emotional and spiritual impoverishment of the home This also has, perhaps, three further and exacerbating aspects in that the dominant type of family group is 'nuclear' rather than 'extended', that in pakeha (European) society an unduly large part of family cohesion seems less from 'sexus' than from Marx's 'cash nexus', and that there seems a recurring pattern of fathers nominally in authority yet in subtler aspects ineffectual, and hence of mothers wielding curiously hollow power 'behind the scenes', leaving them directionless and unfulfilled.

Expectations of marriage in New Zealand historically have not been very lofty. Those who sought to improve family life around the turn of the century concentrated on ridding it of excesses such as drunkenness and violence. Then, through the 1920s and 1930s, many families were preoccupied with survival. Through the affluent 1950s men built careers, while most women were content with settled family lives in their own homes and with being good wives and mothers. It was not until the 1960s that, largely through the influence of the Women's Movement (Swain, 1978), but perhaps also because baby boom cohorts acquired from the media and their peers an unrealistic image of married life (Carlson, 1979), hitherto idealistic hopes of what marriage would offer began to be transformed into expectations, even requirements. Increasingly, women in particular demanded marriages that offered equality, preservation of their individuality, and emotional fulfilment. The lot of the New Zealand wife and mother (Phillips, 1980) made her potentially very receptive to the philosophies of re-emergent feminism.

... the New Zealand father doesn't, by and large, try to dodge the issues of responsibility, but by tradition the children are as much a part of the home as the vacuum cleaner and his wife. ... With first (and maybe later) children he tends to reject the new mother-child bond and resent the changes it brings in his access to sexual and social satisfactions. He attempts to reintegrate the pattern of their social life before the baby came, expects his wife to look, dress and act as before and if this fails, falls back on pre-marriage patterns of social life,

sporting activities and associates. But whatever he does his wife must carry the responsibility for the children, their care and behaviour. (Ritchie and Ritchie, 1973: 87)

Crucial to women's reappraisal of their expectations of marriage was their growing realisation that they could support themselves. The rapid increase in married female labour force activity since World War 2 has arguably been the most significant socio-demographic trend of the period (Carmichael, 1975, 1979b). Through the 1950s it involved mainly a growing tendency for mothers to return to employment when their youngest children were of school age. That trend continued through the 1960s, in company with increasing economic activity among wives aged 20-29 years (see Figure 6.4). This stemmed largely from the widening of the first birth interval (Chapter 6), which also left couples freer to end marriages which immediately proved to be 'mistakes' and accustomed them to two-income lifestyles, thereby adding stress to the transition to parenthood. But it stemmed as well from the earlier completion of childbearing, increased voluntary childlessness (O'Neill, 1979), and changing attitudes toward the need for full-time maternal care of pre-school children. Data from the 1976 census (Table 7.1) suggest that around thirty-five percent of mothers aged 20-29 whose youngest child was aged 3-4 were employed outside the home, most for twenty or more hours per week. Trend data are not available, but it is hard to imagine the figure being nearly as high at, say, the 1961 census.

Far from just convincing them they could live independently, the increased employment of married women helped both them and their husbands to meet alternative partners. Along with the general tide of feminism it also placed pressure on husbands to share more equally in

Table 7.1

EMPLOYMENT STATUS BY MATERNAL AGE AND AGE OF YOUNGEST CHILD: MOTHERS
AGED UNDER THIRTY WITH CHILDREN AGED UNDER TEN 1976

Maternal Age and Age of Youngest Child	Percentage Working				Total	N
	0 Hours	1-19 Hours	20-29 Hours	30+ Hours		
Under 20						
0-2	87.7	2.9	1.5	7.9	100.0	543
3-4	63.6	-	9.1	27.3	100.0	11
20-24						
0-2	84.5	6.1	2.6	6.7	99.9	3370
3-4	63.9	9.2	4.6	22.3	100.0	476
5-9	48.2	8.2	17.6	25.9	99.9	85
25-29						
0-2	81.5	8.5	3.2	6.9	100.1	5058
3-4	65.8	14.6	5.0	14.6	100.0	1776
5-9	40.5	13.5	16.2	29.8	100.0	1146

Source: 1976 census ten percent sample.

the day to day domestic tasks, and unwillingness to bow to this pressure almost certainly strained some marriages. Several other forces can be identified which tended to make marriage more fragile. Post-war economic prosperity doubtless raised the material aspirations of post-1960 marriage cohorts relative to those of earlier cohorts. It was also instrumental in moving the value structure of society away from principles of conformity and obligation toward those of happiness, autonomy, self-realisation, and spontaneity. Other factors associated with this trend were the lengthening of formal education, the wave of protest that accompanied the Vietnam War, and the diminishing influence of organised religion. The very passage of divorce legislation which treats marriage as a social contract amply

demonstrates the churches' decreased hold over New Zealand society.

Returning to the capacity of wives to live independently, a key factor behind the rapid rise in New Zealand's divorce rate after 1968 was the introduction of the DPB. Relatively generous as welfare benefits go, it permitted mothers as never before to take the initiative in ending unhappy marriages (Easton, 1978). [12] It also assured deserting fathers that their wives and families would not be left destitute. Finally, it allowed couples jointly to decide to separate on the basis that the husband would not be solely responsible for the support of his wife and children unless he could afford to be. [13] These forces strengthened as the DPB became more widely known (Table 7.2), and as it became clear, first, that the courts were considering a husband's income and any new dependants he had acquired when making maintenance orders (Herd, 1978), second, that such orders could be defaulted on with relative impunity (Kun, 1977), and third, that the State would support the victims of maintenance defaulters.

Two other legislative initiatives warrant comment. The Legal Aid Act 1969 does not cover divorce proceedings, and is relevant to divorce trends only insofar as legal aid is available in respect of custody and matrimonial property disputes. Secondly, the Matrimonial

[12] The increase in the importance of the 'separation order' ground for divorce after 1972 (Figure 7.2(b)) is probably partly attributable to mothers' growing awareness of the DPB's availability.

[13] It should be noted that a vigorous debate has been taking place in the United States over whether welfare benefits increase marriage dissolution (Moles, 1979). Summarising this debate Bahr (1979), since challenged by Draper (1981), concludes that, overall, they do. The DPB differs from the American AFDC program in that it caters to solo parents specifically rather than to low income families, and it seems unlikely not to have had the sorts of effects just attributed to it.

Table 7.2

DOMESTIC PURPOSES BENEFITS IN FORCE AS AT 31st MARCH 1969-1980

Year	Benefits in Force	Benefits Being Paid to Solo Parents	Percentage of Solo Parent Beneficiaries: ¹				Total
			Divorced	Legal Spouse	Separated from De Facto Spouse	Unmarried	
1969	2494						
1970	3092						
1971	4432						
1972	6186						
1973	9234						
1974	12600						
1975	17231	15882					
1976	23047	21299	4.9	61.9	7.2	21.4	4.6
1977	28401	25759	4.5	61.5	8.3	21.4	4.3
1978	31465	28663	4.1	61.0	10.4	20.6	3.9
1979	35385	32713					
1980	37040	34559	3.7	60.3	12.7	19.6	3.7

Source: Annual Reports of the Child Welfare Division, Department of Education 1969-72, and of the Department of Social Welfare 1973-80.

¹ Note that these percentages are based on beneficiaries' statuses as at the dates of filing their benefit applications. This explains in particular the low percentages of divorced beneficiaries.

Property Act 1976 (Fisher, 1977) has recently added to the attractiveness of divorce for unhappily married women. The Act provides for the equal division of all matrimonial property between parties to marriages of three or more years' duration, unless the parties reach some other agreement. It may have dissuaded some married men from divorce, but where it has determined a wife to end her marriage her husband has been relatively powerless to resist.

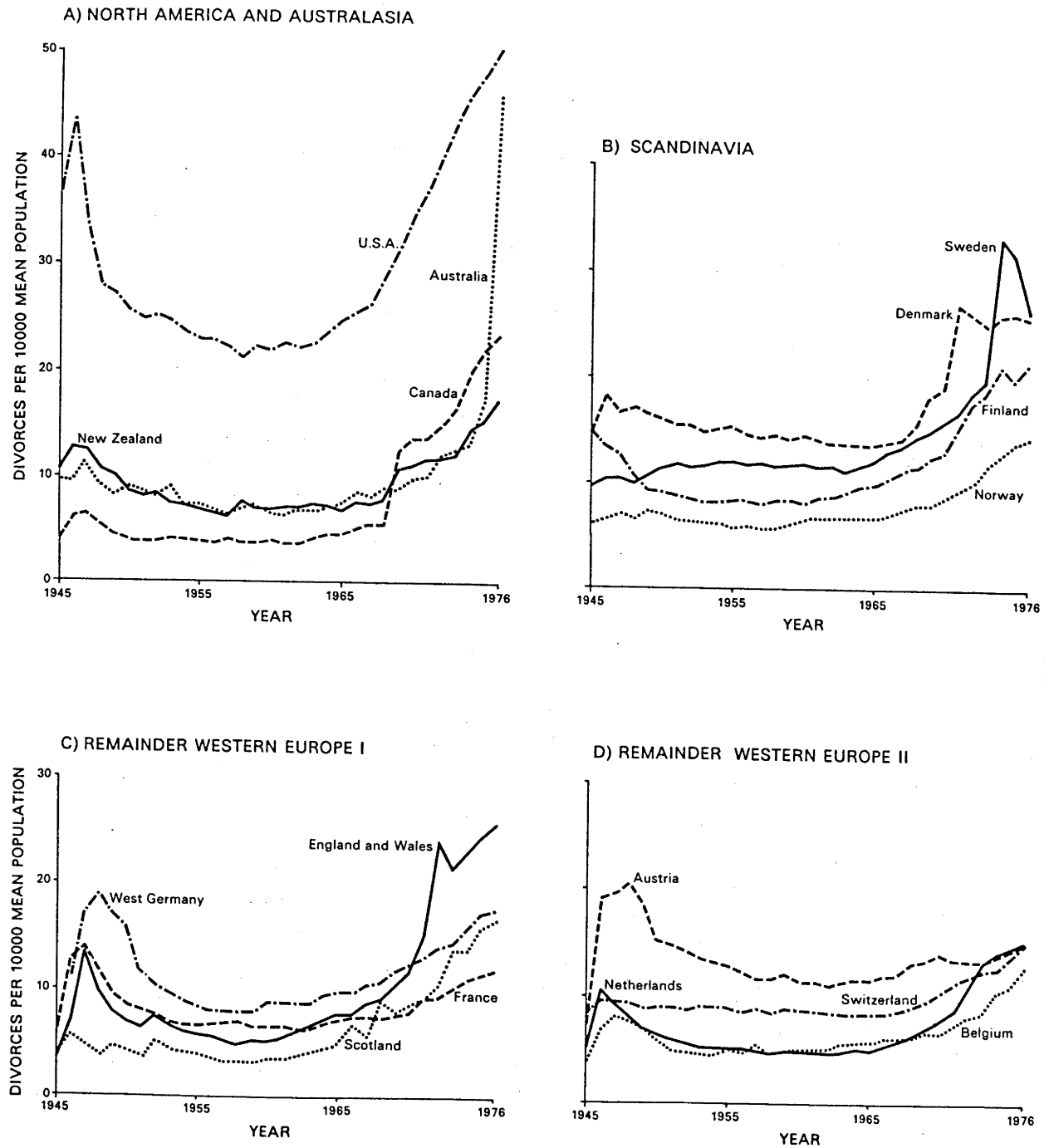
Post-war Trends in Cross-national Perspective

New Zealand has not been alone among Western countries in experiencing a recent rapid increase in its divorce rate. Figure 7.3, showing trends in the crude divorce rate for sixteen nations, demonstrates this conclusively. [14] In most cases, upward trends in this index became established during the early or mid-1960s, and the more spectacular increments have coincided with changes in divorce laws. The massive rise for Australia in 1976 followed the introduction of irrevocable breakdown, as evidenced by one year's separation, as the sole ground for divorce (Guest and Gurvich, 1979). [15] In Canada, liberalisation of the divorce law in 1968 and its extension to cover Newfoundland and Quebec resulted in a sharp rise in the crude divorce rate in 1969 (Hahlo, 1975; Peters, 1976b). Likewise in Denmark (Koch-Nielsen, 1978), Sweden (Trost, 1977, 1979a), England and Wales (Chester, 1977b; Leete, 1976, 1979), and the

[14] The crude divorce rate earlier was noted to have limitations, but is available for more countries over the entire post-war period than is the divorce rate. It is unlikely seriously to mislead when used to compare national trends, rather than levels, of divorce. For available historical series of divorce rates for Western European nations see Chester (1977a: 294-297). For United States and Australian series see Glick and Norton (1977) and McDonald (1980) respectively.

Figure 7.3

CRUDE DIVORCE RATES FOR SELECTED WESTERN NATIONS 1945-1976



Source: United Nations Demographic Yearbook 1958, 1976, and 1978.

Netherlands (Kooy, 1977), major liberalisations of the divorce laws were followed by marked increases in crude divorce rates. The situation in the United States is less straightforward, divorce being a matter for state legislatures, but over half of these have passed no-fault divorce laws since the late 1960s (Wright and Stetson, 1978). Finally, in Belgium divorces by consent were made easier to obtain in 1969 and again in 1972, and in January 1975 divorce became obtainable on the ground of permanent disruption of the marriage (Dumon, 1977).

With respect to the divorce trend in New Zealand the main point to emerge from Figure 7.3 is the extent to which crude divorce rates rose either before or in the absence of major legislative reform. This cautions against attaching too much significance to the Matrimonial Proceedings Amendment Act 1968. Probably the various social and demographic forces previously discussed were destined to produce a rising divorce rate from about this time anyway. Perhaps the role of the DPB in raising New Zealand's divorce rate also can be overstressed, but it does seem a more important legislative initiative in that it removed a major barrier to separation and divorce for

[15] The size of the Australian response was due partly to the introduction in mid-1973 of the Supporting Mother's Benefit and partly to the radical nature of the Family Law Act 1975. The latter required that eligibility for a government pension be taken into account in maintenance decisions, and most divorced women are eligible for a Widow's Pension (McDonald, 1980). Then again, under the Matrimonial Causes Act 1959-66, the two most popular grounds for divorce were the fault grounds desertion for two years and adultery. To divorce on the ground of separation, seemingly the most appropriate where spouses had parted by mutual agreement, the parties had to live apart for five years. When the 1975 Act came into force many couples planning to use the separation ground already would have lived apart for one year. Others who had not bothered with divorce because they could not, or would not, allege adultery or desertion and found the five-year separation period too long probably decided to take action. The 1976 increment was in fact to a large extent temporary, for having reached 19.2 divorces per 1000 married women in that year the divorce rate fell to 12.2 per 1000 in 1978 (McDonald, 1980).

non-working mothers and their husbands.

The Total Divorce Rate

A question which regularly engages students of divorce is the likelihood that a couple marrying in a given year will divorce. A moment's thought shows that really it can only ever be answered in retrospect, but one method of approaching it prospectively is to assume that couples marrying in a given year will experience the marriage duration-specific divorce rates recorded in that year. Summing these rates to different marriage durations yields a series of total divorce rates which are analogous to the total fertility rate.

When calculating total divorce rates for New Zealand, several deficiencies are encountered in the available data. The New Zealand census does not ask duration of marriage. It is thus impossible to adjust the sizes of marriage cohorts for migration, and consequently the total divorce rates presented in Table 7.3 assume that these remained constant. The other side of this problem is that published data giving divorces by duration of marriage are adjusted for migration; they include New Zealand dissolutions of overseas marriages and exclude overseas dissolutions of New Zealand marriages. If, therefore, more married couples were entering New Zealand than were leaving during most of the post-war period, the rates given in Table 7.3 may be on the high side. The problem is at least partly offset by no attempt being made to adjust marriage cohorts for mortality.

Other problems are associated with the published statistics on divorces by duration of marriage. Until 1953 duration of marriage was

Table 7.3

ESTIMATED TOTAL DIVORCE RATES TO SELECTED EXACT MARRIAGE
DURATIONS 1925-1980

Year	Exact Marriage Duration in Years					
	5	10	15	20	25	30
1925	8	29	44	56	64	68
1926	7	28	41	51	58	63
1927	8	26	40	49	54	60
1928	9	26	42	53	59	65
1929	8	27	42	53	59	66
1930	9	28	44	54	59	65
1931	6	24	41	49	55	61
1932	8	26	42	52	58	65
1933	7	27	43	55	61	67
1934	6	28	44	57	62	67
1935	7	25	43	57	63	68
1936	8	33	52	67	75	82
1937	10	35	57	75	84	92
1938	8	35	60	77	87	95
1939	9	35	57	72	81	90
1940	8	34	58	74	84	92
1941	7	29	47	62	71	79
1942	8	27	47	62	71	80
1943	9	32	52	71	81	92
1944	19	50	82	103	114	129
1945	23	59	87	109	130	144
1946	24	71	105	131	145	158
1947	24	71	101	127	141	152
1948	20	60	87	108	121	131
1949	18	61	87	108	121	130
1950	15	50	74	93	104	113
1951	17	46	67	83	95	104
1952	15	46	70	86	99	107
1953	14	41	65	80	90	97
1954	9	36	61	76	90	96
1955	8	32	55	71	82	90
1956	6	33	53	67	79	88
1957	5	30	52	65	75	84
1958	7	37	63	81	93	103
1959	6	34	58	74	85	95
1960	7	34	56	73	85	96
1961	6	33	56	74	88	98
1962	7	32	58	77	90	100
1963	7	35	62	81	96	107
1964	7	38	61	80	94	103
1965	7	33	54	71	88	97
1966	7	35	59	78	96	109
1967	7	35	61	81	97	109
1968	9	40	64	84	100	113
1969	12	56	90	115	136	151
1970	15	60	92	117	139	155
1971	16	64	99	123	147	164
1972	16	64	101	129	153	167
1973	16	64	105	133	156	171
1974	19	77	126	160	186	204
1975	20	80	132	168	196	214
1976	22	90	142	184	215	237
1977	16	82	136	180	214	236
1978	17	85	142	187	223	248
1979	17	91	149	195	233	258
1980	16	94	157	208	248	272

Source: New Zealand Justice Statistics and New Zealand Vital Statistics 1925-80.

calculated as at the date of petitioning for divorce, whereas subsequently it was computed as at the date of the decree absolute. Secondly, duration of marriage is calculated by subtracting year of marriage from year of divorce petition or decree absolute (Dickinson, 1979). This has the theoretical advantage that divorces can be linked to their correct marriage cohorts, but it yields marriage durations which may be one year too low. Finally, the theoretical ability to link divorces to marriage cohorts is largely lost because divorces are available by single years of marriage duration only for durations 0-4 years until 1962 and 0-9 years during 1963-76. For longer durations they are grouped into five-year, ten-year, and open interval classes.

Fortunately Dickinson (1979, 1980) has prepared an acceptable set of estimates of decrees absolute granted annually during 1925-76 by single years of marriage duration (data giving decrees absolute by year of marriage are available from 1977 onward). Table 7.3 is based on these estimates, which make allowance for the different sizes of successive marriage cohorts, and also build in a one-year increase in marriage durations for those years in which marriage duration officially was determined as at the date of petitioning for divorce.

Couples marrying in New Zealand in the late 1920s and early 1930s had a six to seven percent chance of divorcing within thirty years under the divorce rates by marriage duration then prevailing (Table 7.3). As the Depression affected divorce statistics, this figure rose to between nine and ten percent. The divorce rates of 1946 would have depleted a marriage cohort by almost sixteen percent over thirty years. However, these rates were temporarily high, and for couples marrying in the middle and late 1950s the likelihood of divorcing

within thirty years was again below ten percent.

Through the early 1960s the total divorce rate to exact marriage duration thirty years began to rise, and by 1968 had reached 113 per 1000 marriages. Thereafter it rose sharply, and in 1980 stood at 272 per 1000 marriages. When divorces at longer marriage durations also are considered, the cross-sectional experience of 1980 suggests that something like thirty percent of marriages contracted in that year will end in divorce. Whether any real marriage cohort ever experiences so high a divorce rate remains to be seen. Very likely social and legislative changes have caused unstable marriages from different marriage cohorts to be dissolved, at different marriage durations, at about the same time. If the trends toward premarital cohabitation and away from marriage when premaritally pregnant mean that couples are entering marriage more circumspectly, recent marriage cohorts may be inherently more stable. Then again, the effect that adoption in 1981 of a no-fault divorce law will have is as yet unknown.

Divorce Rates by Marriage Cohort

The sensitivity of period measures of divorce to short-term environmental change and events such as changes in divorce laws has been discussed by Ryder (1981). The effects of these occurrences are given truer perspective when divorce is studied as a force depleting marriage cohorts. [16] The analysis which follows again uses

[16] The value of this approach to the understanding of divorce trends is widely recognised. See, for example, Rowntree and Carrier (1958), Jacobson (1959), Ferriss (1970), Leete (1979), Plateris (1979), and Preston and McDonald (1979).

Dickinson's estimates of decrees absolute granted annually since 1925 by single years of marriage duration. Marriage cohort duration-specific and cumulative divorce rates computed from these estimates have the same limitations as the total divorce rates presented in Table 7.3. Effectively they assume that New Zealand dissolutions of overseas marriages are balanced by overseas dissolutions of New Zealand marriages, both in number and by year and duration of marriage. [17]

Official divorce statistics are not available by country of marriage, and while the New Zealand marriage register records overseas divorces which happen to come to the Registrar General's attention, no formal provision exists for them to be notified and no statistics are published. Divorce file sample data do, however, permit a partial examination of the impact of migration on marriage cohort divorce rates.

Based on these data, Table 7.4 shows, by year of marriage, distributions of New Zealand divorces by country of marriage for marriage durations extending from 0-9 to 0-29 years. As is to be expected, the percentage of divorces affecting overseas marriages varies positively with marriage duration. This suggests proportionately larger errors in marriage cohort divorce rates as

[17] Using the divorce file sample, cumulative divorce rates for 1939 and subsequent marriage cohorts were estimated taking into account only New Zealand dissolutions of New Zealand marriages. Regrettably, however, the sampling errors associated with these estimates were too large for there to be any point comparing them with rates based on published data (Table A2.19, Appendix 2). The magnitudes of these sampling errors are due to divorce files having been filed by date of petition. Had they been filed by date of marriage a one-in-five systematic sample would have yielded more satisfactory results.

Table 7.4

DECREES ABSOLUTE GRANTED IN NEW ZEALAND BEFORE 1:1:79 BY MARRIAGE
DURATION, AND YEAR AND COUNTRY OF MARRIAGE: DIVORCE FILE SAMPLE

Year and Country of Marriage	Marriage Duration in Years							
	0-9		0-14		0-19		0-29	
	No	%	No	%	No	%	No	%
1939-44								
New Zealand	910	96.5	1296	95.4	1546	94.3	2002	92.9
United Kingdom	18	1.9	38	2.8	59	3.6	101	4.7
Australia	6	0.6	9	0.7	14	0.9	24	1.1
Other	9	1.0	16	1.2	21	1.3	29	1.3
1945-49								
New Zealand	721	93.3	1134	92.8	1440	92.1	2126	90.6
United Kingdom	30	3.9	50	4.1	73	4.7	142	6.1
Australia	6	0.8	12	1.0	16	1.0	27	1.2
Other	16	2.1	26	2.1	35	2.2	52	2.2
1950-54								
New Zealand	586	94.5	934	92.6	1312	91.6	1871	90.6
United Kingdom	12	1.9	35	3.5	63	4.4	113	5.5
Australia	11	1.8	21	2.1	28	2.0	35	1.7
Other	11	1.8	19	1.9	30	2.1	46	2.2
1955-59								
New Zealand	625	96.6	1127	91.8	1689	91.5	1862	91.0
United Kingdom	23	3.6	52	4.2	90	4.9	107	5.2
Australia	16	2.5	29	2.4	38	2.1	40	2.0
Other	6	0.9	20	1.6	29	1.6	38	1.9
1960-64								
New Zealand	928	93.1	1833	93.0	2069	92.3		
United Kingdom	41	4.1	84	4.3	106	4.7		
Australia	13	1.3	29	1.5	36	1.6		
Other	15	1.5	26	1.3	31	1.4		
1965-69								
New Zealand	1696	93.0	2103	93.1				
United Kingdom	44	2.4	58	2.6				
Australia	54	3.0	63	2.8				
Other	30	1.6	36	1.6				
1970-77								
New Zealand	1154	93.1						
United Kingdom	32	2.6						
Australia	29	2.3						
Other	24	1.9						

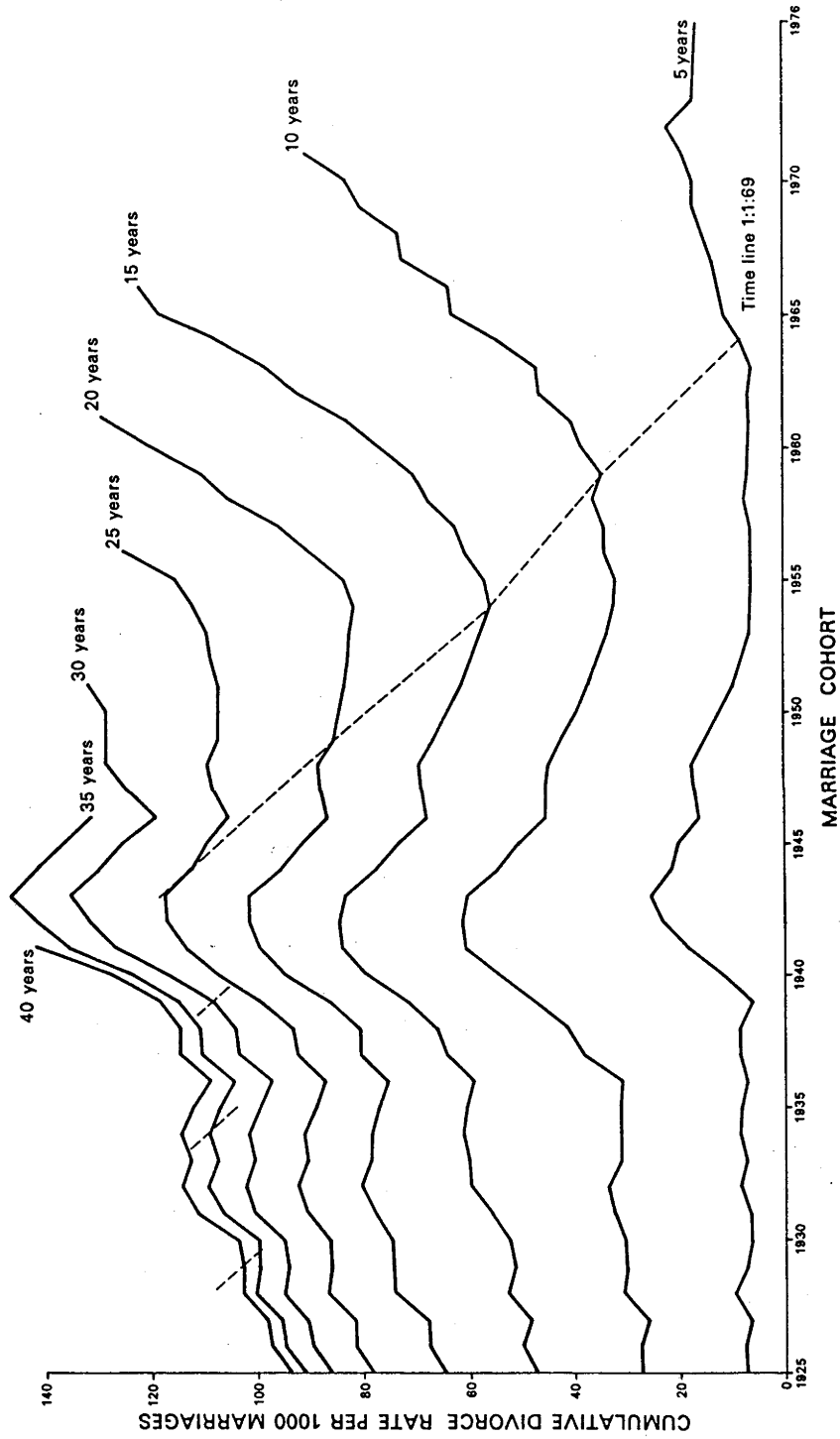
Source: Divorce file sample.

marriage duration increases. Some eight to ten percent of divorces which by the end of 1978 had dissolved marriages contracted during 1939-59 at durations less than thirty years affected overseas

marriages, while for divorces ending marriages contracted during 1960-69 at durations less than fifteen years the figure was about seven percent. In keeping with the immigration pattern during the first two decades post-war, the majority of dissolved 1939-64 overseas marriages took place in the United Kingdom. However, Australian marriages were slightly more numerous among dissolved 1965-77 overseas marriages.

It is more difficult to assess the incidence of overseas dissolutions of New Zealand marriages. A search of the 1961 New Zealand marriage register showed that of 1853 marriages endorsed as having been dissolved within seventeen years, 47 or 2.5 percent had ended overseas. All but one of these divorces was obtained in Australia, and 20 of them (42.6 percent) were obtained at marriage durations 15-16 years. This may indicate that few non-Australian overseas divorces come to the Registrar General's attention, while the recent increase in Australian divorces probably is genuine, the product of that country's new divorce law and heavy trans-Tasman emigration in the second half of the 1970s. Given the data presented, an educated guess is that cumulative marriage cohort divorce rates shown in Figure 7.4 are perhaps five to six percent too high at marriage duration thirty years, and three to four percent too high at duration fifteen years. However, if, as seems likely, overseas dissolutions of New Zealand marriages have of late more nearly balanced, or even exceeded, New Zealand dissolutions of overseas marriages, recent upward trends in cumulative and marriage duration-specific divorce rates may appear slightly gentler than they would be were migration controlled for.

Figure 7.4
CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS: 1925-1976 MARRIAGE COHORTS



Source: New Zealand Justice Statistics 1925-76; New Zealand Vital Statistics 1925-76; unpublished data supplied by the Department of Statistics.

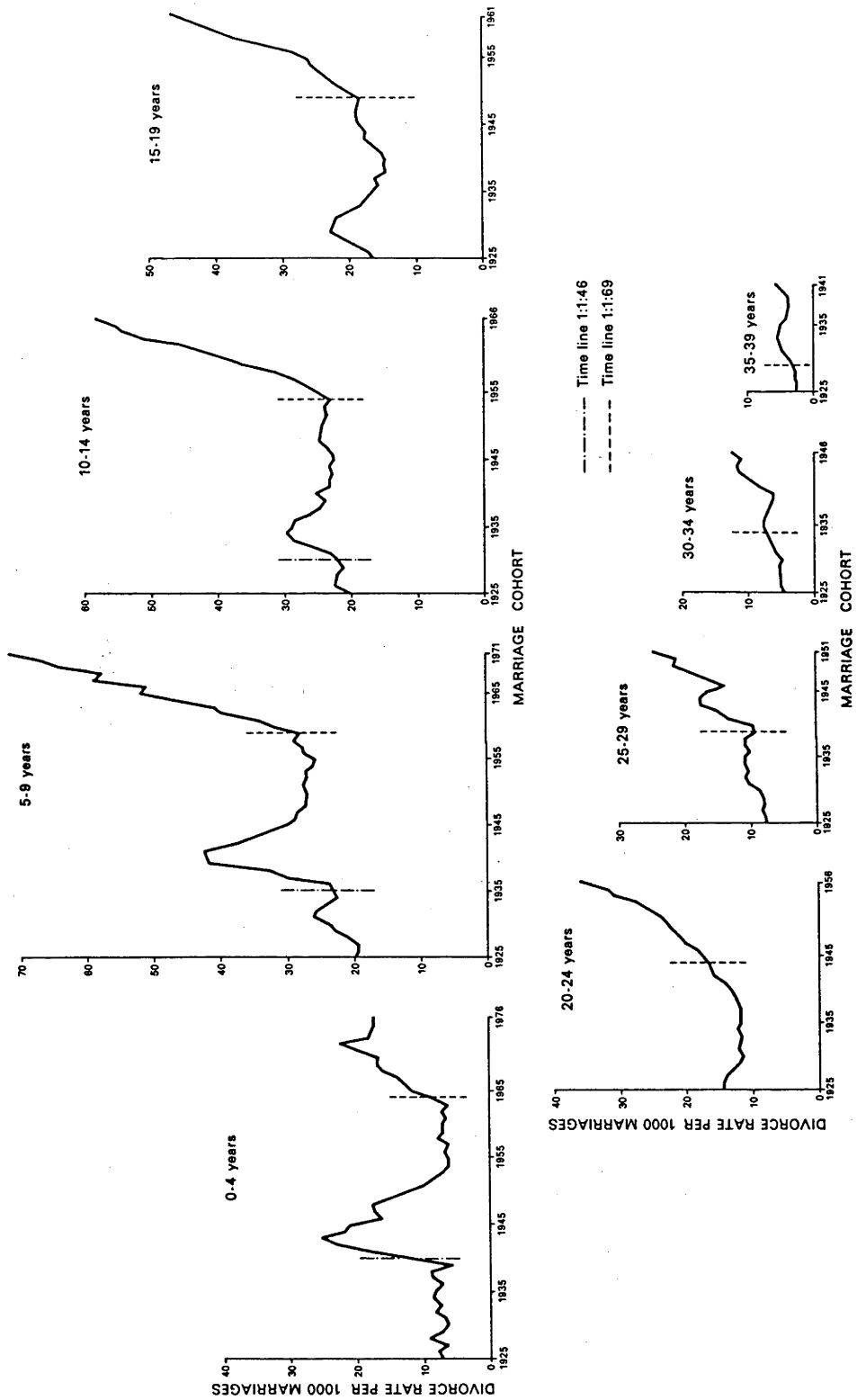
Cumulative divorce rates to exact marriage durations at five-year intervals are shown for the 1925 and succeeding marriage cohorts in Figure 7.4 (see also Table A2.20, Appendix 2). Divorces within five years of marriage increased sharply for the 1940-43 marriage cohorts, and only returned to their pre-war level for cohorts married after 1950. Undoubtedly many wartime marriages were hasty, were quickly followed by separation due to war service, or both. [18] Some early post-war marriages may also have followed abnormally short courtships, but the delay in early divorce returning to its pre-war level was also due to the War's popularising non-compliance with an ORCR as a ground for dissolution. The divorce file sample indicates that, before being abolished in 1953, this ground was used to end 36.5 percent of 1939-49 marriages dissolved within five years (N=471).

Wartime marriages were not the only ones to be severely strained during World War 2. While there was no increase in the divorce rate to exact marriage duration five years for the 1936-39 marriage cohorts (Figure 7.4), there was a marked increase to exact duration ten years. Likewise, marriage cohorts of the early 1930s experienced abnormally high divorce rates at durations 10-14 years. This pattern is confirmed by the duration-specific divorce rates shown in Figure 7.5. Noting that for duration 15-19 years the 1:1:46 time line coincides with the y-axis, it is clear that there were temporary surges in

[18] Other factors to consider in relation to the sharp rise in dissolutions within five years for wartime marriage cohorts are a rise immediately after the War in the proportion of divorces granted on the ground of the wife's adultery (Figures 7.2(b) and 7.2(c) - divorces were obtainable relatively quickly on this ground), and the number of women who married American servicemen in 1943-44. Many of these women were deserted when the Americans left, and the divorce file sample suggests that some ten percent (N=96) of New Zealand dissolutions within five years of marriages contracted in New Zealand during 1943-44 involved an American husband.

Figure 7.5

MARRIAGE DURATION-SPECIFIC DIVORCE RATES: 1925-1976 MARRIAGE COHORTS



Source: New Zealand Justice Statistics 1925-76; New Zealand Vital Statistics 1925-76; unpublished data supplied by the Department of Statistics.

cohort divorce rates at all marriage durations below twenty-five years during the late 1940s and early 1950s. [19] They were most pronounced at durations under ten years, consistent with younger, more recently married couples more often having been separated by war service, more often having been childless, and having been best placed to find new partners during or soon after the War.

Figure 7.5 shows that once the immediate post-war surges in cohort divorce rates by marriage duration had subsided, rates at durations below fifteen years remained relatively stable for a decade or more. At durations 15-34 years, however, duration-specific cohort divorce rates were rising during the early and mid-1960s (Figure 7.5), suggesting that older couples led the contemporary trend toward a higher overall divorce rate. Since in its early stages the post-war rise in married female labour force participation mainly affected women in their late thirties to early fifties (Figure 6.4), this pattern may reflect an earlier realisation among the less recently married that wives could support themselves.

The time line dated 1:1:69 in Figure 7.4 coincides closely with definite movements upward in the trend lines at exact marriage durations five, ten, and fifteen years. At longer durations the significance of this date is less obvious because of the earlier impact of World War 2 on the crucial marriage cohorts. Figure 7.5, however, establishes responses at all marriage durations below thirty years, although at durations 20-24 years there was no marked steepening of an already well established trend. Obviously the

[19] There may also have been surges at longer marriage durations, but these would have affected pre-1925 marriage cohorts.

legislative reforms of 1968 and the social and demographic trends which seem to have had a major effect on the divorce rate thereafter were not marriage cohort-specific in their impact.

Figure 7.5 implies, of course, a pattern of later divorce among marriage cohorts of the 1950s than among those of the 1960s and 1970s. The familism and prosperity of the period, and the unique consciousness that prevailed among that generation of young adults (Elder, 1974, 1978a, 1978b) are undoubtedly reflected in this finding. So too are the higher expectations of those who were children and adolescents during the 1950s. Glick (1975) has even proposed that rapid upward social mobility among U.S. couples married during the 1950s imposed new stresses on their marriages in early middle age. But one can overemphasise strictly generational explanations. The pattern described is also the product of period phenomena; the Women's Movement, changing female employment patterns, improved welfare provisions for separated wives, and an increased emphasis on individual wellbeing. By their very period nature these have affected different marriage cohorts at different marriage durations.

One regrettable aspect of Figure 7.4 is that it is based on marriage durations computed as at the date of the decree absolute. It is very difficult to isolate precisely the date at which a marriage founders. Spouses may perceive it differently, and may only recognise it in retrospect (Burns, 1980). It is nonetheless certain that all marriages end in fact well before they do so in law. In New Zealand the legal process itself often has been time consuming, and more so under some grounds than under others and during some periods than during others. Divorce file data offered the prospect of controlling

for this problem to some extent, and of obtaining a more accurate measure of marriage duration for the majority of divorces sampled. With all commonly used grounds for divorce the formal statement of ground in the divorce petition includes a date of separation (actual or formal) or the date of an alleged matrimonial offence. This date was labelled the date of 'marriage breakdown', and a second marriage duration was computed relative to it. [20]

Problems of truncation bias preclude the construction of graphs similar to Figures 7.4 and 7.5 using the amended definition of marriage duration. Only marriages which had ended legally were sampled, and so some which, according to the new definition, had ended by the sample cut-off date had not at that time been dissolved formally. To overcome this problem it was necessary to standardise by duration of marriage at decree absolute. Accordingly Figure 7.6 shows estimates of marriage duration-specific cohort divorce rates computed on the basis of duration at 'marriage breakdown' for selected maximum exact marriage durations at decree absolute. The solid line in each graph shows cohort rates of legal dissolution of marriages at the specified 'breakdown' durations.

[20] This measure of marriage duration remains partly a function of the ground cited in the divorce petition. Dates when couples began to 'live apart', of desertion, or of oral separation agreements are likely to approximate dates of actual separation more closely than are dates of formal separation agreements or orders. Dates when adultery was committed are dates when proof of it was obtained, or when adultery is first admitted to have occurred. In the first instance a petitioner's awareness of the adultery may substantially have predated the date given, while in the second it may have followed it. Then again, there are undoubtedly many cases where divorce could be petitioned for on the ground of adultery, but where for want of proof or the willingness to air it in court a subsequent separation or desertion is cited instead. It is, for instance, unlikely that divorcing women are more adulterous than divorcing men to the extent that Figure 7.2(c) suggests. For all this, the new measure of marriage duration improves on the official measure.

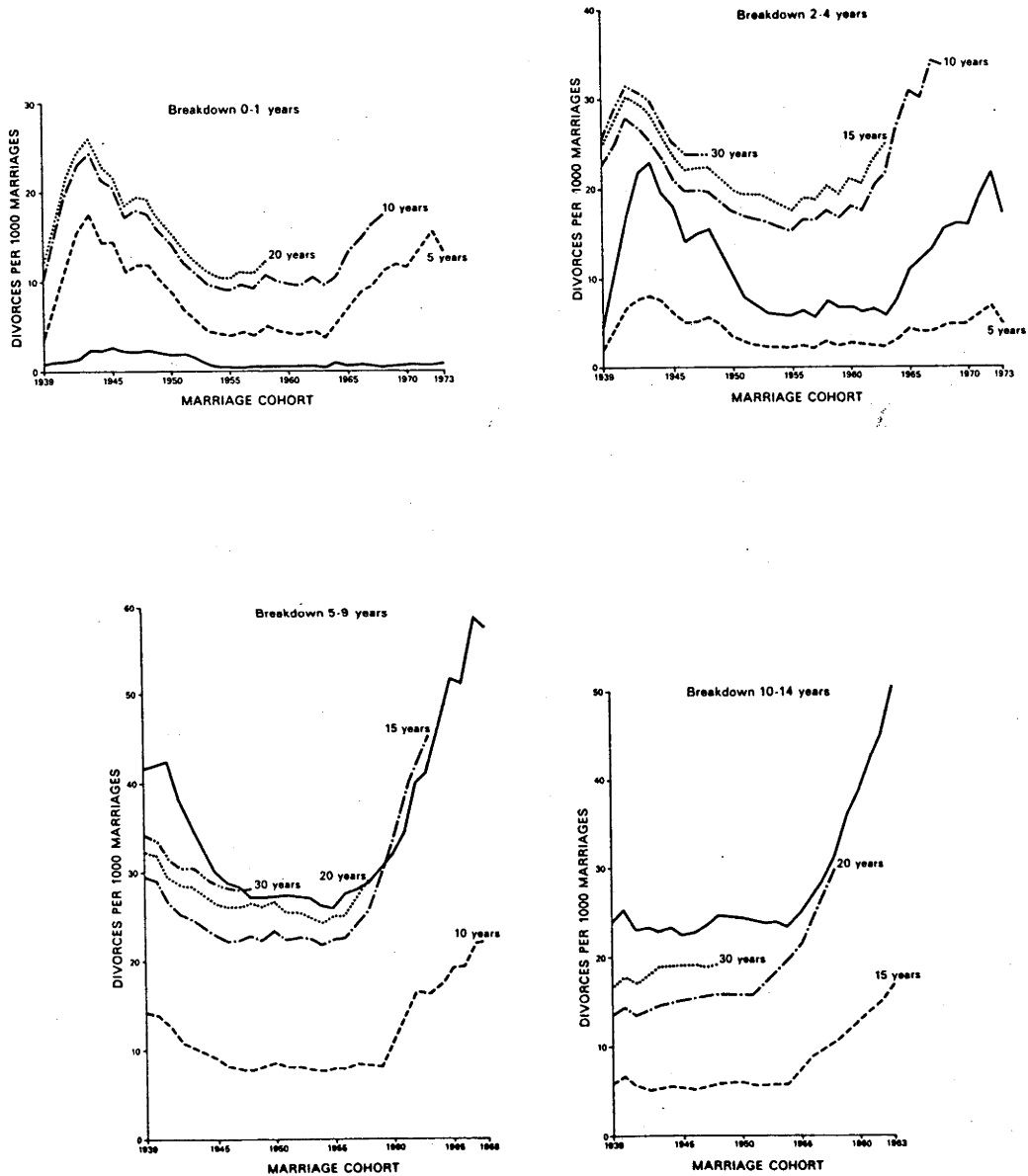
Figure 7.6

CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS

BY MARRIAGE DURATION AT 'MARRIAGE BREAKDOWN': 1939-1973

1

MARRIAGE COHORTS



Source: New Zealand Justice Statistics 1939-76; New Zealand Vital Statistics 1939-73; divorce file sample; unpublished data supplied by the Department of Statistics,

1 Solid lines indicate actual divorce rates at specified 'breakdown' marriage durations.

To construct Figure 7.6, 1939-78 was first split into three periods associated with three different divorce laws - 1939-53, 1954-68, and 1969-78. Then, disregarding 117 cases out of 14673 for which duration of marriage at 'marriage breakdown' could not be determined, sample marriages dissolved legally within each of these periods at each year of marriage duration were distributed according to their marriage durations at 'marriage breakdown'. Using these sample distributions, Dickinson's (1979, 1980) data giving annual decrees absolute by single-years of marriage duration were adjusted to a duration of marriage at 'marriage breakdown' basis. Divorces were redistributed to earlier durations marriage cohort by marriage cohort, separate sets of data being prepared for maximum exact marriage durations at decree absolute at five-year intervals. From these the divorce rates shown in Figure 7.6 were calculated.

The solid line in the upper left graph of Figure 7.6 shows that the rate of divorce within two years of marriage in New Zealand generally has been very low. But the rates of 'breakdown' within two years followed by divorce within five and ten years have been considerably higher, especially for wartime, early post-war, and post-1965 marriage cohorts. Likewise the rate of 'marriage breakdown' at durations 2-4 years followed by divorce by exact duration ten years has typically been much higher than the rate of legal dissolution at durations 2-4 years, particularly for post-war marriage cohorts. Rates of 'marriage breakdown' at durations 5-9 years leading to divorce by exact duration twenty years have tended to approximate more closely rates of divorce at durations 5-9 years; they were generally lower for wartime marriage cohorts and have switched to being higher for more recent ones. Finally, cohort divorce rates at durations

10-14 years exaggerate the importance of these durations so far as the timing of the physical breakdown of marriage is concerned for wartime and early post-war marriage cohorts, but not for cohorts married since the mid-1950s.

Clearly many post-1938 marriages really ended much more quickly than published divorce statistics suggest. And these statistics may have become even more misleading since the late 1960s as the divorce rate has risen. The rates of 'marriage breakdown' within 0-1 and 2-4 years leading to divorce within five and ten years respectively have climbed sharply relative to the rates of legal dissolution at durations 0-1 and 2-4 years for post-1960 marriage cohorts (Figure 7.6). This tends to indicate that couples have become less tolerant of marriages which do not immediately fulfil their expectations, and much more decisive in resorting to divorce. The idea that couples should 'work at' their marriages seems to have less support among more recent marriage cohorts than it did among earlier ones. They are treating marriage more experimentally, abandoning particular relationships, although not necessarily the institution, once they are found wanting.

7.4 TRENDS IN THE REMARRIAGE OF DIVORCED PERSONS

The question of whether increased divorce in New Zealand reflects disenchantment with marriage per se or just with particular marriages is a crucial one. An obvious step toward answering it is to examine trends in the propensity of divorced persons to remarry.

Period Measures

Concurrent with the upward trend in the divorce rate since 1968 there have been continuous increases in the percentages of brides and grooms who were remarrying following divorce, as indeed there have been in many other Western countries (Roussel, 1981). Furthermore, while the remarriage market has been dominated by divorced (as compared to widowed) persons throughout the post-war period, recently the extent of that dominance has increased (Table 7.5). Table 7.5 also indicates that, as in England and Wales (Leete, 1979), divorcees of both sexes have of late become more likely to remarry other divorcees.

These data, however, beg the question of whether divorced persons have become any more or less likely to remarry at all (Roussel, 1981). The remarriage rate for divorced persons of a given sex relates annual remarriages of such persons to the annual mean population of divorced males or females. Two sets of remarriage rates are shown in Figure 7.7 (see also Table A2.21, Appendix 2). [21] For both sexes the two trend lines follow similar courses, but remarriage rates based on vital data-derived risk populations are much lower. This implies that these risk populations are larger than those derived using census data. Censuses invariably under-enumerate divorced persons, particularly by tending to record those living in consensual unions as

[21] The set represented by solid trend lines uses risk populations obtained by applying annual mid-year proportions of the population divorced by sex and five-year age groups, computed by intercensal linear interpolation (except that 1976-80 proportions were estimated by linear extrapolation of 1971-76 intercensal trends), to annual mean population estimates by sex and age, then summing over all ages. The second set of remarriage rates updates Jain's (1972) figures for 1945-67. It uses risk populations obtained by building up the annual age and marital status composition of New Zealand's population by sex from a 1921 census base and subsequent vital events.

Table 7.5
 SELECTED MEASURES OF THE REMARRIAGE OF DIVORCED PERSONS
 BY SEX 1945-1980

Year	Divorcees as Percentage of all		Ratio of Divorced to Widowed		Percent Divorced Grooms Marrying			Percent Divorced Brides Marrying		
	Grooms	Brides	Grooms	Brides	Spinsters	Widows	Divorcees	Bachelors	Widowers	Divorcees
1945	7.1	6.5	1.22	1.20	63.0	12.2	24.8	57.9	15.0	27.1
1946	7.0	7.0	1.56	1.50	63.7	11.3	25.0	63.5	11.8	24.8
1947	7.9	7.8	1.64	1.64	61.3	10.5	28.2	59.8	11.6	28.6
1948	8.7	8.4	1.67	1.73	60.4	10.9	28.7	57.4	12.8	29.8
1949	8.5	8.5	1.65	1.82	60.1	10.6	29.3	57.5	12.9	29.6
1950	8.1	7.7	1.49	1.64	60.4	12.1	27.5	56.7	14.6	28.7
1951	7.7	7.7	1.48	1.72	59.2	10.9	29.9	55.4	14.6	30.0
1952	7.2	7.5	1.34	1.53	56.2	12.8	31.1	57.4	12.9	29.6
1953	7.0	7.0	1.45	1.60	59.4	10.4	30.3	55.6	14.1	30.4
1954	7.0	7.2	1.44	1.67	58.1	11.5	30.4	56.8	13.5	29.7
1955	6.4	6.9	1.41	1.64	54.9	11.9	33.2	54.9	14.4	30.7
1956	6.7	6.8	1.41	1.59	53.7	13.0	33.4	53.5	13.6	32.9
1957	6.5	6.8	1.37	1.49	56.7	13.4	29.9	57.3	14.0	28.7
1958	7.1	7.0	1.60	1.63	55.9	13.1	31.0	56.9	11.9	31.2
1959	6.8	7.2	1.53	1.66	54.7	12.9	32.4	55.7	13.8	30.5
1960	6.5	6.8	1.33	1.48	56.3	11.5	32.3	54.0	15.3	30.7
1961	6.2	6.2	1.40	1.36	54.3	14.6	31.1	54.9	13.9	31.2
1962	6.4	6.4	1.62	1.65	52.3	12.8	34.9	52.1	13.0	34.9
1963	6.5	6.3	1.66	1.57	50.8	15.3	33.9	52.3	13.0	34.6
1964	6.5	6.5	1.67	1.70	54.7	12.2	33.1	53.0	13.7	33.4
1965	6.5	5.9	1.83	1.51	54.2	14.4	31.4	52.7	12.8	34.5
1966	6.0	5.8	1.55	1.45	50.5	14.4	35.1	48.7	15.2	36.2
1967	6.1	5.5	1.67	1.49	53.3	14.8	31.9	49.6	14.9	35.5
1968	6.0	5.8	1.63	1.65	53.9	12.6	33.5	47.4	17.2	35.4
1969	7.3	6.4	1.86	1.57	53.0	14.0	33.0	47.0	15.7	37.4
1970	7.5	7.0	1.98	1.75	52.5	13.3	34.1	50.7	12.6	36.8
1971	8.0	7.2	2.19	1.86	51.9	13.4	34.8	48.3	12.8	38.8
1972	8.4	7.9	2.21	1.97	50.5	12.9	36.6	48.6	12.7	38.7
1973	9.5	8.6	2.44	2.18	52.3	10.5	37.2	48.1	11.0	40.9
1974	10.8	9.5	2.81	2.33	50.9	10.6	38.5	45.9	10.5	43.6
1975	11.3	10.6	3.13	2.73	52.1	9.8	38.1	48.8	10.6	40.6
1976	13.0	12.0	3.34	2.84	50.1	9.9	40.0	46.1	10.3	43.6
1977	14.5	12.8	3.33	2.79	48.8	10.3	40.9	43.5	10.1	46.3
1978	15.1	13.9	4.01	3.40	48.0	8.8	43.2	44.3	9.0	46.7
1979	16.0	14.4	4.23	3.45	46.1	8.6	45.3	41.8	7.7	50.5
1980	16.2	14.8	4.38	3.89	46.0	7.6	46.4	41.0	8.3	50.7

Source: New Zealand Vital Statistics 1945-80.

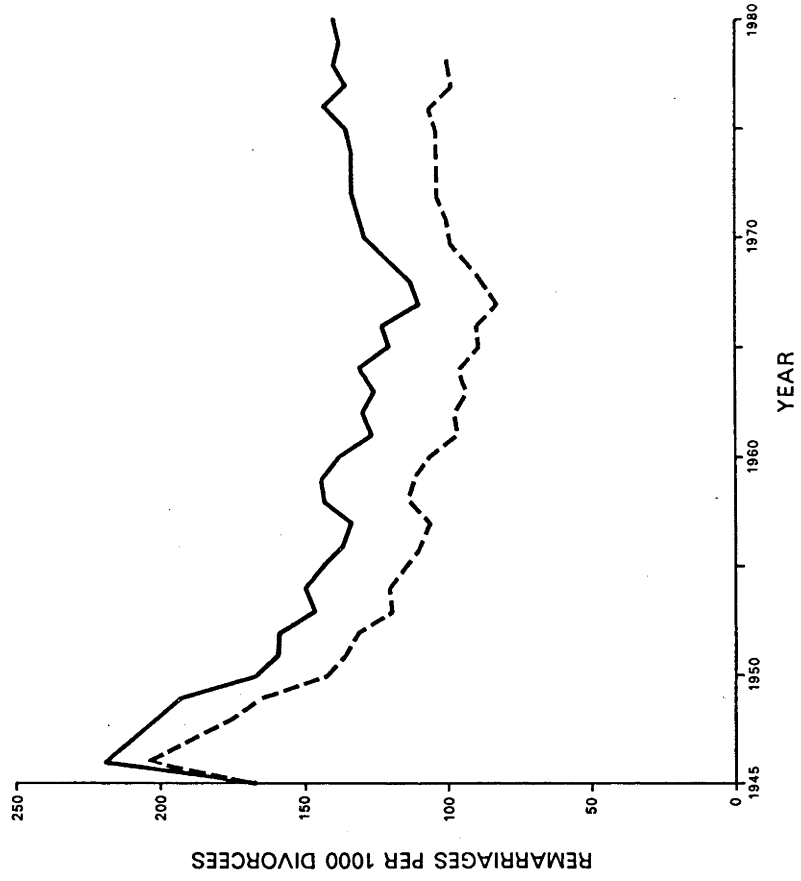
'married'. But there are also problems with the vital data-derived risk populations, which assume that every decree absolute adds one divorcee of each sex to the population. This assumption overlooks the possibility of one partner being resident overseas.

Until 1981, New Zealanders entering Australia required no travel documents. These conditions frequently were exploited by husbands

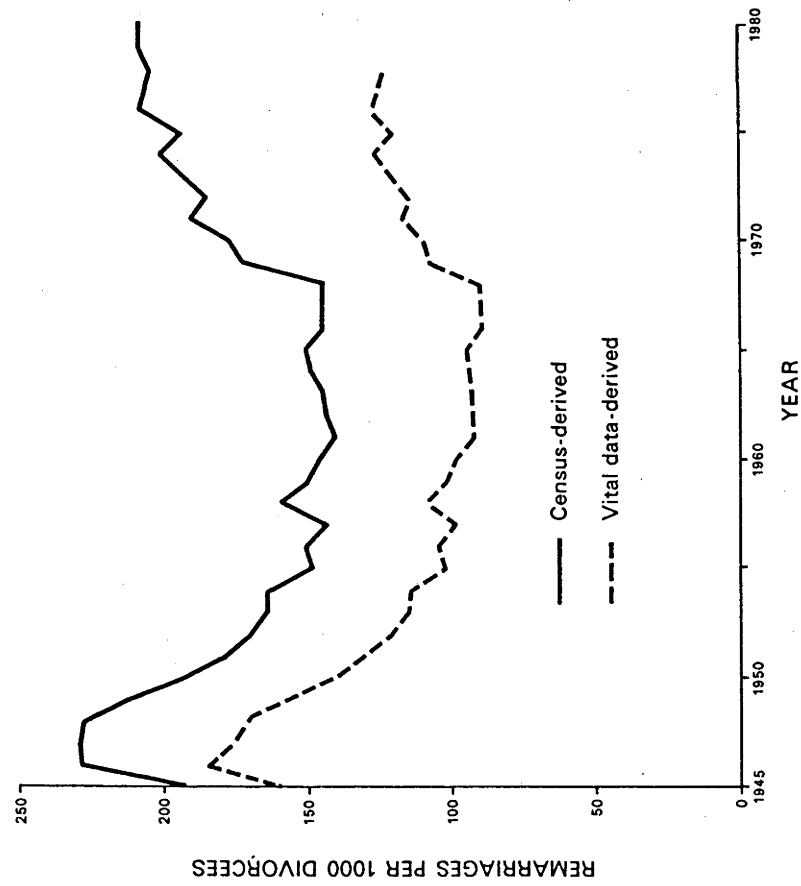
Figure 7.7

REMARRIAGE RATES FOR DIVORCED PERSONS BY SEX BASED ON CENSUS AND VITAL DATA-DERIVED RISK POPULATIONS 1945-1980

FEMALES



MALES



Source: New Zealand Vital Statistics 1945-80; 1945-76 censuses; Jain (1972); unpublished data supplied by the Department of Statistics.

seeking to avoid having to maintain their wives and families, and the fact that the two trend lines for males in Figure 7.7 are wider apart than are those for females may well reflect this phenomenon. [22] There is unlikely to have been a compensating counterflow of Australian men to New Zealand, simply because Australia's size and its wealth of employment opportunities in remote locations made it easy to 'disappear' without leaving the country.

Remarriage rates for divorcees of both sexes were high in 1946-47 (Figure 7.7). Thereafter the male rate declined steeply until 1955 and then stabilised, while the female rate continued to fall until 1967. Brief resurgences in both rates in the late 1950s probably are linked to the temporary rise in the divorce rate in 1958 (Figure 7.1). After 1968 the remarriage rate for male divorcees increased, and only recently has it shown signs of levelling off. That for females also rose during this period, but not as sharply.

Remarriage rates such as are shown in Figure 7.7 can, however, be very misleading. Normally the probability of a divorcee remarrying varies inversely with age at divorce, so that a shift in the age structure of the divorcing population can affect the trend of the remarriage rate for divorced persons. So can change in the speed with which remarriage takes place; quicker remarriage reducing the size of the divorced population at any point in time and increasing the number of remarriages within a given period.

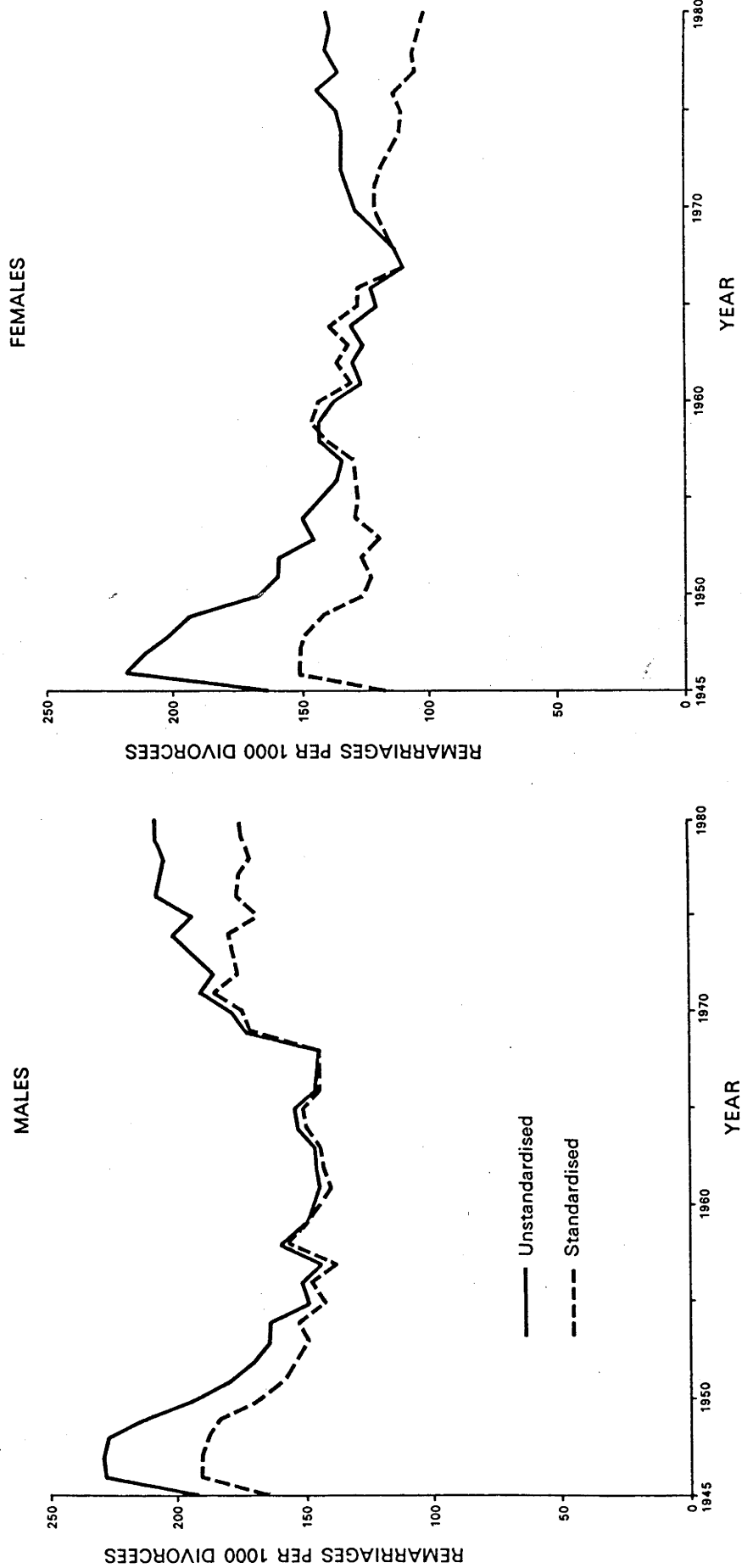
[22] Marriage breakdown in New Zealand since World War 2 may also have led to some migration to the United Kingdom between separation and divorce. However, as this generally would have been motivated by a desire to return to one's country of birth there is no knowing which, if either, sex was more affected.

Figure 7.8 shows again the higher series of remarriage rates by sex together with rates standardised to the age structures of the divorced populations in 1968. [23] It indicates, for both sexes, that the high remarriage rates of the early post-war years resulted, to a substantial extent, from the relative youthfulness of the divorced populations of that period. Both standardised rates were more stable through the 1950s than were the unstandardised rates, and both deviated little from the unstandardised rates during the 1960s. For males the standardised remarriage rate rose with the unstandardised rate during 1968-71, but thereafter the latter continued to increase only because male divorcees became generally younger; the former actually began to decline slowly. Similarly the rise in the female unstandardised remarriage rate commencing in the late 1960s was almost entirely the product of the increasing youthfulness of female divorcees. The standardised rate has in fact, with minor interruptions, been falling for the past two decades. [24]

[23] These series of remarriage rates were chosen for standardisation because Jain's (1972) data yield some implausible age-specific remarriage rates for divorced females in particular. This problem arises because of deficiencies in Jain's method of estimating the age distributions of males and females divorced in each year. It is especially serious over the years 1945-53, when no allowance is made for the abnormally large proportions of divorces which dissolved marriages of very short duration (Figure 7.5), thereby producing very youthful cohorts of divorcees.

[24] It should be realised that the age structure of the divorcing population may change because couples entering the highest risk marriage durations married earlier or later than previous marriage cohorts, because divorce comes to take place sooner or later after marriage, or because the age structure of the married population changes. Undoubtedly the growing youthfulness of New Zealand's divorcing population from the late 1960s onward reflects a combination of earlier marriage, earlier divorce, and the fact that marriages of post-war baby boom cohorts began to pass through the divorce courts.

Figure 7.8
UNSTANDARDISED AND AGE-STANDARDISED REMARRIAGE RATES FOR DIVORCED PERSONS BY SEX 1945-1980

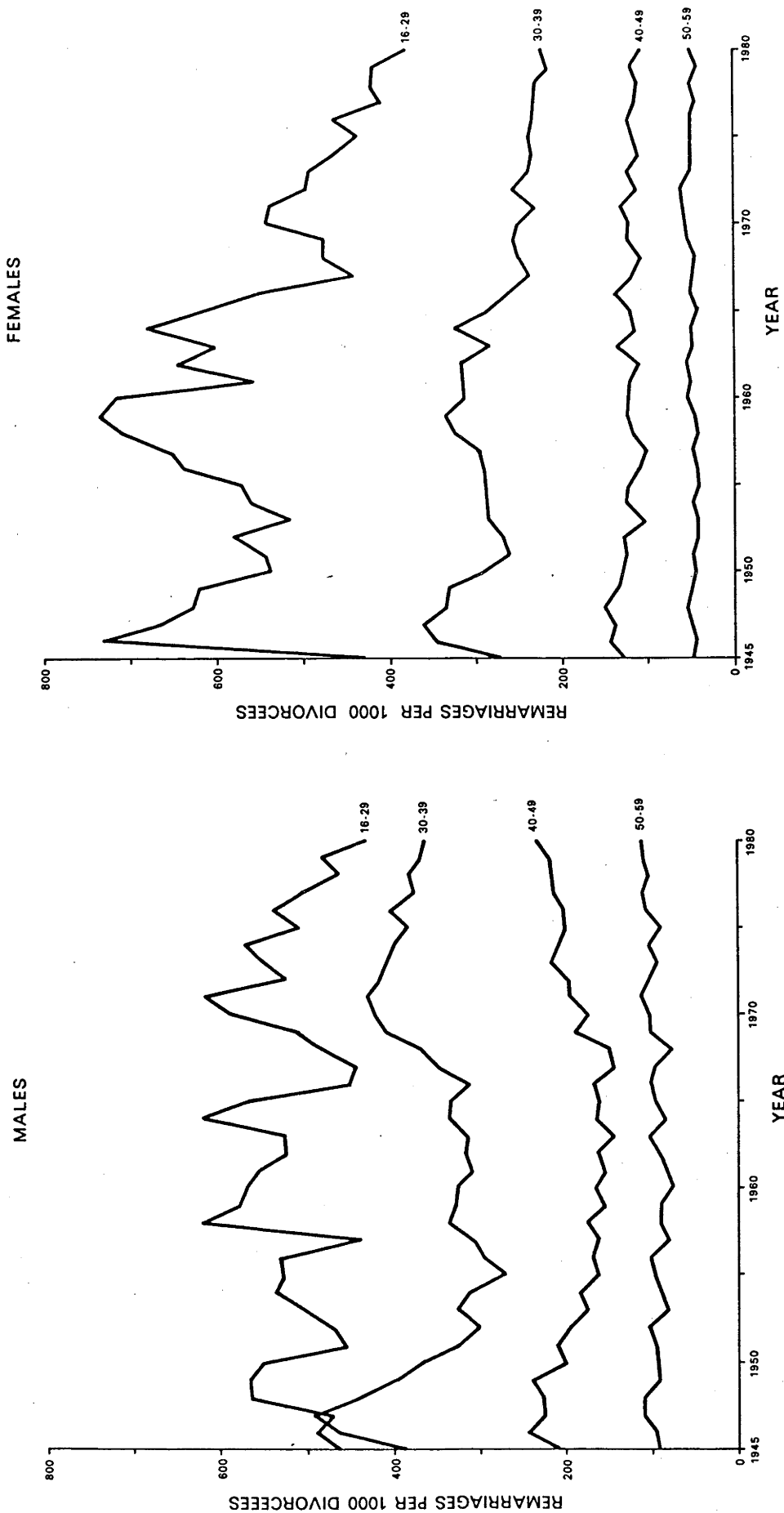


Source: New Zealand Vital Statistics 1945-80; 1945-76 censuses; unpublished data supplied by the Department of Statistics.

These findings suggest different responses by the sexes to the post-1968 upsurge in divorce so far as remarriage is concerned. Initially there was some increase in the likelihood of female divorcees remarrying, particularly at ages less than thirty (Figure 7.9). But as women for whom the chance to divorce more quickly meant swifter remarriage achieved their objective, the previous downward trend of the standardised remarriage rate was reasserted. Figure 7.9 suggests that female divorcees aged under forty have been showing an increasing reluctance to remarry since perhaps the mid-1960s, probably as a result of growing economic and ideological independence and the diminished stigma associated with simply living together.

Men who divorced during 1969-71 seem to have had a much stronger commitment to remarriage than their ex-wives (Figure 7.8). This perhaps confirms the impact of the DPB on New Zealand's divorce rate, for it is reasonable to suppose that this innovation made men more inclined to end failed marriages and formalise new relationships, and women less intent on resisting divorce and their husbands' remarriage. For men the prospect of having to keep two households and perhaps see their children deprived was lessened, while for women it was no longer imperative to maintain a claim on one's husband's income. Figure 7.8 shows that since 1971 the standardised remarriage rate for male divorcees has stabilised. Figure 7.9, however, shows that this conceals declining remarriage rates at ages 16-29 and 30-39, and a rising rate at ages 40-49. Seemingly, older divorced men are maintaining more of a commitment to marriage than are younger ones, for whom consensual unions may have become more attractive. Another possibility is that proportionately more divorces are taking place without the husband already being involved with another woman. This

Figure 7.9
 AGE-SPECIFIC REMARRIAGE RATES FOR DIVORCED PERSONS BY SEX 1945-1980



Source: New Zealand Vital Statistics 1945-80; 1945-76 censuses; unpublished data supplied by the Department of Statistics.

would reduce the likelihood of his remarriage shortly after divorce, and also create the potential for more remarriages at older ages.

The Remarriage Experience of Synthetic Divorce Cohorts

Ideally, trends in the remarriage of divorcees should be studied by computing, for successive divorce cohorts, remarriage rates and cumulative remarriage rates specific for duration of divorce. To do this one requires annual data on remarriages of divorcees by duration (or year) of divorce, age, and sex. No such data are available for New Zealand, but manual searches of the marriage register for 1961 and 1976 yielded this information for those two remarriage cohorts. It made possible the construction of gross remarriage tables for synthetic divorce cohorts by sex and age at decree absolute. The method used is described in Appendix 12.

Aside from the possibility that either 1961 or 1976 was an atypical year so far as remarriages of divorcees was concerned, a failing of this method is that it makes no allowance for the impact of migration on the sizes of divorce cohorts over time. The problem of migration subsequent to divorce is minimised by the fact that most remarriages take place very quickly (Table 7.6). [25] The potentially more serious influence of migration again concerns the practice of men leaving New Zealand before divorcing to avoid maintenance commitments. It is possible that this practice has declined since the DPB was introduced and judicial policy on maintenance has come explicitly to

[25] As Thornton (1975) has noted, the events of divorce and widow(er)hood cannot be equated as initiators of the remarriage process; often it is the remarriage process that precipitates divorce, or else the search for a new partner begins at separation.

Table 7.6
 REMARRIAGES (d(x)) AND CUMULATIVE REMARRIAGES (Σd(x)) PER 1000 DIVORCED PERSONS BY DURATION OF DIVORCE, SEX, AND AGE AT DIVORCE: 1961 AND 1976 SYNTHETIC DIVORCE COHORTS

Duration of Divorce	1961				1976				Total	Total							
	16-29	30-39	40-49	50+	16-29	30-39	40-49	50+									
d(x)	Id(x)	d(x)	Id(x)	d(x)	Id(x)	d(x)	Id(x)	d(x)	Id(x)	d(x)	Id(x)						
Males																	
0 Months	282	282	200	200	157	157	140	140	179	179	116	116	136	127	127		
1	53	335	73	273	45	202	53	193	57	236	67	183	52	188	69		
2	58	393	44	317	20	223	24	217	33	268	47	227	33	213	39		
3-5	52	445	66	383	37	259	36	254	48	316	86	369	78	305	61		
6-11	97	543	85	468	60	320	35	289	66	382	103	472	92	396	69		
12-17	50	593	58	526	40	360	27	316	44	425	60	532	58	454	44		
18-23	83	676	35	561	25	385	31	347	37	463	60	592	41	495	28		
2 Years	84	760	59	620	51	435	28	375	94	557	97	689	56	551	44		
3	69	828	55	676	31	466	15	390	41	597	66	755	44	595	31		
4	56	884	40	716	18	484	11	401	29	627	36	791	32	628	28		
5	37	921	30	745	22	507	36	437	29	656	24	815	28	655	19		
6	41	962	24	770	29	536	18	454	27	684	21	836	10	665	21		
7	15	977	13	783	16	551	14	469	14	698	15	851	11	676	8		
8	17	994	16	799	4	557	4	475	11	709	11	862	10	686	14		
9	6	1000	9	807	6	562	0	475	6	715	12	875	13	699	8		
10-14	4	1005	8	815	5	568	2	478	6	721	4	879	7	706	5		
15-19	2	1007	2	817	3	571	1	479	2	723	0	879	4	710	4		
20-24	3	1010	3	820	1	572	0	479	2	725	4	883	2	712	2		
Females																	
0 Months	247	247	228	228	141	141	83	83	182	182	146	146	86	86	86		
1	123	370	98	326	53	194	24	108	77	259	77	223	52	139	52		
2	54	424	46	372	30	224	11	118	37	296	40	263	35	173	29		
3-5	79	503	66	438	44	268	18	136	54	350	91	353	57	230	47		
6-11	88	591	57	495	50	318	30	166	56	406	107	461	73	304	58		
12-17	53	643	59	554	28	346	15	181	42	448	69	529	47	351	32		
18-23	45	688	35	589	22	368	19	200	31	479	53	582	32	383	23		
2 Years	62	750	38	627	46	414	27	228	44	523	82	664	51	434	39		
3	29	779	42	669	39	454	13	241	34	557	56	720	42	476	37		
4	36	815	20	689	46	499	5	246	28	585	36	755	29	504	29		
5	14	829	27	716	17	517	25	271	21	606	20	776	20	524	22		
6	23	853	14	730	9	525	5	276	16	622	22	798	13	537	22		
7	19	872	14	744	23	549	10	287	17	639	34	832	18	556	14		
8	6	878	14	767	23	571	5	292	16	655	14	845	7	563	11		
9	8	886	13	780	15	586	5	297	11	666	15	860	9	572	10		
10-14	5	891	9	789	6	592	2	299	6	672	7	867	9	581	9		
15-19	3	894	3	792	1	593	0	299	5	675	5	872	3	584	2		
20-24	0	894	2	794	2	595	2	300	1	676	1	873	1	585	1		
										60	60	99	99	136	136	127	127
										52	52	183	183	213	213	235	235
										55	55	276	276	330	330	390	390
										25	25	385	385	480	480	538	538
										11	11	459	459	608	608	687	687
										6	6	494	494	656	656	727	727
										13	13	521	521	679	679	752	752
										4	4	524	524	685	685	752	752
										0	0	525	525	689	689	752	752

Source: New Zealand Marriage Register 1961 and 1976; Divorce file sample; New Zealand Justice Statistics 1936-76.

1 Duration-specific and cumulative remarriages have been rounded independently.

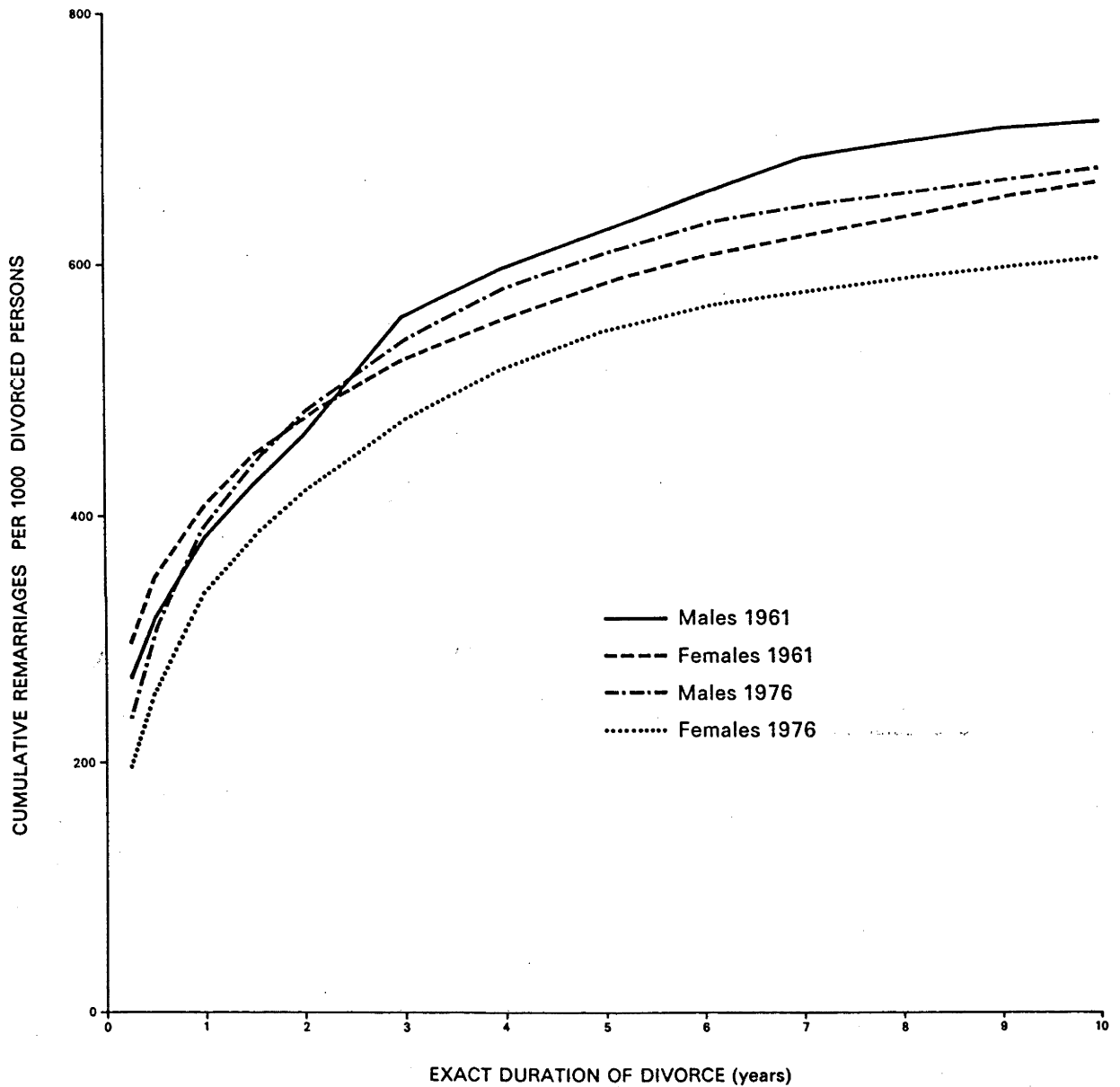
take into account a husband's income and any new dependants. If so, the assumption that all parties to New Zealand divorces enter the New Zealand remarriage market may be more reasonable for 1976 calculations for males than for 1961 ones.

Setting this issue aside for now, Figure 7.10 shows cumulative remarriage rates to exact duration of divorce ten years for 1961 and 1976 male and female synthetic divorce cohorts (see also Table 7.6). The 1976 female remarriage trajectory lies completely below that for 1961, and is dominated by a markedly lower incidence of remarriage within three months of divorce (Table 7.6). Some, but not all, of this ground is made up at longer durations of divorce. By contrast, the 1961 and 1976 male remarriage trajectories are quite similar for the first two to three years, whereafter the latter moves clearly below the former. Thus it appears that the proportion of females, but not of males, divorcing with the intention of remarrying immediately has fallen appreciably. It must be recalled that persons divorced in the mid-1970s were generally younger than those divorced around 1960; because the norm is for husbands to be older than wives, younger male divorcees may have greater access to single females as remarriage partners than younger female divorcees do to single males. Still, it seems very likely that female more than male divorcees have become warier of remarrying over the past two decades.

When the analysis is refined by age at divorce (Figure 7.11 and Table 7.6) it transpires that the likelihood of remarriage within two, ten, or twenty-five years has fallen for both sexes at ages 16-29 and 30-39. The overall no-change situation for males at short durations of divorce is thus due to changes in the age distribution of divorcing

Figure 7.10

CUMULATIVE REMARRIAGES PER 1000 DIVORCED PERSONS BY DURATION OF DIVORCE AND SEX: 1961 AND 1976 SYNTHETIC DIVORCE COHORTS

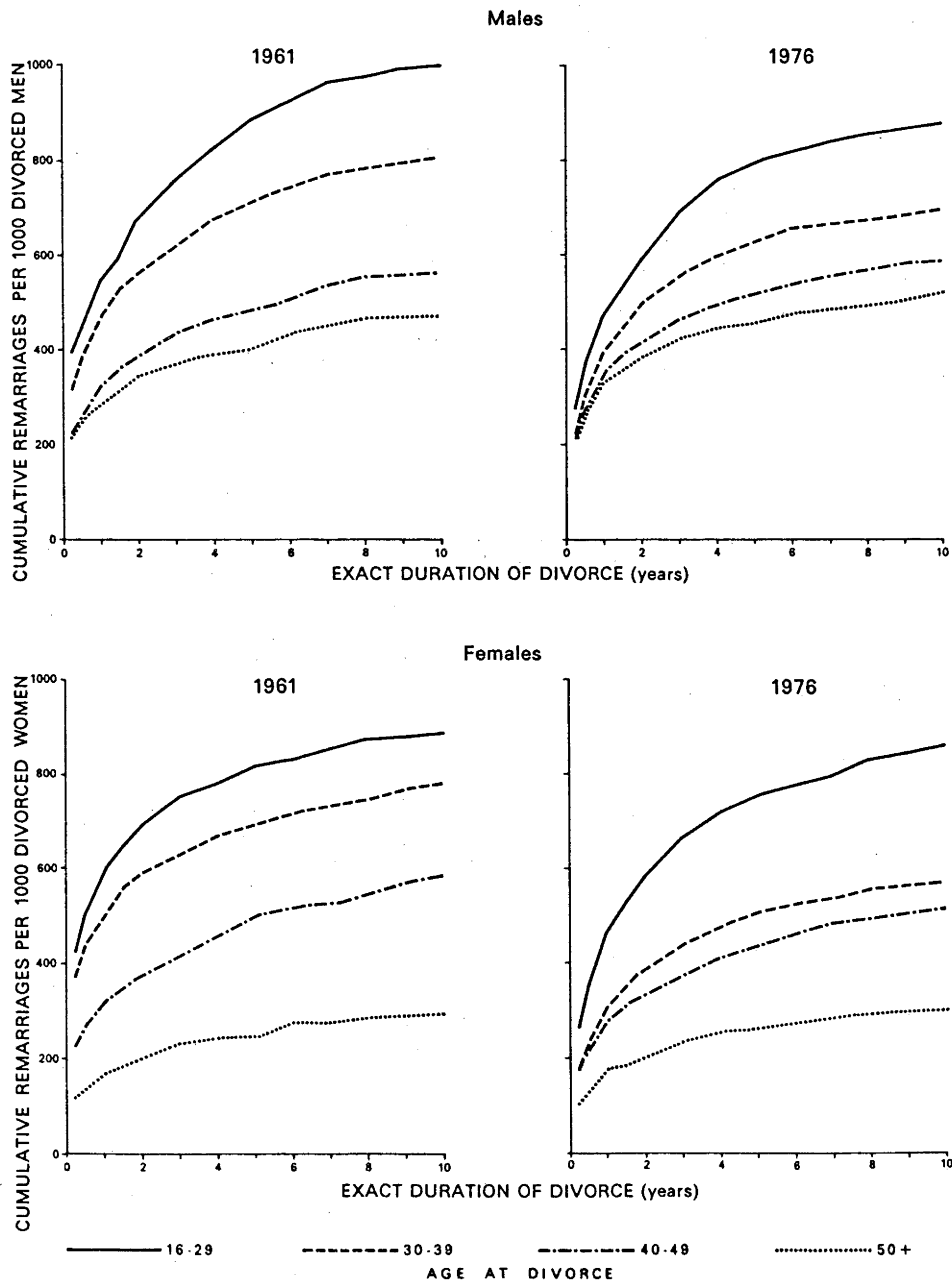


Source: New Zealand Marriage Register 1961 and 1976; Divorce file sample; New Zealand Justice Statistics 1951-76.

Figure 7.11

CUMULATIVE REMARRIAGES PER 1000 DIVORCED PERSONS BY DURATION OF DIVORCE, SEX, AND AGE AT DIVORCE: 1961 AND 1976

SYNTHETIC DIVORCE COHORTS



Source: New Zealand Marriage Register 1961 and 1976; Divorce file sample; New Zealand Justice Statistics 1951-76.

men. The 1961 male remarriage trajectory at ages 16-29 indicates universal remarriage within ten years (Figure 7.11), and the cumulative remarriage probability actually exceeds unity at longer durations of divorce (Table 7.6). [26] For men divorced at ages 40-49 and 50+ the chances of remarriage seem to have increased, although very early remarriage has declined (Table 7.6). The latter finding could be due to the increased tendency to remarry another divorcee (Table 7.5), which will have required more men to wait while their new partners also obtained divorces. Finally, if the pre-divorce migration of husbands to Australia has declined, the downward trend in the remarriage of males divorced at younger ages may be exaggerated by Table 7.6, while the upward trend at older ages could be understated.

Under 1976 conditions, women divorcing before age thirty were only marginally less likely to remarry within ten or twenty-five years than they were under 1961 conditions (Table 7.6). They were considerably less likely to remarry within three months, which could again reflect the need more often to wait while one's partner also divorced, but which equally might indicate less urgency over remarrying given greater public acceptance of informal cohabitation (Chapter 6). The female divorcees whose remarriage behaviour has changed most markedly are those divorced in their thirties, whose 1961 remarriage trajectory was similar to that for women divorced at ages 16-29, but whose 1976 trajectory was closer to that for women divorced in their forties (Figure 7.11). Their likelihood of remarriage within two years dropped by thirty-five percent over this period, and their

[26] This 'impossible' result stems from the synthetic nature of the divorce cohort being studied, and from the fact that $d(x)$ values in the gross remarriage tables are derived directly rather than by applying $q(x)$ values to an initial radix population (Appendix 12).

period propensity ever to remarry by one-quarter (Table 7.6).

Women divorced in their thirties are especially likely to be left with dependent children. This naturally is an impediment in the remarriage market, but it may also be that growing disaffection with marriage per se among female divorcees has particularly affected those entering the divorced state as young mothers. Being left to care for dependent children could have caused stronger attachment to feminist ideals than being left either childless or when children are more self-reliant. Another consideration is that remarriage is no longer economically as imperative for female divorcees with young children. Improved welfare benefits and increased faith in their own earning capacity have seen to this. Indeed they have probably caused mothers of dependent children to more often take the initiative in ending unsatisfactory marriages, where previously they tended to divorce only if their husbands took the initiative or if they already were involved with another man. This would mean that proportionately fewer female divorcees in their thirties have been motivated to divorce by a desire to remarry.

The 1976 remarriage trajectory for women divorced in their forties is again lower than the 1961 one (Figure 7.11), and again the crucial difference is a much lower remarriage rate during the three months following divorce (Table 7.6). Explanations already advanced for diminished haste over remarriage apply again, as they do in respect of women divorced after turning fifty. For these older women, however, many of whom in the mid-1970s would still have adhered to more traditional values, the change in remarriage behaviour was slight.

One final issue to be addressed here is the synthetic character of the divorce cohorts studied. Repeatedly it has been noted that major declines in remarriages between the 1961 and 1976 cohorts occurred at very short durations of divorce, but it must be remembered that at longer durations remarriage trajectories incorporate the experience of earlier real divorce cohorts. Persons who in 1976 had been divorced for some years were survivors of real divorce cohorts which remarried more freely shortly after divorcing. Thus, 1976 real divorce cohorts defined by sex and age at divorce may ultimately remarry in greater numbers at longer durations of divorce than did synthetic cohorts for that year. [27] The other possibility is that fewer remarriages at shorter durations in 1976 indicate a recent fundamental change in attitudes to remarriage which could eventually reduce 1976 real divorce cohort duration-specific remarriage rates at longer durations below the synthetic cohort ones shown (as $d(x)$ values) in Table 7.6.

7.5 SUMMARY

Concluding an analysis of divorce trends in France, Boigeol et al (1977: 173) write:

The increased number of divorces observed in recent times cannot be understood simply in quantitative terms. After a certain point, albeit one which cannot be precisely determined, the probability of divorce in a population is no longer incidental, but becomes an integral feature of the marriage pattern. ... The change involved can be expressed differently by saying that the affective aspect of marriage now prevails over the institutional aspect. Partners in marriage no longer submit to regulation

[27] McCarthy et al (1981) argue that declines in U.S. period remarriage rates for divorced persons reflect a lengthening of the interval between divorce and remarriage rather than a decline in the proportions remarrying.

requiring their relationship to conform to some imposed general norm, but claim the right and freedom to develop their own pattern. ... the possibility of divorce becomes part of married life, not as a threat, but almost as a condition of the integrity of the relationships.

How widely this qualitative change has taken place in New Zealand is difficult to tell. The more circumspect approach to marriage of young people during the 1970s (Chapter 6) is consistent with greater recognition of the inherent fragility of the institution by them than by earlier post-war youth cohorts. However, divorce rates recently have increased at all marriage durations, and indeed began to do so earliest among those who had been married for fifteen years or longer.

Historically the divorce rate has risen sharply in response to significant legislative reforms and major social dislocations. Increments associated with the former have tended to be permanent, largely, before World War 2, because the formal availability of divorce was extended. World War 2 itself disrupted many marriages, especially those which took place shortly before it or while it was in progress. The familism and prosperity of the 1950s then gave rise to much lower divorce rates, suggesting that the War had had a relatively modest lasting impact on the stability of marriage.

From the early 1960s marriage cohort divorce rates began to rise at marriage durations fifteen years and over. This points to growing realisation by married women of their capacity to be self-supporting being an important factor behind the contemporary upsurge in divorce. Higher married female labour force participation initially affected mainly women who had been married for some time, and Scanzoni (1979) recently has argued that changes in husband-wife bargaining power are

the key to historical changes in the stability of marriage. The overall divorce rate did not begin to rise steeply until after 1968. It is doubtful that divorce law changes in that year were directly responsible for the almost continuous increase since; in the longer term they probably affected the normative more than the formal availability of divorce. The more important legislative event was the introduction of the DPB, which greatly increased the effective availability of divorce by guaranteeing that the wives and children of broken marriages would not be left destitute.

In combination, by lessening normative and pragmatic constraints, these legal initiatives helped a number of social and demographic trends to find expression in higher divorce rates. They were responses to, and in turn accelerated the trend toward viewing marriage as a social contract, the dissolubility of which is taken for granted. New Zealand marriages remain much more stable, though not necessarily any happier, than American ones. However, were the marriage duration-specific divorce rates of 1980 to prevail indefinitely thirty percent of all marriages would end in divorce. There are clear signs that couples have become less tolerant of impaired marriages and more decisive in ending them. Later marriage and fewer marriages precipitated by pregnancy may mean that recent marriage cohorts are inherently more stable, but whether they are sufficiently so to counter the greater demands being made of marriage is uncertain. Then again, consensual unions have become more numerous, absorbing instability which otherwise might affect formal ones. The stability of these unions, the extent to which they can be likened to formal marriages, and the extent, if any, to which their dissolution is less socially and psychologically disruptive because of

their informality are important topics for future research. [28]

Since the late 1960s, remarrying divorcees have formed increasing proportions of New Zealand marriage cohorts and have become more likely to marry one another. However, that is not to say that divorcees have become more likely to remarry. High remarriage rates for divorcees of both sexes after World War 2 were largely due to the comparative youth of those who divorced at that time. Remarriage rates rose with the divorce rate after 1968, but in the case of females this trend again was largely an artifact of an increasingly youthful age structure. At ages below forty they have in fact become more reluctant to remarry since the mid-1960s. The remarriage rate for male divorcees genuinely rose during 1968-71, but has since continued to do so only at ages forty and over. At younger ages remarriage rates have fallen.

Comparison of the remarriage experience of synthetic divorce cohorts for 1961 and 1976 suggests that the likelihood of remarriage has fallen for both sexes, especially where divorce takes place before age forty. The trend has been stronger for females, among whom greater economic independence has undoubtedly been a factor. Very rapid remarriage in particular seems to have declined, partly because it is more often necessary to wait for one's new partner also to

[28] Limited data on the stability of informal cohabiting relationships are available from the Christchurch Child Development Study. They show that 32.5 percent of mothers who cohabited during pregnancy (N=83) became solo parents at confinement. Of those who were cohabiting at confinement and who remained in the study two years later (N=65), 23.1 percent ever separated within those two years and 18.5 percent separated and were not reconciled. Comparable figures for mothers legally married at confinement (N=952) were 4.7 and 2.7 percent ($p < 0.001$ in both instances; see Table 5.21).

divorce and partly because changing attitudes to informal cohabitation have made remarriage a less urgent priority. It is likely, too, that divorce in the mid-1970s was less often brought about by the remarriage process than it was a decade earlier. Separation more often occurred without either partner having already formed a new relationship.

The introduction of the DPB alone is likely to have induced such a trend, which has probably involved couples with dependent children in particular. A very marked fall in the propensity to remarry of women divorced in their thirties points in this direction. Possibly such women also have embraced feminist ideals very avidly, and thus become both particularly determined to support themselves and especially sceptical of marriage as an institution. Herein, however, lies a basic dilemma in interpreting recent declines in remarriage rates for divorcees. In the absence of detailed survey data it is difficult to know to what extent they manifest disenchantment with marriage, to what extent change in the types of circumstances in which marriages are being dissolved, to what extent a growing preference for consensual remarriage, and, in the case of women, to what extent decreased economic incentive to remarry.

CHAPTER 8

CORRELATES OF DIVORCE

8.1 INTRODUCTION

Sociologists and social demographers long have been concerned to identify those characteristics which predispose some married couples to divorce more than others. Certain subgroups of the married population consistently have been found to be particularly divorce-prone. However, with the recent sharp rise in the divorce rate suggesting the breakdown of normative sanctions against divorce, the question arises of whether its traditional correlates remain as strong as previously. If these sanctions have lost much of their effectiveness, then divorcing couples may have become more representative of married couples in general, particularly along socio-economic and religious dimensions.

This chapter examines that hypothesis whilst seeking to establish some of the factors associated with divorce among successive New Zealand marriage cohorts since 1939. The divorce file data used cover only a limited range of variables, and even then are sometimes of inferior quality compared to good survey data. But several of the more basic independent variables are available. The analysis, for the most part, relies on comparisons of divorce rates computed for discrete subgroups within marriage cohorts by linking sample data to published vital statistics. Its main drawback is that in examining the various independent variables individually there is limited scope

for controlling for the effects of other variables.

8.2 FINDINGS FROM PREVIOUS RESEARCH

Overseas Studies

Studies of the correlates of marital instability have been variously studies of divorce per se and of separation. [1] In reviewing them this distinction must be kept in mind, because subgroups of the married population differ in the extent to which, and the speed with which, they formalise dissolutions of marriage (Sweet, 1972). For example, American studies based on separation consistently find black marriages much less stable than white ones, whereas those which compare divorce rates show considerably smaller differentials. [2]

Age at marriage repeatedly has been associated positively with marital stability. [3] Marriages of teenagers seem to be especially vulnerable, and the relationship holds for both sexes. Furthermore, it does not just reflect the correlation of age at marriage with other variables, such as race, low education, or premarital pregnancy. [4] Bumpass and Sweet (1972) suggest that early marriers struggle to

[1] For general reviews of such studies see Hicks and Platt (1970), Sweet (1977), Lewis and Spanier (1979), and Price-Bonham and Balswick (1980).

[2] Several recent studies demonstrate this point (Bumpass and Sweet, 1972; Norton and Glick, 1976; McCarthy, 1977, 1978; McCarthy and Menken, 1979). Rosenwaike (1969) found higher white than nonwhite divorce rates in his record linkage analysis, but lately Sweet and Bumpass (1974), Thornton (1975, 1978), and Bumpass and Rindfuss (1979) have, in addition to authors already mentioned, confirmed that black marriages are particularly unstable.

achieve independence from their parents, and have perceptions of marital roles which often are tentative and unrealistic. They also probably are less mature and self-disciplined than those who marry later (Thornton, 1975; Glick and Norton, 1977; Ineichen, 1977), and may tend to come from unhappy homes (Thornes and Collard, 1979). Their more rapid family building may portend a general inability to plan their lives (Thornes and Collard, 1979), while marrying with few assets often condemns them to rental accommodation, with little prospect of realising aspirations of home ownership and good prospects of having to change residence frequently.

Many studies have shown marriages of pregnant brides to be susceptible to disruption. [5] Some writers suggest that the personalities and values of bridally pregnant couples make them less capable of, or committed to, creating successful unions (Vincent, 1961; Chilman, 1966; Paulker, 1969). Others claim that such couples often are ill-matched and poorly prepared for marriage (Christensen,

[3] The many American studies include those by Monahan (1953), Burchinal and Chancellor (1963), Landis (1963), Bauman (1967), Rosenwaike (1969), Coombs and Zumeta (1970), Farley (1970), Bumpass and Sweet (1972), Sweet and Bumpass (1974), Weed (1974), Ross and Sawhill (1975), Thornton (1975), Carter and Glick (1976), Lee (1977), McCarthy (1978), Bumpass and Rindfuss (1979), Mott and Moore (1979), Menken et al (1981), Moore et al (1981), and Spanier and Glick (1981). British studies include those by Rowntree (1964), Gibson (1974), Ineichen (1977), Leete (1979), and Thornes and Collard (1979). Data for France and Sweden are presented by Boigeol and Commaille (1974) and Moss (1965) respectively.

[4] See, for example, Farley (1970), Bumpass and Sweet (1972), Sweet and Bumpass (1974), Thornton (1975, 1978), and Mott and Moore (1979).

[5] The record linkage studies of Christensen (1959, 1960, 1963a, 1963b) and Christensen and Meissner (1953) established this relationship repeatedly. Other American writers to have confirmed it include Christensen and Rubinstein (1956), Monahan (1960), Lowrie (1965), Coombs and Zumeta (1970), Bumpass and Sweet (1972), Bacon (1974), Furstenberg (1976a), and McCarthy and Menken (1979). British studies include those by Gibson (1974) and Thornes and Collard (1979).

1960; Furstenberg, 1976a; Thornes and Collard, 1979), and that they receive little support from kin (Winch and Greer, 1964). A third argument has stressed economic factors (Coombs et al, 1970; Furstenberg, 1976a), while accelerated family building also has been seen as significant (Freedman and Coombs, 1966a; Bumpass et al, 1978; Trussell and Menken, 1978). Pohlman (1969) argues that early parenthood undermines conjugal solidarity, and several scholars have discussed the stresses accelerated role transition imposes on a marriage (Bacon, 1974; Elder and Rockwell, 1976; Trussell, 1976; Russell, 1980). Finally, to the extent that pregnant brides marry grooms of lower status (Coombs et al, 1970) their husbands may be unable to provide their accustomed standard of living. Coombs and Zumeta (1970) identify disparities between aspiration and actuality, and marital role perception and role performance, as a common complaint of separating wives.

While univariate studies are unanimous that premarital pregnancy correlates with marital instability, recent multivariate ones show its effect to be much reduced once variables such as age at marriage and education are controlled for (Bumpass and Sweet, 1972; Hampton, 1975; Menken et al, 1981). Women who give birth before marriage, however, are found to have very high rates of marital disruption net of the effects of other variables. Belated marriage to the natural father often may signify that one party was reluctant to marry at all. Other unwed mothers may rush into marriage, desperately seeking stepfathers for their children.

Early post-war American studies reported an inverse relationship between socio-economic status and marital instability (Hollingshead,

1950; Kephart, 1955; Goode, 1956). Census-based analyses then suggested the association was more complex (Glick, 1957; Hillman, 1962), but when Udry (1966) controlled for class differences in remarriage patterns this complexity disappeared. Subsequent investigations have confirmed that limited education and marital instability go together. [6] There is, however, evidence that college dropouts and very highly educated women exhibit more instability than they would were the relationship monotonic. [7] Moreover, the significance of education is greatly attenuated when age at marriage (Bumpass and Sweet, 1972; Thornton, 1978) and husband's income (Cutright, 1971) are controlled for.

A strong inverse relationship generally has been noted between husband's income and marital instability. [8] Multivariate studies suggest, however, that it is less the level of income than its reliability, the level of family assets, and a couple's ability to improve their economic status that are important (Furstenberg, 1974; Ross and Sawhill, 1975; Cherlin, 1976, 1979; Mott and Moore, 1979). Earnings of the wife seem to be positively associated with marital disruption (Johnson, 1975; Ross and Sawhill, 1975), their destabilising impact via wives' independence outweighing their stabilising impact via family income. Cherlin (1976, 1979) also finds support for Becker's (1973) theory that a low ratio of wife's to

[6] See Bernard (1966), Coombs and Zumeta (1970), Bumpass and Sweet (1972), Sweet and Bumpass (1974), Thornton (1975, 1978), Norton and Glick (1976), Bumpass and Rindfuss (1979), and Menken et al (1981).

[7] See, for example, Bauman (1967), Thornton (1975), Carter and Glick (1976), Glick and Norton (1977), and Houseknecht and Spanier (1980).

[8] See, for example, Goode (1956), Bernard (1966), Udry (1967), Scanzoni (1970), Cutright (1971), and Carter and Glick (1976).

husband's earnings enhances stability by lessening marital role ambiguity.

Recent British studies show unskilled manual workers and low status white collar workers to be especially divorce-prone (Gibson, 1974; Thornes and Collard, 1979). Thornes and Collard attribute the high divorce rate for the unskilled to a combination of relatively weak economic and religious barriers to divorce and a host of adverse environmental factors. That for low status white collar workers they put down to stress resulting from an ambiguous social position between the middle and working classes, and from consequent intense striving for social and material advancement.

Religious beliefs sometimes prevent separation and divorce. Early American studies consistently found Catholics less likely to divorce than non-Catholics, while later ones have shown Catholic marriages to be less likely to end in separation. [9] The differential is not, however, as substantial as doctrinal differences suggest (Sweet, 1977), and has narrowed of late, partly because the ratio of nominal to active Catholics has increased (McCarthy, 1979) and partly because Catholic opposition to divorce has eased (McRae, 1978). [10] Perhaps, given Thornes and Collard's (1979) finding that marriages of English churchgoers are more stable than those of non-churchgoers,

[9] The former studies include those by Landis (1949), Monahan and Kephart (1954), Burchinal and Chancellor (1963), and Christensen and Barber (1967). The latter include those by Coombs and Zumeta (1970), Bumpass and Sweet (1972), Thornton (1978), McCarthy (1979), and Menken et al (1981).

[10] Perhaps, too, no-fault divorce laws have reduced the capacity of active Catholics married to nominal ones and religiously intermarried Catholics to resist the dissolution of their marriages.

future research should focus on religiosity.

Consistent with theories of mate selection research has shown homogamy to be conducive to marital stability, although recently Mugford (1980) has argued that heterogamy per se is not a destabilising force. Heer (1974) found American black-white intermarriages to be less stable than intra-racial marriages. Age dissimilarity, too, seems to undermine marriages, those in which the wife is older or markedly younger than her husband having higher dissolution rates. [11] Religious intermarriages also seem less stable than same-faith marriages. [12] Finally, couples mismatched by education (Bumpass and Sweet, 1972) or by social class (Scanzoni, 1968; Boigeol and Commaille, 1974) have been reported especially divorce or separation-prone.

Remarriages of divorced persons almost invariably have proved less stable than first marriages. [13] Various scholars have attributed this finding to personality disorders, to the likelihood that having divorced one is less hesitant to do so again, and to the belief that male divorcees often are poor providers. More recently Cherlin (1978) has emphasised the complex family structures and relationships which characterise remarriages, particularly where there

[11] See, for example, Day (1964), Bumpass and Sweet (1972), Boigeol and Commaille (1974), Cherlin (1977), Dean and Gurak (1978), and Wilson (1982).

[12] See, for example, Landis (1949, 1963), Burchinal and Chancellor (1963), Christensen and Barber (1967), Bumpass and Sweet (1972), and Moller (1975).

[13] See, for example, Monahan (1958), Glick and Norton (1971), Bumpass and Sweet (1972), Becker et al (1976), Cherlin (1977, 1978), and McCarthy (1978).

are stepchildren, and the lack of institutional guidelines for dealing with them. Responding to this argument Halliday (1980) points out that, on religious grounds, divorce is less frequently an acceptable remedy for marital problems in first marriages. He also suggests that in a period of rapid change in marital roles institutionalised responses to such problems are a handicap. Dean and Gurak (1978) find that twice-wed women experience low homogamy in both their first and second marriages, suggesting that they have a proclivity for choosing incompatible partners. Mueller and Pope (1980) find that the remarriage process often involves upward social mobility for divorced women, and this may imply that mate selection has a tendency to be based on shallow, materialistic motives.

The hypothesis that marital instability runs in families receives qualified support from the research literature (Price-Bonham and Balswick, 1980). Some studies have found little or no evidence to substantiate it (Duncan and Duncan, 1969; Heiss, 1972; Furstenberg, 1976a). However, Mueller and Pope (1977) claim that generally the expected relationship has been established, but has not been strong. [14] They find that coming from a broken home contributes to poor mate selection, having earlier (Pope and Mueller, 1976) concluded that it does not necessarily impair the learning of marital roles.

New Zealand Studies

The New Zealand literature on factors related to divorce comprises three studies. Nixon (1954), in a sometimes technically

[14] Studies cited in support of this view include those by Gurin et al (1960), Bumpass and Sweet (1972), Hogan (1976), and Pope and Mueller (1976). See also Goode (1956), Sweet and Bumpass (1974), and Mott and Moore (1979).

dubious analysis, suggested that divorce was associated with lower incomes, lower status occupations, early marriage, and bridal pregnancy. Using census data he found no obvious tendency for Catholics to be less divorce-prone than non-Catholics, attributing this to lower Catholic remarriage rates, to Presbyterianism being dominant in rural areas, and to inter-religious differences in social class. He also found civil, urban, and North Island marriages to be less stable than religious, rural, and South Island ones. The last disparity he put down to the frontier character of the North Island during the late nineteenth century having established divorce as a more acceptable remedy for marital disharmony.

In another relatively unsophisticated study Phillips (1981) confirms that census data show proportionately more Catholics and Anglicans divorced than Presbyterians and Methodists. He shows, crudely, that persons divorcing in 1929 had married relatively young, and that of civil marriages celebrated in Auckland Registry Office in 1960 those ending in divorce by 31:12:79 involved comparatively young couples. [15] He further tentatively concludes that divorce has been most common in the middle and lower socio-economic strata of New Zealand society. Finally, he shows that censuses have recorded proportionately fewer Maoris than non-Maoris 'divorced', but acknowledges that this does not prove that their marriages are more stable.

[15] Phillips' use of mean, rather than median ages at marriage in the Auckland exercise is unsatisfactory. Those for the entire Registry Office cohort are boosted by marriages between older persons, which are especially susceptible to dissolution by death at short durations. The problem may be especially serious in a cohort of civil marriages, because remarriages are probably overrepresented.

In the most comprehensive analysis of correlates of divorce in New Zealand Patterson (1976) examined 469 Wellington divorces for which petitions were filed in 1971. She compared the 403 which were first divorces for both parties with a control group of 419 intact marriages from the Greater Wellington Urban Area, and the 66 which were 'redivorces' for at least one party with the first divorces. Data were obtained from divorce files, vital registration records, and unit record data from the 1971 census. [16]

Patterson reports downward occupational mobility of the husband as her strongest correlate of divorce, followed in order by marriage by civil ceremony, bridal pregnancy, and the wife's having been aged less than twenty-two at marriage. Contrary to expectation she finds divorcing wives less likely than still married ones to be employed, but this result is unreliable. Employment of the former is measured after separation at a time when they were likely to be drawing the Domestic Purposes Benefit (DPB), and the samples are not matched by marriage duration. One or both parties having been born illegitimate, having lost a parent through death, or having had a parent remarry after divorcing is also moderately correlated with divorce, as is the fact of either party having been born overseas. Weaker correlations are found between divorce and country-of-birth heterogamy, the

[16] Patterson's discussion of her methodology leaves some unanswered queries because it fails to show how some of her variables were measured and from precisely which sources her data were drawn on each item for each of the divorced, redivorced, and control groups. The divorced and control groups are not matched by duration of marriage. Furthermore, no account is taken either of the possibility that findings for the redivorced group reflect selectivity in the remarriage process, or of the fact that the redivorced group includes some individuals divorcing for the first time. Finally, the manner in which some variables were dichotomised for multivariate analysis is open to dispute.

presence of dependent children, the husband being a manual worker, and being non-Catholic. Interactions between explanatory variables are discussed, but methodological weaknesses (see footnote 16) really place all results under a cloud. This is even more the case with results from the comparison of redivorcing with divorcing couples. The former turn out to be more likely to be non-Catholic, to include working wives, and to be childless, but this may simply reflect a selective remarriage process and a tendency for redivorcing couples to be older.

8.3 FINDINGS FOR NEW ZEALAND

Divorce file data in conjunction with published vital statistics permit the following possible correlates of divorce in New Zealand to be investigated: age at marriage, relative age of bride and groom, marital status of bride and groom, relative marital status, premarital pregnancy, first birth interval, country of birth of bride and groom, relative birthplace, type of marriage ceremony (civil or religious), and, for religious marriages, denomination of the officiating clergyman. Each of these variables is examined by way of estimates of cumulative divorce rates to exact marriage durations at five-year intervals and five-year-interval duration-specific divorce rates calculated for the marriage cohorts of 1939-40, 1941-44, 1945-48, 1949-53, 1954-58, 1959-63, 1964-68, and 1969-73.

As divorce file data pertain to decrees absolute granted up to the end of 1978, the 1973 marriage cohort is the most recent for which divorces over at least the first five years are covered. It was decided to group single-year marriage cohorts into five-year composite

cohorts working backwards from this date, particularly since by doing so one break fell between 1968 and 1969. This coincides with the commencement of the major upsurge in New Zealand's divorce rate.

For the marriage cohorts of 1939-48 the grouping system departs from the pattern of five-year categories, partly because detailed marriage statistics are not available for 1941-44. For this period considerable estimation was necessary to determine populations at risk, and it made sense to confine the resulting error to a single composite cohort. It also was felt desirable to separate wartime from early post-war marriage cohorts, and the cohorts of 1939-40 seemed in some ways distinct from those of 1941-44. They were much larger, doubtless including many marriages which were advanced in anticipation of separation through military service. The 1941-44 cohorts, on the other hand, may have contained more genuine spur-of-the-moment marriages, especially to American servicemen.

Estimates of cumulative and marriage duration-specific divorce rates are computed by inflating by a factor of five divorce frequencies obtained from the one-in-five divorce file sample and expressing these products as rates per 1000 marriages celebrated. Calculations are based on divorces which dissolved New Zealand marriages only, since the method used is effectively a form of record linkage. The divorce rates obtained are thus generally conservative, as they take no account of overseas dissolutions of New Zealand marriages.

For most estimates of divorce rates, ninety percent confidence interval half-widths are given in parenthesis. [17] Any two rates are considered here to be significantly different if the intervals these

half-widths define about them do not overlap. [18] Intervals take into account both the numbers of sample divorces on which rates are based (these N's also are shown) and the sizes of marriage cohort subgroups to which they pertain.

It was noted above that non-availability of detailed marriage statistics for 1941-44 necessitated estimation of risk populations for the various divorce rates. The fact that detailed marriage tables were published for non-Maori marriages until 1951 and for all marriages thereafter also required that risk populations for pre-1952 marriage cohorts be adjusted upward. Finally, some risk populations were available only indirectly from published data. Details of the procedures used to overcome these problems are given in Appendix 13.

In addition to the variables by which divorce rates could be estimated using record linkage, the divorce file sample yielded information on the occupations of divorcing husbands at the time the divorce petition was filed. This is used to examine cross-sectionally the relationship between divorce and socio-economic status.

[17] Confidence interval half-widths are not given for rates based on fewer than five sample divorces. These qualify as 'rare' events in statistical terms, and confidence intervals should be fitted around them using the poisson distribution. These intervals are of unequal length above and below divorce rates, complicating the setting out of tables. They are omitted because little or no weight is given to the divorce rates concerned in the interpretation of results.

[18] This basis for defining rates as significantly different is not strictly a difference-of-proportions test at the confidence level specified. It is in fact a more rigorous test of statistical significance, and was chosen for its flexibility in permitting any particular divorce rate to be compared with any other.

Age at Marriage

The relationship between early marriage and divorce is confirmed by Tables 8.1 and 8.2. Considering marriages dissolved within ten years, estimated divorce rates for all marriage cohorts from 1939-40 to 1964-68 are highest where the bride was aged 16-17 and decline to their lowest levels where she was aged 25-29 or, for some more recent cohorts, 22-24 (Table 8.1). When the analysis is restricted to first marriages it becomes clear that any tendency for divorce rates to rise again for brides aged 30-39 reflects remarriages at those ages. Among those marrying for the first time rates tend to show simple inverse relationships with age at marriage. [19]

Focusing again on rates at exact marriage duration ten years, estimates for all but the 1939-40 and 1945-48 cohorts are significantly lower for brides aged 18-19 than for those aged 16-17 (Table 8.1). Estimates for all cohorts are significantly lower again for brides marrying at 20-21, and still lower for those marrying at 22-24. Spinsters who married at ages 25-29 during 1939-53 seem to have entered more stable unions than those who married at ages 22-24, but subsequent marriage cohorts show no significant difference between these age groups. Probably the downward shift in age at first marriage explains this change, the mid-20s having become a very mature

[19] Comparatively low divorce rates for spinsters marrying in their thirties (Table 8.1) partly reflect the greater likelihood of death dissolving such marriages by any marriage duration. It is because of this competing mortality factor that Tables 8.1 and 8.2 do not cover ages at marriage beyond 30-39 years. Moreover, within any age-at-marriage category divorce rates become increasingly influenced by widow(er)hood as duration of marriage increases. Comparisons between age at marriage-specific divorce rates should not, however, be seriously affected for ages at marriage up to 25-29 years, particularly over, say, the first twenty years of marriage.

age at which to marry. As divorces at longer marriage durations are taken into account the pattern only becomes more clearcut. Differences between cohort divorce rates for brides aged 16-17 and 18-19, and those aged 20-21 and 22-24, which were not statistically significant at exact duration ten years mostly are significant by exact duration fifteen years.

Cumulative divorce rates by age of groom also are consistently highest at the youngest ages at marriage, then decline with increasing age to ages 25-29 or 30-39 years (Table 8.2). Confining the analysis to first marriages again yields an inverse relationship. All but the 1945-48 and 1954-58 male first marriage cohorts have significantly lower divorce rates within ten years for grooms aged 20-21 than for those aged 18-19. All but the 1939-40 cohort have rates which are significantly lower again for grooms aged 22-24, and that rate is significantly lower by exact duration fifteen years. Similarly, only the 1939-40 and 1954-58 rates for grooms aged 25-29 are not significantly lower than those for grooms aged 22-24, and these attain significance by exact durations fifteen and twenty years respectively. [20]

While cumulative divorce rates decline with increasing age at first marriage for both sexes, the decline is steepest at the youngest ages. Marriages where the bride was a teenaged spinster or the groom

[20] A significantly higher divorce rate within ten years for 30-39 year-old males first married during 1954-58 than for 25-29 year-olds may reflect the particular instability of marriages of Hungarian refugees who came to New Zealand in the mid-1950s. There are no annual data showing age at (first) marriage by groom's country of birth, but data from the divorce file sample hint that Hungarian bachelor grooms in the mid-1950s rather more often than New Zealand ones were in their thirties.

a 16-21 year-old bachelor seem from Tables 8.1 and 8.2 to have been particularly unstable compared to first marriages at older ages.

The relationship between age at first marriage and the cumulative divorce rate persists as marriage duration increases. Does it, however, hold within each duration interval? Table 8.3 suggests that it does by and large. Often the duration-specific divorce rate for an age-at-first-marriage group is lower than that for the next younger group, but not significantly so. However, frequently it is significantly lower than the rate for the next younger group again, and allowing that rates for grooms married at ages 16-17 and 18-19 often are based on very few sample divorces, the consistency with which duration-specific divorce rates decline with increasing age at first marriage at durations 5-9, 10-14, and 15-19 years is striking.

If the general increase in the divorce rate since 1968 has weakened the relationship between age at first marriage and divorce, this should show in duration-specific divorce rates for the most recent composite first marriage cohort to pass through each duration interval (Table 8.3). However, these rates point instead to persistence of the pattern of decreasing marital instability with increasing age at first marriage. A crude measure of the strength of the relationship between divorce and age at first marriage is given by the ratio of the duration-specific divorce rates for brides married at ages 16-19 and 20-24, or for grooms married at ages 16-21 and 22-29. Table 8.4 provides no evidence of a major weakening of the tendency for earlier first marriages to be more vulnerable.

Table 8.3

ESTIMATED MARRIAGE DURATION-SPECIFIC DIVORCE RATES BY AGE
AND SEX: 1939-40 TO 1964-68 FIRST MARRIAGE COHORTS

Marriage Cohort	Age at Marriage											
	16-17	18-19	20-21	22-24	25-29	30-39	16-17	18-19	20-21	22-24	25-29	30-39
	Males					Females						
	Marriage Duration											
	5-9 years											
1939-40	185.2	185.2	71.0	48.9	38.5	17.5	145.3	88.0	47.6	33.9	21.8	20.4
(1)	(58.0,18)	(17.0,35)	(7.7,83)	(5.6,99)	(5.2,24)	(38.8,26)	(15.7,62)	(8.8,60)	(6.0,66)	(5.3,36)	(7.9,14)	
1941-44	102.0	160.3	109.6	41.8	20.4	15.4	119.6	70.8	53.6	28.8	16.8	6.2
(1)	(43.2,25)	(16.5,85)	(6.0,100)	(3.5,71)	(4.0,31)	(30.7,29)	(12.0,70)	(7.6,103)	(4.7,80)	(4.0,37)	(3.7,6)	
1945-48	59.5	67.5	61.0	35.0	20.8	16.4	80.2	55.9	32.8	22.7	15.1	12.2
(1)	(23.3,17)	(10.0,75)	(4.5,124)	(3.1,96)	(3.6,45)	(21.4,28)	(8.8,83)	(4.8,97)	(3.5,88)	(3.4,42)	(4.9,13)	
1949-53	74.6	73.7	39.6	28.8	20.3	13.4	76.5	40.1	26.6	18.9	14.2	10.7
(2)	(21.3,24)	(7.0,66)	(3.6,137)	(2.9,104)	(3.5,32)	(17.1,40)	(6.2,86)	(3.8,104)	(3.1,80)	(3.4,37)	(4.3,13)	
1954-58	63.0	50.9	50.9	21.9	18.1	27.8	69.4	43.0	22.9	15.7	13.4	14.4
(3)	(14.6,25)	(7.3,100)	(3.0,111)	(2.7,95)	(5.0,64)	(13.2,56)	(5.7,119)	(3.3,100)	(2.9,62)	(3.5,31)	(5.3,16)	
1959-63	114.8	84.5	52.7	32.3	24.1	26.0	91.4	53.7	26.8	23.7	24.5	12.0
(47.9,11)	(13.7,75)	(6.0,157)	(3.4,189)	(3.4,109)	(5.0,57)	(12.2,110)	(5.5,196)	(3.2,146)	(3.7,89)	(5.4,43)	(5.3,11)	
1964-68	142.7	121.5	70.4	44.4	35.8	34.0	123.1	71.9	45.4	29.0	23.6	18.3
(38.9,25)	(12.5,181)	(5.8,296)	(3.5,326)	(4.0,171)	(6.3,61)	(11.6,213)	(5.3,365)	(3.8,293)	(3.8,125)	(5.2,43)	(7.7,12)	
	10-14 years											
1939-40	0.0	20.6	42.5	30.6	19.1	16.7	55.8	46.9	27.0	21.0	13.9	8.8
(0)	(2)	(13.4,21)	(6.1,52)	(4.0,49)	(5.1,23)	(25.2,10)	(11.7,33)	(6.7,34)	(4.8,41)	(4.2,23)	(5.3,6)	
1941-44	0.0	64.1	51.7	26.3	12.3	15.0	57.8	38.5	31.8	16.3	9.1	19.8
(0)	(28.9,10)	(11.7,40)	(4.8,63)	(2.7,43)	(4.0,30)	(22.1,14)	(9.0,38)	(5.9,61)	(3.5,45)	(3.0,20)	(6.6,19)	
1945-48	0.0	35.7	31.7	28.3	21.1	13.8	51.5	35.1	25.4	19.1	12.6	8.6
(0)	(17.2,9)	(7.3,39)	(4.1,100)	(3.1,98)	(3.3,38)	(17.4,18)	(7.0,52)	(4.3,75)	(3.2,74)	(3.1,35)	(3.8,11)	
1949-53	37.3	55.4	33.7	21.6	16.0	17.3	57.4	30.3	23.7	15.8	11.5	10.7
(1)	(18.7,18)	(6.5,56)	(3.1,103)	(2.6,82)	(3.9,41)	(15.0,30)	(5.4,65)	(3.6,93)	(2.8,67)	(3.1,30)	(4.3,13)	
1954-58	105.1	57.1	46.3	22.4	19.8	16.9	55.8	38.2	22.3	19.6	13.4	10.8
(65.4,5)	(15.4,28)	(7.0,91)	(3.1,114)	(2.8,104)	(3.9,39)	(11.9,45)	(5.4,106)	(3.3,97)	(3.2,78)	(3.5,31)	(4.6,12)	
1959-63	125.3	108.0	63.5	40.4	36.8	27.8	97.2	68.4	41.5	29.0	23.4	9.9
(49.8,12)	(15.3,96)	(6.6,189)	(3.8,237)	(4.1,167)	(5.2,61)	(12.6,117)	(6.1,250)	(4.0,227)	(4.0,109)	(5.3,61)	(4.8,9)	
	15-19 years											
1939-40	0.0	41.2	28.4	11.8	15.2	8.7	16.8	25.5	16.7	11.8	9.6	7.3
(0)	(4)	(11.0,14)	(3.9,20)	(3.6,39)	(3.7,12)	(14.2,3)	(8.7,18)	(5.3,21)	(3.6,23)	(3.5,16)	(4.8,5)	
1941-44	0.0	25.6	33.5	21.0	11.4	8.0	33.0	32.4	21.8	12.3	5.9	8.4
(0)	(4)	(9.5,26)	(4.3,50)	(2.6,40)	(2.9,16)	(16.9,8)	(8.3,32)	(4.9,42)	(3.1,34)	(2.4,13)	(4.4,8)	
1945-48	0.0	19.8	24.4	21.4	14.3	12.0	51.5	31.7	18.3	14.9	7.9	5.5
(0)	(12.9,5)	(6.5,30)	(3.6,76)	(2.6,66)	(3.1,33)	(17.4,18)	(6.7,47)	(3.6,54)	(2.9,58)	(2.5,22)	(3.1,7)	
1949-53	37.4	58.4	38.4	23.9	16.8	10.5	55.5	35.9	20.0	18.4	13.9	6.6
(1)	(19.1,19)	(6.9,64)	(3.1,123)	(2.6,86)	(3.1,25)	(14.7,29)	(5.9,77)	(3.3,78)	(3.0,78)	(3.4,36)	(3.4,8)	
1954-58	84.0	53.0	53.4	32.7	24.2	16.9	69.4	49.1	31.6	23.7	18.6	17.1
(4)	(14.9,26)	(7.5,105)	(3.7,166)	(3.1,127)	(3.9,39)	(13.2,56)	(6.0,136)	(3.9,138)	(3.6,94)	(4.1,43)	(4.9,26)	
	20-24 years											
1939-40	0.0	41.1	24.3	11.7	10.1	13.8	27.9	15.6	10.3	13.9	12.1	5.8
(0)	(4)	(10.2,12)	(3.8,20)	(2.9,26)	(4.6,19)	(18.1,5)	(6.9,11)	(4.2,13)	(3.9,27)	(4.0,20)	(4)	
1941-44	102.0	44.9	33.6	19.6	14.9	11.0	41.2	34.4	23.5	14.1	10.0	3.1
(1)	(24.4,7)	(9.5,26)	(4.2,47)	(3.0,52)	(3.4,22)	(18.8,10)	(8.5,34)	(5.1,45)	(3.3,39)	(3.1,22)	(3)	
1945-48	0.0	55.6	30.9	25.4	16.6	11.3	51.6	33.7	26.4	17.8	12.9	7.0
(0)	(21.2,14)	(7.3,38)	(3.9,90)	(2.8,77)	(3.0,31)	(17.9,17)	(6.9,50)	(4.3,78)	(3.1,69)	(3.1,36)	(3.4,9)	
1949-53	74.6	61.4	39.6	31.5	22.6	13.4	57.4	43.4	27.8	22.2	17.6	9.1
(2)	(19.6,20)	(7.0,66)	(3.7,150)	(3.1,116)	(3.5,32)	(15.0,30)	(6.5,93)	(3.9,109)	(3.3,94)	(3.8,46)	(4.0,11)	
	25-29 years											
1939-40	0.0	10.3	26.4	15.9	8.2	5.8	11.2	19.9	14.3	12.8	4.9	1.5
(0)	(1)	(10.6,13)	(4.5,27)	(2.6,21)	(3.0,8)	(2)	(7.7,14)	(4.9,18)	(3.7,25)	(2.5,8)	(1)	
1941-44	306.1	44.9	30.9	12.6	10.3	7.9	41.3	24.2	15.6	9.7	8.1	6.2
(3)	(24.4,7)	(9.1,24)	(3.4,30)	(2.5,36)	(2.9,16)	(18.8,10)	(7.2,24)	(4.2,30)	(2.7,27)	(2.8,18)	(3.7,6)	
1945-48	59.5	31.7	29.3	23.4	16.6	10.1	27.9	31.0	22.6	18.0	9.4	5.5
(1)	(16.2,8)	(7.1,36)	(3.7,83)	(2.8,77)	(2.8,28)	(12.2,11)	(6.6,46)	(4.0,67)	(3.1,70)	(2.7,26)	(3.1,7)	

Source: Divorce file sample; New Zealand Vital Statistics 1939-68.

1 Rates for marriage duration 0-4 years are not shown as they are identical to the cumulative divorce rates to exact marriage duration 5 years shown in Tables 8.1 and 8.2. Note that these rates also cover the 1969-73 marriage cohort.

Relative Age at Marriage

Pursuing the theme of age further, does the age difference between spouses affect the likelihood that a marriage will end in divorce? With the norm in New Zealand being for grooms to be a little

Table 8.4

INDICES OF THE STRENGTH OF THE RELATIONSHIP BETWEEN DIVORCE AND AGE AT
 FIRST MARRIAGE BY SEX AND DURATION OF MARRIAGE AT DIVORCE: 1939-40¹
 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Marriage Duration in Years					
	0-4	5-9	10-14	15-19	20-24	25-29
Females						
1939-40	2.56	2.53	2.08	1.74	1.45	1.35
1941-44	2.39	2.06	1.87	2.01	1.99	2.26
1945-48	1.54	2.24	1.75	2.16	1.70	1.56
1949-53	1.58	2.09	1.82	2.08	1.85	
1954-58	2.25	2.52	2.01	1.92		
1959-63	2.49	2.47	2.08			
1964-68	1.78	2.19				
1969-73	1.99					
Males						
1939-40	2.67	2.12	1.63	2.19	2.48	2.08
1941-44	3.31	4.05	2.95	2.08	2.15	3.22
1945-48	2.47	2.31	1.32	1.34	1.70	1.53
1949-53	1.77	1.87	1.99	1.97	1.62	
1954-58	1.31	2.57	2.34	1.90		
1959-63	2.53	2.14	1.93			
1964-68	1.85	2.09				
1969-73	1.49					

Source: Divorce file sample; New Zealand Vital Statistics, 1939-73.

¹ Indices are ratios of marriage duration-specific divorce rates for brides married for the first time at ages 16-19 and 20-24 and grooms married for the first time at ages 16-21 and 22-29.

older than their brides, marriages where the groom is younger or much older are atypical, and might be less stable.

Divorce rates for subgroups of marriage cohorts defined by relative age of bride and groom lend little support to this hypothesis. Rates presented in Table A2.22, Appendix 2 pertain only

to couples who were both aged under fifty at marriage, as after 1956 published statistics tabulate age of bride by age of groom in single years only for ages 16-49 years. [21] However, rates computed for brides and grooms of all ages for the marriage cohorts of 1939-40, 1945-48, and 1949-53 (not shown) also failed to reveal significantly more divorce where grooms were younger or markedly older than their brides. [22]

In Table 8.5, separate results are presented for selected ages of bride and groom, the analysis once again being confined to marriages between parties aged under fifty. It would appear that the least stable marriages of teenaged brides have been those to grooms about the same age. This generalisation applies especially to the wartime and 1960s marriage cohorts. For the 1939-40 and 1941-44 cohorts divorce rates to exact marriage duration ten years are significantly higher where the groom was within a year of being his bride's age than where he was 4-5 or 6-10 years older. The same is true, or almost true, for the 1959-63 and 1964-68 cohorts. Similar differences are

[21] Note that in Tables A2.22, Appendix 2 and 8.5 relative age is determined by simple subtraction of the bride's from the groom's age in completed years. Given the nature of the published vital statistics, no more accurate procedure could be adopted. Naturally a wife is always the same number of years younger or older than her husband. However, this section is titled 'Relative Age at Marriage' because of the crude method by which relative age is calculated. Were the same method to be applied at some other point in time, not all couples would remain in the same relative age categories.

[22] Among possible explanations for this finding are the following. First, very young brides cannot, by law, marry appreciably younger grooms. Thus, the higher incidence of divorce among young brides affects mainly the less extreme relative age categories. Second, where one spouse is much older than the other, death is more likely to obviate any need for divorce by any marriage duration than where they are more similar in age. Finally, marriages characterised by extreme age differences may often involve Maoris, and thus frequently be dissolved only informally.

Table 8.5

ESTIMATED CUMULATIVE DIVORCE RATES TO EXACT MARRIAGE DURATIONS TEN AND TWENTY YEARS FOR SELECTED AGES OF BRIDE AND GROOM BY RELATIVE AGE OF BRIDE AND GROOM: 1939-40 TO 1964-68 MARRIAGE COHORTS

Age of Bride or Groom and Relative Age of Groom	10 years					20 years						
	1939-40	1941-44	1945-48	1949-53	1954-58	1939-40	1941-44	1945-48	1949-53	1954-58		
Exact Marriage Duration and Marriage Cohort												
Bride 16-19												
Within 1 year of same age	221.0 (71.7,16)	209.1 (55.9,24)	80.7 (29.4,15)	63.4 (21.9,17)	63.4 (17.7,26)	94.2 (15.5,17)	129.4 (33.5,17)	276.2 (77.3,20)	313.6 (83.7,36)	156.1 (39.2,29)	175.2 (34.1,47)	182.9 (28.1,75)
2-3 years older	132.0 (35.5,26)	160.2 (31.8,46)	106.7 (21.0,50)	63.5 (13.2,47)	57.9 (10.9,58)	75.1 (9.7,12)	109.7 (20.9,27)	187.8 (37.4,79)	243.7 (51.2,109)	168.5 (25.4,79)	147.3 (17.1,161)	160.6 (16.1,161)
4-5 years older	112.5 (30.0,27)	90.8 (23.7,29)	69.9 (18.7,28)	50.6 (12.1,36)	72.7 (12.3,70)	70.9 (10.7,89)	85.1 (10.2,138)	204.2 (38.3,49)	172.2 (31.1,55)	159.8 (26.9,64)	111.1 (17.3,79)	164.1 (17.6,158)
6-10 years older	105.7 (26.4,31)	93.0 (21.7,36)	69.3 (15.8,39)	54.2 (12.0,42)	51.9 (10.4,51)	63.5 (11.5,62)	95.5 (13.0,106)	170.5 (32.3,50)	157.5 (27.2,61)	147.4 (22.0,83)	122.7 (17.3,95)	132.2 (15.9,130)
More than 10 years older	60.8 (38.8,5)	115.9 (42.9,14)	74.1 (29.1,13)	92.4 (32.4,16)	65.1 (24.8,14)	80.1 (25.9,19)	68.2 (25.9,14)	158.2 (39.5,26)	157.3 (48.7,19)	148.2 (39.5,26)	155.9 (40.6,27)	172.1 (37.9,37)
Bride 20-24												
2-5 years younger	112.8 (45.1,12)	112.8 (35.9,19)	76.8 (23.7,21)	55.0 (19.1,17)	19.9 (11.8,6)	47.2 (16.4,17)	73.6 (18.4,32)	197.4 (56.8,21)	182.4 (43.6,31)	131.6 (30.1,36)	113.0 (26.5,35)	92.5 (24.5,28)
Within 1 year of same age	39.5 (9.8,34)	74.3 (10.7,96)	55.1 (7.5,110)	35.3 (5.4,88)	33.2 (5.3,82)	35.4 (4.9,107)	54.9 (5.4,212)	86.0 (14.1,74)	127.8 (13.7,165)	94.6 (9.6,189)	82.6 (8.1,206)	90.7 (8.5,224)
2-3 years older	52.6 (11.8,61)	47.7 (9.2,55)	34.6 (6.5,59)	29.6 (5.4,63)	16.9 (4.0,38)	25.4 (4.6,64)	44.4 (5.4,138)	85.9 (14.8,67)	78.9 (11.7,91)	69.2 (9.0,118)	61.5 (7.7,131)	59.2 (7.3,133)
4-5 years older	39.6 (11.7,24)	41.2 (9.8,37)	30.1 (7.3,36)	26.8 (6.2,39)	19.1 (5.1,30)	25.3 (5.9,39)	44.8 (7.4,76)	82.4 (16.4,50)	68.0 (12.4,61)	70.2 (10.9,84)	61.1 (9.2,89)	63.7 (9.1,100)
6-10 years older	42.1 (11.5,28)	39.3 (9.3,37)	35.2 (7.6,45)	21.7 (5.7,31)	33.0 (6.9,48)	28.6 (6.5,41)	53.2 (9.0,72)	37.2 (13.3,38)	63.8 (11.7,60)	74.4 (10.8,95)	58.1 (9.1,83)	79.0 (10.4,115)
More than 10 years older	68.1 (26.8,13)	81.4 (23.4,24)	35.5 (12.8,16)	48.9 (15.3,21)	28.9 (13.3,10)	47.9 (15.4,20)	58.8 (17.1,24)	115.2 (34.0,22)	145.8 (30.2,43)	88.7 (19.7,40)	93.2 (20.6,40)	89.6 (22.6,31)
Bride 25-29												
More than 3 years younger	63.9 (34.4,7)	120.9 (40.5,17)	65.1 (25.7,13)	29.0 (15.9,7)	15.1 (3)	64.9 (29.2,10)	45.5 (23.1,8)	118.6 (45.4,13)	142.2 (43.3,20)	125.3 (34.5,25)	87.0 (26.7,21)	95.6 (30.7,19)
2-3 years younger	21.7 (14.1,5)	17.0 (11.1,5)	22.3 (11.5,8)	32.3 (13.0,13)	17.9 (10.7,6)	25.1 (14.9,6)	40.8 (17.7,11)	30.4 (16.6,7)	50.9 (18.8,15)	67.0 (19.4,24)	79.4 (19.8,32)	53.6 (18.1,18)
Within 1 year of same age	32.5 (11.1,18)	33.7 (9.7,25)	22.6 (7.2,21)	26.2 (7.9,23)	20.7 (7.5,16)	27.5 (10.3,15)	34.5 (10.9,21)	63.3 (15.2,35)	44.5 (11.1,33)	50.5 (10.6,47)	56.9 (11.5,50)	56.8 (12.2,44)
2-5 years older	24.5 (10.3,12)	27.1 (9.0,19)	21.9 (7.1,20)	20.7 (7.5,16)	22.0 (8.0,16)	25.0 (9.7,14)	30.0 (10.9,16)	44.9 (13.8,22)	44.3 (11.4,31)	46.0 (10.2,42)	53.1 (11.9,41)	50.9 (12.0,37)
6-10 years older	8.7 (2)	32.1 (14.0,11)	31.2 (11.3,16)	23.8 (10.9,10)	39.2 (15.1,14)	32.7 (14.3,11)	54.0 (18.7,17)	34.6 (17.7,8)	46.7 (16.8,16)	56.6 (15.0,29)	42.9 (14.6,18)	95.3 (22.9,34)
More than 10 years older	19.1 (2)	49.6 (25.2,8)	45.0 (19.5,11)	22.1 (14.4,5)	32.1 (19.0,6)	69.3 (29.7,11)	50.8 (23.0,10)	38.2 (4)	80.5 (31.5,13)	73.6 (24.6,18)	48.7 (21.1,11)	85.5 (30.1,16)
Groom 30-39												
More than 1 year younger	15.4 (2)	18.7 (4)	32.1 (14.7,10)	39.0 (15.6,13)	47.5 (16.5,17)	48.4 (16.8,17)	57.5 (21.2,15)	61.5 (31.0,8)	46.7 (21.2,10)	67.4 (20.9,21)	65.9 (20.0,22)	83.9 (21.6,30)
Within 1 year of same age	30.5 (18.0,6)	27.2 (14.0,8)	44.0 (14.9,18)	35.3 (14.1,13)	45.9 (16.0,17)	38.7 (16.1,12)	57.5 (23.7,12)	61.0 (25.1,12)	68.1 (21.6,20)	78.2 (19.5,32)	78.8 (20.7,29)	78.3 (20.5,29)
2-5 years older	17.6 (9.5,15)	25.4 (9.5,15)	23.1 (7.7,19)	16.1 (7.1,11)	27.5 (11.1,18)	23.9 (9.6,13)	48.1 (14.7,22)	32.8 (13.2,13)	45.7 (12.6,27)	53.6 (11.6,44)	49.8 (12.2,34)	58.0 (13.4,38)
6-10 years older	25.4 (9.9,14)	35.7 (9.4,30)	34.6 (7.8,41)	21.4 (6.6,22)	31.8 (8.1,26)	28.6 (8.1,26)	35.9 (11.7,47)	45.3 (13.0,25)	53.5 (11.4,45)	63.3 (10.4,75)	48.6 (9.9,50)	73.1 (12.5,69)
More than 10 years older	53.6 (20.5,14)	83.1 (19.8,35)	31.2 (10.4,19)	57.0 (14.4,32)	50.3 (14.1,26)	54.3 (13.5,33)	61.3 (14.8,35)	114.8 (29.0,30)	132.9 (24.3,56)	77.3 (15.9,47)	99.8 (18.6,56)	123.8 (21.5,65)

Source: Divorce file data; New Zealand Vital Statistics 1939-68.

1. Note that this table covers only marriages where both bride and groom were aged under fifty years.

shown for the 1949-53 and ('6-10 years older' category only) 1954-58 marriage cohorts at exact duration twenty years, though not at duration ten years.

Early marriage being associated with divorce for both sexes, it is hardly surprising that where both bride and groom are young the likelihood of divorce is especially high. That this relationship emerges most strongly for the wartime and 1960s marriage cohorts suggests that it is not simply a function of age. 'Forced' marriages due to premarital pregnancy may be a major consideration. Probably the proportion of such marriages among those of teenaged brides to males of similar age was especially high during wartime, and again during the 1960s as premarital coitus increased. But perhaps more importantly the prosperity and familism of the 1950s may have cushioned the financial pressures and problems of accelerated role transition experienced by very young couples. The fact that the relationship under discussion emerges for couples married during the 1950s at marriage durations 10-19 years may indicate that these pressures in fact lay dormant, surfacing as the economic climate changed and individualistic ideals replaced familistic ones.

Among marriages of brides aged 20-24, those where the groom was 2-5 years younger, and to a lesser extent those where he was about the same age, seem consistently to have been less stable than those where he was 2-10 years older (Table 8.5). Again, premarital pregnancy may more often have been decisive in decisions to marry. Secondly, for brides aged 20-24, grooms 2-5 years younger are likely to hold relatively low status jobs. Marriages may often be beset by financial difficulties, and spouses may have limited interpersonal skills.

At the other extreme there is some evidence in Table 8.5 that 20-24 year-old brides have been more divorce-prone if marrying grooms more than ten years their senior than if marrying grooms older by 2-10 years. Ten and twenty-year cumulative divorce rates are for almost all marriage cohorts higher for the former relative age category than for any of those making up the latter, even if not all differences are statistically significant. Undue emphasis on the physical attractiveness of a much younger woman or the economic resources of a much older man as motives for marriage may help explain this finding. A substantial age difference perhaps also increases the likelihood of interests being divergent, and raises the odds that the husband has previously used divorce to resolve marital problems.

At bridal ages 25-29, the evidence for a higher divorce rate where the groom was considerably older is inconsistent (Table 8.5). Perhaps as bridal age increases so does the capacity of a marriage to stand such an age difference. However, one must also consider the undoubted greater impact of widowhood on divorce rate differentials by relative age at marriage. The tendency for marriages to have been less stable if the groom was somewhat younger than the bride remains for most marriage cohorts, except that the higher divorce rate is associated with a greater degree of relative youth.

Since 1939, grooms aged 30-39 consistently have accounted for the majority of marriages where the groom was more than ten years the older partner. Within this age group, ten-year cohort divorce rates frequently have been significantly higher for these marriages than for those where the groom was 2-5 or 6-10 years older (Table 8.5). By exact duration twenty years these differences are statistically

significant for all but the 1945-48 marriage cohort. [23]

In summary, relative age at marriage has been associated with divorce within particular age-at-marriage groups. The relationships uncovered are not causal ones, but probably have operated through variables which concern the motives for marriage, the ability of couples to cope with its economic and interpersonal demands, and the likelihood of them sharing common interests. Whether the post-1968 increase in the divorce rate has modified these relationships is hard to say. Divorces may have increased more where the groom was 2-10, and especially 6-10, years older than the bride than where he was more than ten years older. Divorce rates to exact marriage duration ten years for 20-24 and 25-29 year-old brides, and 30-39 year-old grooms, married during 1964-68 raise this possibility.

Marital Status

The frequent finding that having once divorced predisposes one to having a subsequent marriage also end in divorce is supported strongly by the New Zealand evidence. Data covering all bridal ages (Table 8.6) show significantly higher estimated divorce rates to exact marriage duration five years for divorcees than for spinsters for all but the wartime and 1969-73 marriage cohorts. Differences for the 1941-44 and 1939-40 cohorts become significant by exact durations ten and twenty-five years, while those for all other cohorts are

[23] The peculiar state of the immediate post-war marriage market may explain this exception. War losses forced some women to marry very much older men until the surge of male dominated immigration in the early 1950s replenished the supply of potential husbands (Chapter 6). For a time, therefore, such marriages probably were more likely than usual to be based on genuine affection and commitment.

Table 8.6

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
BY AGE AND MARITAL STATUS OF BRIDE: 1939-40 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Bride's Age and Marital Status											
	20-29			30-39			40-49			All Ages		
	NH	W	D	NH	W	D	NH	W	D	NH	W	D
Exact Marriage Duration												
5 years												
1939-40	5.8 (1.6,28)	0.0 (0)	0.0 (0)	1.5 (1)	0.0 (0)	14.4 (2)	9.0 (1)	13.5 (1)	17.4 (1)	7.1 (1.5,47)	4.4 (1)	13.3 (4)
1941-44	15.5 (2.2,107)	12.6 (1)	60.4 (26.0,11)	12.5 (5.3,12)	36.2 (4)	24.0 (14.2,6)	11.8 (2)	10.0 (1)	0.0 (0)	18.6 (2.1,173)	18.8 (9.7,8)	29.3 (10.3,17)
1945-48	9.9 (1.5,95)	6.0 (1)	46.8 (16.3,17)	4.7 (2.8,6)	20.2 (4)	20.2 (9.8,9)	4.1 (1)	6.7 (1)	10.2 (2)	10.4 (1.3,136)	15.0 (6.6,11)	27.8 (7.4,30)
1949-53	6.7 (1.2,72)	0.0 (0)	31.1 (13.0,12)	4.1 (2.7,5)	5.2 (1)	22.2 (9.3,12)	6.9 (2)	10.4 (2)	22.3 (13.2,6)	7.4 (1.0,111)	10.0 (5.2,8)	24.7 (6.3,32)
1954-58	5.5 (1.1,59)	31.0 (2)	16.1 (10.5,5)	2.7 (3)	0.0 (0)	13.5 (7.5,7)	6.7 (2)	14.7 (3)	6.9 (12.5,6)	6.9 (1.0,109)	6.5 (4.3,5)	16.2 (5.3,20)
1959-63	4.6 (1.0,50)	0.0 (0)	20.7 (12.3,6)	4.4 (3.2,4)	21.6 (3)	12.2 (7.3,6)	0.0 (0)	0.0 (1)	15.2 (9.9,5)	6.5 (0.9,111)	14.7 (6.2,12)	15.0 (5.0,19)
1964-68	10.2 (1.3,129)	35.6 (2)	22.7 (11.7,8)	12.5 (6.4,8)	16.3 (2)	22.2 (10.2,10)	13.6 (3)	9.0 (2)	20.5 (11.3,7)	13.3 (1.2,272)	11.7 (5.4,10)	21.9 (5.9,29)
1969-73	14.4 (1.5,203)	12.6 (1)	31.0 (9.8,21)	22.6 (8.8,14)	21.7 (3)	18.3 (8.0,11)	6.3 (1)	29.7 (16.3,7)	19.0 (9.8,8)	19.4 (1.3,450)	14.3 (5.4,15)	21.5 (4.8,42)
10 years												
1939-40	39.1 (4.1,190)	43.9 (1)	88.2 (46.8,7)	21.9 (8.2,15)	36.2 (2)	57.5 (29.0,8)	18.0 (2)	27.0 (2)	34.7 (2)	47.4 (3.9,312)	22.0 (14.3,5)	60.0 (20.2,18)
1941-44	47.4 (3.8,327)	88.4 (46.7,7)	109.8 (34.1,20)	18.7 (6.4,18)	54.3 (31.7,6)	84.1 (25.8,21)	35.3 (20.8,6)	50.2 (32.2,5)	46.3 (29.8,5)	53.9 (3.4,502)	61.0 (17.1,26)	79.3 (16.5,46)
1945-48	33.5 (2.7,322)	54.3 (25.9,9)	126.6 (25.7,46)	14.9 (5.0,19)	50.6 (22.9,10)	62.8 (16.9,28)	4.1 (1)	60.5 (28.8,9)	50.7 (23.0,10)	37.4 (2.4,489)	46.3 (11.4,34)	80.7 (12.2,87)
1949-53	27.2 (2.3,293)	36.7 (3)	98.3 (22.3,38)	14.8 (5.1,18)	20.9 (4)	75.8 (16.7,41)	13.8 (4)	20.9 (4)	52.1 (19.9,14)	31.6 (2.1,475)	23.8 (7.9,19)	75.0 (10.8,97)
1954-58	23.7 (2.2,252)	61.9 (4)	64.3 (20.5,20)	17.1 (5.7,19)	12.9 (2)	77.1 (17.2,40)	16.7 (10.9,5)	58.9 (24.3,12)	63.2 (21.2,18)	31.5 (2.0,497)	36.5 (10.0,28)	68.9 (10.6,85)
1959-63	29.9 (4.4,328)	14.9 (1)	89.7 (24.7,26)	16.4 (6.2,15)	71.8 (32.2,10)	46.8 (14.0,23)	19.0 (12.4,5)	19.6 (4)	85.3 (22.7,28)	41.6 (2.2,712)	37.9 (9.8,31)	65.6 (10.2,83)
1964-68	46.8 (2.8,590)	89.0 (55.9,5)	122.1 (25.7,43)	30.6 (9.9,20)	122.5 (43.6,15)	113.1 (21.9,51)	27.2 (16.1,6)	58.5 (23.2,13)	79.2 (21.5,27)	65.0 (2.5,1326)	58.6 (11.8,50)	96.5 (11.9,128)
15 years												
1939-40	59.2 (5.0,288)	43.9 (1)	138.5 (57.0,11)	30.7 (9.7,21)	36.2 (2)	100.6 (37.5,14)	36.0 (4)	54.1 (4)	34.7 (2)	70.0 (4.6,461)	30.8 (16.9,7)	93.4 (24.7,28)
1941-44	65.7 (4.4,453)	113.6 (52.5,9)	142.7 (38.1,26)	38.5 (9.1,17)	72.5 (36.3,8)	120.1 (30.3,30)	41.2 (22.4,7)	70.3 (37.7,7)	83.3 (39.1,9)	75.2 (4.0,701)	77.4 (19.0,33)	112.1 (19.3,65)
1945-48	52.6 (3.3,506)	86.4 (31.8,14)	209.1 (31.4,76)	23.5 (6.2,30)	75.8 (27.7,15)	103.1 (21.2,46)	16.2 (11.8,4)	67.2 (30.2,10)	71.1 (26.9,14)	58.0 (3.0,758)	62.7 (13.2,46)	128.9 (15.0,139)
1949-53	44.9 (2.9,483)	48.9 (4)	150.1 (26.7,58)	25.5 (6.7,31)	36.6 (20.0,7)	110.9 (19.9,60)	24.1 (13.2,7)	36.5 (19.9,7)	89.4 (25.6,24)	51.6 (2.7,776)	32.6 (9.3,26)	112.9 (12.9,146)
1954-58	43.0 (2.9,458)	108.4 (56.9,7)	135.0 (28.5,42)	27.9 (7.2,31)	32.1 (20.8,5)	113.7 (20.5,59)	23.4 (12.9,7)	88.4 (29.3,18)	87.7 (24.7,25)	55.1 (2.7,869)	56.0 (12.2,43)	112.7 (13.2,139)
1959-63	64.2 (3.4,705)	74.4 (47.1,5)	186.2 (33.6,54)	26.3 (7.8,24)	100.6 (37.5,14)	105.8 (20.4,52)	30.4 (15.6,8)	53.9 (23.3,11)	109.6 (25.4,36)	85.7 (3.1,1468)	58.7 (12.1,48)	118.5 (13.4,150)
20 years												
1939-40	71.6 (5.4,348)	87.7 (2)	151.1 (59.1,12)	38.0 (10.8,26)	90.6 (56.9,5)	114.9 (39.8,16)	45.0 (28.9,5)	54.1 (4)	52.1 (3)	83.2 (5.0,548)	48.5 (21.0,11)	106.7 (26.2,32)
1941-44	78.6 (4.8,542)	151.5 (59.3,12)	153.7 (39.3,28)	46.9 (10.0,45)	90.6 (40.2,10)	140.1 (32.3,35)	47.1 (23.9,8)	80.3 (40.1,8)	111.1 (44.5,12)	90.1 (4.4,839)	93.8 (20.8,40)	129.4 (20.5,75)
1945-48	66.5 (3.7,640)	90.5 (32.8,15)	258.7 (33.8,94)	29.0 (6.9,37)	91.0 (30.1,18)	141.2 (24.3,63)	20.3 (13.2,5)	73.9 (31.5,11)	91.4 (30.2,18)	73.9 (3.4,965)	69.5 (13.8,51)	166.0 (16.7,179)
1949-53	62.8 (3.4,675)	85.6 (45.5,7)	199.3 (29.9,77)	32.1 (7.4,39)	52.4 (23.7,10)	138.6 (21.9,75)	24.1 (13.2,7)	41.7 (21.2,8)	96.8 (26.5,26)	71.9 (3.1,1082)	42.7 (10.5,34)	140.7 (14.2,182)
1954-58	68.9 (3.6,733)	108.4 (56.9,7)	196.0 (33.1,61)	45.0 (9.2,50)	45.0 (24.5,7)	150.3 (23.1,78)	23.4 (12.9,7)	103.1 (31.4,21)	98.2 (25.9,28)	86.0 (3.3,1355)	63.8 (13.0,49)	145.9 (14.8,180)
25 years												
1939-40	83.9 (5.8,408)	131.6 (3)	239.3 (70.5,19)	43.8 (11.5,30)	90.6 (56.9,5)	129.3 (41.8,18)	45.0 (28.9,5)	54.1 (4)	52.1 (3)	95.3 (5.3,628)	52.9 (21.9,12)	140.1 (29.5,42)
1941-44	94.0 (5.2,648)	164.1 (61.2,13)	175.6 (41.5,32)	50.0 (10.4,48)	99.6 (41.9,11)	160.1 (34.1,40)	53.0 (25.3,9)	100.4 (44.3,10)	111.1 (44.5,12)	106.6 (4.7,993)	103.2 (21.7,44)	144.9 (21.5,84)
1945-48	85.6 (4.2,823)	96.5 (33.7,16)	283.4 (34.8,103)	36.0 (7.7,46)	106.2 (32.2,21)	147.9 (24.7,66)	20.3 (13.2,5)	80.6 (32.8,12)	96.4 (30.9,19)	93.8 (3.8,1225)	76.3 (14.4,56)	178.0 (17.1,192)
1949-53	85.9 (4.0,924)	122.2 (53.3,10)	248.4 (32.3,96)	41.2 (8.4,50)	73.3 (27.7,14)	159.0 (23.1,86)	24.1 (13.2,7)	41.7 (21.2,8)	108.0 (27.9,29)	97.5 (3.6,1466)	51.5 (11.5,41)	167.0 (15.3,216)
30 years												
1939-40	94.4 (6.2,459)	131.6 (3)	251.9 (71.7,20)	45.3 (11.7,31)	90.6 (56.9,5)	143.7 (43.7,20)	45.0 (28.9,5)	54.1 (4)	52.1 (3)	105.6 (5.6,696)	52.9 (21.9,12)	150.1 (30.4,45)
1941-44	104.9 (5.4,723)	189.4 (64.8,15)	192.1 (42.9,35)	56.2 (10.9,54)	108.7 (43.6,12)	176.1 (35.5,44)	58.9 (26.6,10)	100.4 (44.3,10)	120.4 (46.1,13)	119.0 (4.9,1109)	110.2 (22.3,47)	158.7 (22.3,92)
1945-48	102.5 (4.6,986)	114.6 (36.4,19)	316.5 (35.9,115)	41.5 (8.2,53)	106.2 (32.2,21)	163.6 (25.8,73)	20.3 (13.2,5)	87.4 (34.1,13)	96.4 (30.9,19)	111.1 (4.0,1452)	81.7 (14.9,60)	196.6 (17.8,212)

Source: Divorce file sample: New Zealand Vital Statistics 1939-73.

significant at all durations, generally by clear margins. For males the all-ages cumulative divorce rate for divorcees remarried in 1939-40 is always higher, but never significantly so, than that for bachelors (Table 8.7). For all later marriage cohorts rates for divorcees are significantly higher at all exact marriage durations.

Forced separations experienced by couples married in 1939-40 may have muted the tendency for remarrying divorcees to be at greater risk of divorce than persons never before married. The absence of a significantly higher divorce rate within five years for female divorcees married during 1969-73 is consistent with women having become generally more forthright in ending failed marriages and more careful in making decisions to remarry. It might also indicate that 'bad risk' divorcees more frequently are opting to cohabit (Chapter 7).

Refinement of the analysis by age at marriage shows the finding for female divorcees married during 1969-73 to hinge on the 30-39 age group (Table 8.6). This is interesting, as spinsters marrying this late traditionally have entered very stable unions. It ties in with conclusions reached in Chapter 7 concerning changed attitudes of female divorcees to remarriage. Those remarrying in their twenties continue to be more likely to divorce than spinsters marrying at those ages. However, women who around 1970 were entering the remarriage market in their thirties were perhaps often mothers who would not have divorced but for the security offered by the DPB. They probably generally were more anxious to be free of one spouse than to acquire a new one. Thus, at a time when feminism was causing formal marriage to be viewed more cynically anyway, remarriage decisions became more considered.

Table 8.7

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
BY AGE AND MARITAL STATUS OF GROOM: 1939-40 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Groom's Age and Marital Status											
	20-29			30-39				40-49			All Ages	
	NM	W	D	NM	W	D	NM	W	D	NM	W	D
Exact Marriage Duration												
5 years												
1939-40	6.7 (1.7,32)	0.0 (0)	0.0 (0)	5.8 (3.0,8)	31.6 (2)	0.0 (0)	5.0 (1)	0.0 (0)	23.0 (2)	7.2 (1.5,47)	9.2 (3)	7.3 (2)
1941-44	18.4 (2.4,123)	52.1 (1)	15.2 (1)	13.5 (3.8,27)	10.4 (1)	53.2 (20.4,14)	19.8 (11.8,6)	17.5 (2)	24.3 (4)	18.6 (2.1,172)	13.7 (7.6,7)	32.8 (10.9,19)
1945-48	11.6 (1.6,109)	0.0 (0)	26.0 (4)	9.4 (2.7,26)	7.7 (1)	16.0 (8.3,8)	13.3 (7.9,6)	12.4 (2)	19.4 (11.5,6)	11.4 (1.4,148)	9.3 (5.1,7)	19.8 (6.1,22)
1949-53	7.8 (1.2,90)	0.0 (0)	32.1 (19.0,6)	6.7 (2.5,16)	15.6 (2)	21.7 (9.5,11)	2.1 (1)	11.3 (2)	15.2 (9.1,6)	7.6 (1.0,113)	16.7 (6.3,15)	17.8 (5.4,23)
1954-58	7.2 (1.1,88)	0.0 (0)	36.5 (23.6,5)	7.8 (2.7,18)	21.2 (2)	6.6 (3)	4.8 (2)	12.3 (2)	10.9 (4)	7.1 (1.0,111)	7.8 (4.7,6)	14.2 (5.0,17)
1959-63	5.7 (1.0,76)	0.0 (0)	38.0 (24.5,5)	4.6 (2.1,10)	12.5 (1)	12.9 (7.7,6)	12.3 (8.0,5)	21.2 (3)	8.3 (0.9,115)	6.7 (5.9,11)	13.3 (10.6,9)	12.9 (4.7,16)
1964-68	12.3 (1.3,200)	0.0 (0)	67.3 (26.5,13)	7.2 (2.9,13)	13.1 (1)	29.1 (11.3,14)	15.6 (9.3,6)	20.4 (3)	15.0 (8.9,6)	12.9 (1.2,263)	17.7 (6.7,15)	23.4 (5.9,33)
1969-73	18.7 (1.5,351)	0.0 (0)	37.5 (14.0,15)	13.0 (4.2,20)	39.6 (3)	27.3 (8.9,20)	13.8 (9.0,5)	37.8 (22.3,6)	28.5 (10.3,16)	18.7 (1.3,433)	14.9 (5.6,15)	27.6 (5.2,59)
10 years												
1939-40	52.3 (4.7,249)	0.0 (0)	53.8 (1)	23.3 (6.0,32)	47.5 (3)	65.9 (33.1,8)	15.0 (3)	13.5 (1)	57.5 (36.7,5)	47.6 (3.9,310)	21.5 (11.8,7)	65.3 (21.9,18)
1941-44	56.9 (4.2,379)	52.1 (1)	197.6 (72.2,13)	28.9 (5.5,58)	72.9 (39.0,7)	102.6 (27.5,27)	49.5 (18.3,15)	35.1 (4)	85.1 (32.0,14)	53.5 (3.4,494)	37.2 (12.3,19)	105.2 (18.7,61)
1945-48	42.9 (3.1,404)	32.9 (1)	97.7 (35.3,15)	25.8 (4.4,71)	7.7 (1)	70.1 (16.8,35)	42.3 (14.0,19)	56.0 (26.7,9)	45.2 (17.4,14)	40.1 (2.5,522)	25.3 (8.4,19)	62.0 (10.6,69)
1949-53	34.4 (2.5,397)	0.0 (0)	74.9 (28.3,14)	20.1 (4.2,48)	46.9 (27.5,6)	73.1 (17.0,37)	14.7 (8.1,7)	39.6 (21.6,7)	43.1 (15.0,17)	32.5 (2.1,486)	35.7 (9.1,32)	56.4 (9.4,73)
1954-58	32.0 (2.3,394)	0.0 (0)	102.3 (38.1,14)	35.6 (5.7,82)	53.1 (34.0,5)	46.3 (14.5,21)	19.1 (9.8,8)	55.4 (26.4,9)	51.7 (17.0,19)	32.9 (2.1,518)	36.4 (9.9,28)	53.4 (9.6,64)
1959-63	39.7 (2.5,531)	0.0 (0)	76.0 (34.0,10)	30.6 (5.4,67)	62.7 (39.9,5)	62.5 (16.5,29)	32.1 (12.9,13)	63.6 (30.2,9)	60.8 (18.5,22)	42.2 (2.3,724)	41.1 (10.2,34)	54.8 (9.5,68)
1964-68	60.8 (2.8,992)	95.2 (2)	191.5 (41.7,37)	41.2 (6.9,74)	39.2 (3)	112.2 (21.2,54)	49.4 (16.3,19)	74.8 (31.9,11)	65.0 (18.1,26)	65.9 (2.6,1339)	48.5 (10.9,41)	88.1 (11.1,124)
15 years												
1939-40	77.9 (8.8,371)	0.0 (0)	107.5 (2)	40.0 (7.8,55)	63.3 (4)	115.3 (42.6,14)	25.0 (16.2,5)	27.0 (2)	69.0 (40.0,6)	70.5 (4.7,459)	33.8 (14.7,11)	94.3 (25.9,26)
1941-44	78.9 (4.9,525)	52.1 (1)	273.6 (80.9,18)	43.9 (6.7,88)	114.6 (47.8,11)	144.4 (31.9,38)	59.4 (20.0,18)	43.9 (28.2,5)	151.9 (41.2,25)	74.1 (4.0,684)	50.8 (14.3,26)	153.6 (22.0,89)
1945-48	68.1 (3.8,641)	32.9 (1)	136.7 (40.8,21)	39.6 (5.5,109)	31.0 (4)	114.2 (20.9,57)	51.2 (15.3,23)	74.6 (30.5,12)	61.4 (20.1,19)	62.2 (3.1,810)	37.2 (10.1,28)	94.3 (12.9,105)
1949-53	55.2 (3.1,638)	60.6 (2)	117.8 (34.7,22)	37.4 (5.7,89)	54.7 (29.6,7)	106.6 (20.2,54)	16.8 (8.7,8)	67.9 (27.8,12)	81.1 (20.2,32)	52.8 (2.7,789)	49.1 (10.6,44)	88.8 (11.6,115)
1954-58	57.2 (3.1,703)	0.0 (0)	182.7 (48.6,25)	52.5 (6.8,121)	74.3 (39.8,7)	86.1 (19.4,39)	38.2 (17.8,16)	61.6 (27.8,10)	73.4 (20.0,27)	57.8 (2.7,909)	49.4 (11.5,38)	86.8 (12.0,104)
1959-63	84.0 (3.5,1124)	0.0 (0)	159.6 (47.0,21)	58.4 (7.4,128)	75.2 (43.4,6)	137.9 (23.5,64)	46.9 (15.5,19)	91.8 (35.7,13)	105.1 (23.7,38)	87.1 (3.2,1493)	48.3 (11.0,40)	107.3 (12.9,133)
20 years												
1939-40	93.3 (6.2,444)	0.0 (0)	107.5 (2)	48.7 (8.5,67)	94.9 (54.2,6)	123.6 (44.0,15)	35.0 (19.1,7)	27.0 (2)	80.5 (42.9,7)	84.5 (5.1,550)	39.9 (16.0,13)	101.5 (26.8,28)
1941-44	96.3 (5.3,641)	52.1 (1)	288.8 (82.2,19)	51.9 (7.3,104)	114.6 (47.8,11)	167.2 (33.8,44)	76.0 (22.4,23)	52.6 (30.8,6)	170.1 (43.1,28)	89.3 (4.4,825)	54.8 (14.8,28)	174.3 (23.2,101)
1945-48	86.4 (4.3,813)	65.8 (2)	175.8 (45.2,27)	51.6 (6.2,142)	38.7 (25.0,5)	144.2 (23.1,72)	64.5 (17.0,29)	99.5 (34.7,16)	87.2 (23.6,27)	78.8 (3.5,1026)	45.2 (11.1,34)	121.2 (14.4,135)
1949-53	78.1 (3.7,902)	181.8 (98.8,6)	160.6 (39.5,30)	47.9 (6.4,114)	78.1 (34.9,10)	132.3 (22.2,67)	23.1 (10.1,11)	67.9 (27.8,12)	101.4 (22.4,40)	73.7 (3.1,1101)	58.0 (11.5,32)	111.9 (12.9,145)
1954-58	89.6 (3.8,1101)	54.3 (77.7,1)	299.7 (57.6,41)	69.4 (7.8,160)	95.5 (44.5,9)	136.8 (23.8,62)	47.8 (15.3,20)	110.8 (36.2,18)	100.6 (23.1,37)	87.7 (3.3,1380)	65.0 (13.1,50)	128.5 (14.2,154)
25 years												
1939-40	105.5 (6.6,502)	0.0 (0)	161.3 (3)	62.3 (9.6,86)	126.6 (61.5,8)	148.3 (47.5,18)	45.0 (21.6,9)	27.0 (2)	92.0 (45.6,8)	97.2 (5.4,633)	49.1 (17.6,16)	119.7 (28.8,33)
1941-44	115.1 (5.8,766)	52.1 (1)	334.3 (85.6,22)	62.9 (8.0,126)	125.0 (49.7,12)	174.8 (34.4,46)	82.6 (23.3,25)	61.4 (33.1,7)	182.3 (44.3,30)	106.3 (4.7,982)	60.6 (15.5,31)	186.3 (23.8,108)
1945-48	108.2 (4.7,1018)	131.6 (4)	227.9 (49.8,35)	62.9 (6.8,173)	38.7 (25.0,5)	168.3 (24.6,84)	71.2 (17.8,32)	99.5 (34.7,16)	96.9 (24.7,30)	98.3 (3.8,1279)	47.8 (11.4,36)	141.9 (15.4,116)
1949-53	106.8 (4.2,1234)	303.0 (117.7,10)	219.5 (44.6,41)	61.3 (7.2,146)	93.8 (37.9,12)	161.9 (24.1,82)	27.3 (11.0,13)	73.5 (28.9,13)	104.0 (22.6,41)	99.9 (3.6,1492)	65.8 (12.2,59)	132.8 (13.9,172)
30 years												
1939-40	118.3 (6.9,563)	0.0 (0)	215.1 (4)	68.3 (10.0,94)	126.6 (61.5,8)	148.3 (47.5,18)	45.0 (21.6,9)	27.0 (2)	92.0 (45.6,8)	108.0 (5.7,703)	49.1 (17.6,16)	123.3 (29.1,34)
1941-44	128.6 (6.0,856)	52.1 (1)	379.9 (88.0,25)	70.8 (8.4,142)	135.4 (51.4,13)	193.8 (35.9,51)	82.6 (23.3,25)	70.2 (35.2,8)	182.3 (44.3,30)	106.3 (5.0,1098)	66.5 (16.2,34)	200.1 (24.4,116)
1945-48	129.1 (5.1,1214)	131.6 (4)	260.4 (52.1,40)	73.0 (7.3,201)	46.4 (27.2,6)	184.3 (25.5,92)	71.7 (17.8,32)	99.5 (34.7,16)	109.8 (26.1,34)	116.2 (4.1,1512)	49.2 (11.6,37)	157.1 (16.0,175)

Source: Divorce file sample; New Zealand Vital Statistics 1939-73.

The 1969-73 marriage cohort apart, cumulative divorce rates have with few exceptions been significantly higher for divorced than for never married brides and grooms of all ages at all exact marriage durations (Tables 8.6 and 8.7). Indeed, age-specific rates often have shown larger differences than rates computed over all ages. This reflects both the older ages at which divorcees marry, which increases the chance of death dissolving their marriages within any period, and the fact that all-ages rates take in many high risk marriages of teenagers. Few remarrying divorcees are still in their teens.

The other marital status group to be considered is the widowed. Over all ages at marriage, widows have tended to have divorce rates which, at exact marriage duration ten years, were significantly lower than those for divorcees but little different from those for spinsters (Table 8.6). At longer marriage durations they generally have had the lowest rates of all, but then death usually ends a widow's marriage sooner than it does a spinster's or a divorcee's. When divorce rates are computed by age at marriage widows appear to fall somewhere between spinsters and divorcees. This suggests that they are more capable than divorcees of remarrying happily, because of personality and more careful mate selection, yet that they have the problem of inevitably comparing the new spouse with his predecessor. Findings for widowers generally parallel those for widows (Table 8.7).

Divorce rates generally have been higher for divorced than for never married brides and grooms aged 20-29, 30-39, and all ages within five-year duration intervals as well as cumulatively (Table 8.8). [24] The evidence perhaps is unconvincing at durations 20-24 and 25-29 years. But at shorter durations, estimated divorce rates for

Table 8.8

ESTIMATED MARRIAGE DURATION-SPECIFIC DIVORCE RATES FOR NEVER
MARRIED AND DIVORCED BRIDES AND GROOMS OF SELECTED
AGES: 1939-40 TO 1964-68 MARRIAGE COHORTS¹

Marriage Cohort	Age and Marital Status at Marriage																								
	20-29		30-39		All Ages		20-29		30-39		All Ages		20-29		30-39		All Ages								
	NM	D	NM	D	NM	D	NM	D	NM	D	NM	D	NM	D	NM	D	NM	D							
	Grooms										Brides														
	Marriage Duration																								
	5-9 years																								
1939-40	45.6 (4.4,217)	53.8 (1)	17.5 (5.2,24)	65.9 (33.1,8)	40.4 (3.6,263)	58.0 (20.7,16)	33.1 (3.8,162)	88.2 (46.8,7)	20.4 (7.9,14)	43.1 (25.3,6)	40.3 (3.6,265)	46.7 (17.9,14)	1941-44	38.5 (1.5,256)	182.4 (70.1,12)	15.4 (4.0,31)	49.4 (19.7,13)	34.9 (2.8,322)	72.4 (15.8,42)	31.9 (3.1,220)	49.4 (23.6,9)	6.2 (3.7,6)	60.1 (22.1,15)	35.3 (2.8,329)	50.0 (13.3,29)
1945-48	31.3 (2.6,295)	71.7 (30.6,11)	16.4 (3.6,45)	54.1 (14.9,27)	28.7 (2.2,374)	42.2 (8.9,47)	23.6 (2.3,227)	79.8 (20.9,29)	10.2 (4.1,13)	42.6 (14.1,19)	27.0 (2.1,353)	52.9 (10.0,57)	1949-53	26.6 (2.2,307)	42.8 (21.8,8)	13.4 (3.5,32)	51.4 (14.4,26)	24.9 (1.9,373)	38.6 (7.9,50)	20.5 (2.0,221)	67.2 (18.7,26)	10.7 (4.3,13)	53.6 (14.2,29)	24.2 (1.8,364)	50.3 (8.9,65)
1954-58	24.8 (2.1,306)	65.8 (31.2,9)	27.8 (5.0,64)	39.7 (13.5,18)	25.8 (1.9,407)	39.2 (8.2,47)	48.2 (1.9,193)	14.4 (5.3,16)	63.6 (15.8,33)	12.0 (5.3,16)	52.7 (1.8,388)	1949-63	34.0 (2.3,455)	38.0 (24.5,5)	26.0 (5.0,57)	49.6 (14.8,23)	35.5 (2.1,609)	41.9 (8.4,52)	69.0 (2.2,278)	12.0 (21.9,20)	34.6 (5.3,11)	50.6 (12.1,17)	50.6 (2.1,601)	52.9 (9.1,64)	
1964-68	48.5 (2.5,792)	124.2 (34.9,24)	34.0 (6.3,61)	83.1 (18.5,40)	53.0 (2.3,1076)	64.7 (9.7,91)	99.4 (2.5,461)	18.3 (23.5,35)	90.9 (7.7,12)	74.6 (19.9,41)	10.6 (2.3,1054)	1949-68													
	10-14 years																								
1939-40	25.6 (3.4,122)	53.8 (1)	16.7 (5.1,23)	49.4 (28.9,6)	22.9 (2.7,149)	29.0 (14.9,8)	20.1 (3.0,98)	50.3 (4)	8.8 (5.3,6)	43.1 (25.3,6)	22.6 (2.7,149)	33.4 (15.3,10)	1941-44	22.0 (2.6,146)	76.0 (48.1,5)	15.0 (4.0,30)	41.8 (18.2,11)	20.6 (2.2,190)	48.4 (13.1,28)	18.3 (2.4,126)	32.9 (19.4,6)	19.8 (6.6,19)	36.0 (17.3,9)	21.3 (2.2,199)	32.8 (10.9,19)
1945-48	25.2 (2.4,237)	39.0 (23.0,6)	13.8 (3.3,38)	44.1 (13.5,22)	22.1 (1.9,288)	32.3 (7.8,36)	19.1 (2.1,184)	82.5 (21.2,30)	8.6 (3.8,11)	40.3 (13.7,18)	20.6 (1.8,269)	48.2 (9.6,52)	1949-53	20.8 (2.0,241)	42.9 (21.8,8)	17.3 (3.9,41)	33.5 (11.8,17)	20.3 (1.7,303)	32.4 (7.2,42)	17.7 (1.9,190)	51.8 (16.6,20)	10.7 (4.3,13)	35.1 (11.6,19)	20.0 (1.7,301)	37.9 (7.8,49)
1954-58	25.2 (2.1,309)	80.4 (34.2,11)	16.9 (3.9,39)	39.8 (13.5,18)	24.9 (1.8,391)	33.4 (7.6,40)	19.3 (2.0,206)	70.7 (21.4,22)	10.8 (4.6,12)	36.6 (12.1,19)	43.8 (1.8,372)	50.6 (8.6,54)	1959-63	44.3 (2.6,593)	83.6 (35.5,11)	27.8 (5.2,61)	75.4 (18.0,35)	44.9 (2.3,769)	52.5 (9.3,65)	34.3 (2.6,377)	96.5 (25.5,28)	9.9 (4.8,9)	59.0 (15.6,29)	44.1 (2.3,756)	52.9 (9.3,67)
	15-19 years																								
1939-40	15.4 (2.6,73)	0.0 (0)	8.7 (3.7,12)	8.3 (1)	14.0 (2.1,91)	7.2 (2)	12.4 (2.3,60)	12.6 (1)	7.3 (4.8,5)	14.3 (2)	13.2 (2.1,87)	13.3 (4)	1941-44	17.4 (2.4,116)	15.2 (1)	8.0 (2.9,16)	22.8 (13.5,6)	15.2 (1.9,141)	20.7 (8.7,12)	11.0 (2.0,89)	11.0 (2)	8.4 (4.4,8)	20.0 (13.0,5)	14.9 (1.9,138)	17.3 (8.0,10)
1945-48	18.3 (2.0,172)	39.1 (23.0,6)	12.0 (3.1,33)	30.0 (11.2,15)	16.6 (1.6,216)	26.9 (7.1,30)	13.9 (1.8,134)	49.6 (16.8,18)	5.5 (3.1,7)	38.1 (13.3,17)	15.9 (1.6,207)	37.1 (8.5,40)	1949-53	22.9 (2.1,264)	42.8 (21.8,8)	10.5 (3.1,25)	25.7 (10.4,13)	20.9 (1.7,312)	23.1 (6.1,30)	17.9 (1.9,192)	49.2 (16.2,19)	6.6 (3.4,8)	27.7 (10.4,15)	20.3 (1.7,306)	27.8 (6.7,36)
1954-58	22.4 (2.4,398)	117.0 (40.4,16)	16.9 (3.9,39)	50.7 (15.2,23)	29.9 (2.0,471)	41.7 (8.5,50)	25.9 (2.3,275)	61.0 (20.0,19)	17.1 (5.7,19)	36.6 (12.1,19)	30.9 (2.0,486)	33.2 (7.5,41)	1939-40	12.2 (2.3,58)	53.8 (1)	13.8 (4.6,19)	24.7 (3)	12.7 (2.0,83)	18.2 (11.9,5)	12.4 (2.3,60)	88.2 (46.8,7)	5.8 (4)	14.4 (2)	12.1 (2.0,80)	33.4 (15.3,10)
1941-44	18.8 (2.5,125)	45.5 (3)	11.0 (3.4,22)	7.6 (2)	17.0 (2.0,157)	12.0 (6.6,7)	15.4 (2.2,106)	21.9 (4)	3.1 (3)	20.0 (13.0,5)	16.5 (1.9,154)	15.5 (7.5,9)	1945-48	21.8 (2.2,205)	52.1 (26.4,8)	11.3 (3.0,31)	24.1 (10.1,12)	19.5 (1.8,253)	20.7 (6.3,23)	19.1 (2.1,183)	24.7 (12.0,9)	7.0 (3.4,9)	6.7 (3)	19.9 (1.8,260)	12.0 (4.9,13)
1949-53	28.7 (2.3,332)	58.9 (25.3,11)	13.4 (3.5,32)	29.6 (11.1,15)	26.2 (1.9,391)	20.9 (5.9,27)	23.1 (2.1,249)	49.1 (16.2,19)	9.1 (4.0,11)	20.4 (9.0,11)	26.3 (1.9,384)	26.3 (6.5,34)	1939-40	12.8 (2.4,61)	53.8 (1)	5.8 (3.0,8)	0.0 (0)	10.8 (1.9,70)	3.6 (5.3,1)	10.5 (2.2,51)	12.6 (1)	1.5 (1)	14.4 (2)	10.3 (1.8,68)	10.0 (3)
1941-44	13.5 (2.1,90)	45.6 (3)	7.9 (2.9,16)	19.0 (12.4,5)	12.6 (1.7,116)	13.8 (7.1,8)	10.9 (1.8,75)	16.5 (3)	6.2 (3.7,6)	16.0 (4)	13.8 (1.7,116)	13.8 (7.1,8)	1945-48	20.9 (2.2,196)	32.5 (21.0,5)	10.1 (2.8,28)	16.0 (8.3,8)	17.9 (1.7,233)	15.2 (5.4,17)	16.9 (1.9,163)	33.1 (13.8,12)	5.5 (3.1,7)	15.7 (8.7,7)	17.3 (1.7,227)	18.6 (6.1,20)

Source: Divorce file data; New Zealand Vital Statistics 1939-68.

¹ Rates for marriage duration 0-4 years are not shown as they are identical to the cumulative divorce rates to exact marriage duration 5 years shown in Tables 8.6 and 8.7. Note that these rates also cover the 1969-73 marriage cohort.

[24] Note that Table 8.8 excludes widowed persons and age groups other than 20-29 and 30-39 because numbers of sample divorces were too small for an analysis of duration-specific divorce rates to be worthwhile.

remarrying divorcees are almost all higher than comparable rates for persons marrying for the first time. Some differences are not statistically significant, but the pattern is persistent.

Relative Marital Status

Having shown that remarrying divorcees typically have entered less stable unions than bachelors or spinsters, with remarrying widows and widowers falling in between, it is logical to wonder whether marital stability has varied with the combination of marital statuses of bride and groom. One might expect, for instance, that bachelor-spinster marriages have been more stable than those between two divorcees, and that marriages between divorced and never married persons have given rise to intermediate divorce rates.

Evidence presented in Table 8.9 shows only partial conformity to this pattern. Invariably, at marriage durations ten or more years, the estimated cohort divorce rate for bachelor-spinster marriages has been lower than those for bachelor-divorcee, divorcee-spinster, and divorcee-divorcee ones. Mostly these differences have been statistically significant, but when they have not the comparison group generally has been divorcee-spinster marriages. Divorce rates for bachelor-divorcee and divorcee-divorcee marriages have not been consistently higher or lower than one another. Thus there is a strong suggestion that these marriages have been less stable than divorcee-spinster ones.

When the analysis is refined by age of bride or groom, further insight is provided into this proposition. Among brides aged 20-29, cumulative divorce rates clearly have been lowest for bachelor-

Table 8.9

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
BY RELATIVE MARITAL STATUS OF BRIDE AND GROOM: 1939-40 TO
1969-73 MARRIAGE COHORTS

Marriage Cohort	Relative Marital Status								
	Bachelor Spinster	Bachelor Divorcee	Divorcee Spinster	Divorcee Divorcee	Bachelor Widow	Widower Spinster	Divorcee Widow	Widower Divorcee	Widower Widow
Exact Marriage Duration									
5 years									
1939-40	6.9 (1.5,43)	14.7 (3)	10.3 (2)	0.0 (0)	9.1 (1)	10.4 (2)	0.0 (0)	23.7 (1)	0.0 (0)
1941-44	16.8 (2.0,153)	47.1 (18.1,14)	56.3 (20.1,16)	37.3 (3)	31.3 (20.3,5)	14.2 (4)	0.0 (0)	0.0 (0)	21.7 (3)
1945-48	10.4 (1.4,125)	32.4 (10.2,21)	11.6 (6.0,8)	26.9 (13.8,8)	5.4 (2)	8.0 (3)	48.5 (28.4,6)	7.4 (1)	12.3 (3)
1949-53	7.0 (1.0,97)	19.1 (7.4,14)	14.3 (6.3,11)	28.8 (12.6,11)	6.4 (2)	7.9 (3)	6.8 (1)	39.4 (21.5,7)	14.7 (9.6,5)
1954-58	6.7 (1.0,99)	13.0 (6.3,9)	12.0 (6.2,8)	21.2 (10.9,8)	10.7 (3)	6.2 (2)	6.6 (1)	18.1 (3)	3.0 (1)
1959-63	6.2 (0.9,101)	17.6 (7.4,12)	12.0 (6.2,8)	9.8 (4)	7.0 (2)	7.1 (2)	24.0 (4)	17.2 (3)	16.2 (9.7,6)
1964-68	12.8 (1.1,249)	15.0 (6.9,10)	26.6 (8.6,20)	23.7 (10.4,11)	15.3 (4)	12.1 (3)	10.4 (2)	40.7 (20.7,8)	10.0 (4)
1969-73	18.8 (1.4,411)	19.0 (6.5,18)	30.6 (7.6,34)	26.5 (8.6,20)	15.4 (4)	20.8 (13.5,5)	18.4 (12.0,5)	16.0 (4)	11.7 (7.0,6)
10 years									
1939-40	46.8 (3.9,293)	68.7 (26.1,14)	76.9 (28.1,15)	54.3 (3)	27.4 (3)	20.7 (4)	0.0 (0)	23.7 (1)	21.1 (2)
1941-44	49.9 (3.4,455)	90.9 (24.5,27)	133.7 (29.7,38)	186.6 (63.9,15)	75.2 (30.7,12)	32.0 (15.4,9)	212.8 (98.2,8)	65.1 (4)	43.4 (25.5,6)
1945-48	37.2 (2.5,447)	95.5 (17.0,62)	53.5 (12.6,37)	67.3 (21.4,20)	35.3 (14.1,13)	13.3 (8.7,5)	97.1 (39.2,12)	36.8 (23.8,5)	36.9 (17.8,9)
1949-53	31.2 (2.2,433)	65.4 (13.4,48)	44.3 (10.9,34)	89.0 (21.4,34)	16.1 (10.5,5)	21.1 (10.9,8)	34.2 (22.1,5)	84.4 (30.7,15)	26.5 (12.8,9)
1954-58	31.2 (2.1,461)	66.7 (14.0,46)	40.4 (11.2,27)	76.7 (20.1,29)	39.2 (17.0,11)	27.7 (13.4,9)	53.1 (26.9,8)	60.2 (27.2,10)	26.7 (12.9,9)
1959-63	41.4 (2.3,670)	69.1 (14.3,47)	51.1 (12.6,34)	61.1 (17.4,23)	24.7 (13.6,7)	28.2 (14.5,8)	54.0 (25.8,9)	63.0 (27.1,11)	40.6 (15.1,15)
1964-68	64.3 (2.6,1247)	109.4 (17.8,73)	93.2 (15.6,70)	83.9 (18.9,39)	72.9 (23.7,19)	36.2 (17.4,9)	78.0 (28.5,15)	81.5 (28.7,16)	40.0 (14.4,16)
15 years									
1939-40	69.4 (4.7,434)	103.0 (31.3,21)	107.7 (32.7,21)	90.6 (56.9,5)	36.5 (4)	31.1 (18.4,6)	0.0 (0)	47.4 (2)	31.6 (3)
1941-44	69.1 (3.9,630)	121.2 (27.9,36)	197.0 (34.7,56)	298.5 (75.1,24)	112.8 (36.8,18)	53.3 (19.7,15)	239.4 (102.4,9)	81.4 (51.3,5)	43.4 (25.5,6)
1945-48	57.6 (3.1,693)	147.9 (20.5,96)	79.5 (15.1,55)	117.8 (27.5,35)	57.1 (17.8,21)	26.5 (12.2,10)	121.4 (43.2,15)	58.9 (29.7,8)	41.0 (18.7,10)
1949-53	50.7 (2.7,704)	105.0 (16.7,77)	75.6 (14.0,58)	130.9 (25.4,50)	25.7 (13.2,8)	47.8 (14.3,14)	37.0 (25.9,7)	106.9 (34.1,19)	32.4 (14.1,11)
1954-58	54.6 (2.8,806)	120.3 (18.2,83)	76.2 (15.1,51)	116.4 (24.3,44)	71.2 (22.6,20)	36.9 (15.4,12)	59.8 (28.4,9)	72.2 (29.5,12)	41.5 (16.0,14)
1959-63	85.8 (3.2,1389)	129.4 (18.9,88)	103.6 (17.4,69)	119.7 (23.6,49)	56.4 (20.2,16)	35.3 (16.1,10)	90.0 (32.6,15)	74.5 (29.2,13)	46.0 (16.0,17)
20 years									
1939-40	82.8 (5.1,518)	122.7 (33.8,25)	117.9 (34.0,23)	90.6 (56.9,7)	63.9 (34.4,7)	36.3 (19.8,7)	0.0 (0)	47.4 (2)	42.1 (4)
1941-44	83.4 (4.3,760)	148.1 (30.3,44)	221.7 (36.3,63)	323.4 (76.8,26)	131.6 (39.4,21)	56.9 (20.3,16)	319.1 (111.8,12)	81.4 (51.3,5)	50.6 (27.4,7)
1945-48	73.1 (3.5,879)	189.5 (22.6,123)	105.5 (17.2,73)	154.9 (30.9,46)	65.2 (18.9,24)	34.5 (13.8,13)	129.4 (44.4,16)	73.6 (33.0,10)	45.1 (19.6,11)
1949-53	70.9 (3.2,985)	140.4 (18.9,103)	101.6 (16.0,78)	151.8 (27.0,58)	41.7 (16.7,13)	50.2 (16.5,19)	61.5 (29.2,9)	118.1 (35.6,21)	35.4 (14.8,12)
1954-58	84.9 (3.4,1254)	150.8 (20.0,104)	122.6 (18.7,82)	161.4 (27.8,61)	78.3 (23.6,22)	58.5 (19.2,19)	73.0 (31.2,11)	90.3 (32.7,15)	47.4 (17.0,16)
25 years									
1939-40	94.6 (5.4,592)	161.9 (38.0,33)	133.3 (35.8,26)	126.8 (65.9,7)	73.0 (36.6,8)	51.8 (23.5,10)	0.0 (0)	47.4 (2)	42.1 (4)
1941-44	99.5 (4.6,907)	171.7 (32.2,51)	239.3 (37.2,68)	348.3 (78.2,28)	150.4 (41.6,24)	64.0 (21.5,18)	319.1 (111.8,12)	81.4 (51.3,5)	57.8 (29.2,8)
1945-48	92.9 (3.9,1118)	204.9 (23.3,133)	133.0 (19.0,92)	165.0 (31.7,49)	76.1 (20.5,28)	39.8 (14.8,15)	137.5 (45.8,17)	73.6 (33.0,10)	45.1 (19.6,11)
1949-53	96.7 (3.7,1343)	178.6 (20.8,131)	126.4 (17.6,97)	167.5 (28.1,64)	57.8 (19.5,18)	68.7 (19.1,26)	75.1 (32.0,11)	118.1 (35.6,21)	35.4 (14.8,12)
30 years									
1939-40	105.3 (5.7,659)	176.6 (39.3,36)	138.5 (36.4,27)	126.8 (65.9,7)	73.0 (36.6,8)	51.8 (23.5,10)	0.0 (0)	47.4 (2)	42.1 (4)
1941-44	111.6 (4.9,1017)	181.8 (32.9,54)	256.9 (38.1,73)	385.6 (79.9,31)	169.2 (43.7,27)	67.6 (22.0,19)	319.1 (111.8,12)	114.0 (59.7,7)	57.8 (29.2,8)
1945-48	111.0 (4.2,1336)	225.0 (24.1,146)	146.0 (19.8,101)	185.2 (33.2,53)	81.5 (21.0,30)	39.8 (14.8,15)	153.7 (47.7,19)	81.0 (34.4,11)	45.1 (19.6,11)

spinster marriages, and have been highest for divorcee-divorcee ones (Table 8.10). As to rates for bachelor-divorcee and divorcee-spinster marriages, neither has been consistently higher than the other. Among brides aged 30-39 divorce rates for bachelor-divorcee and divorcee-spinster marriages also have taken on intermediate values, but except for the 1941-44 cohort divorcee-spinster rates always have been lower. Indeed the differences for post-war cohorts often have been statistically significant.

Among marriages where the groom was aged 20-29 or 30-39, the relative stability of bachelor-spinster marriages again is apparent (Table 8.11). However, any tendency for divorcee-spinster marriages to be more stable than bachelor-divorcee ones can be detected only for the younger age group.

Possibly male divorcees have had better prospects than female divorcees of remarrying successfully since World War 2. The practice of deserting husbands fleeing to Australia to avoid maintenance obligations (Chapter 7) probably removed from the local remarriage market some of the 'worst risk' male divorcees. Apart from that, the relative stability of marriages between 30-39 year-old spinsters and divorced men may reflect the exercise of considerable care in mate selection by the former. Women who first marry in their thirties do not do so lightly, and may tend to marry only divorcees who were 'innocent victims' in their previous marriages. Perhaps, too, divorcees aged 30-39 who marry bachelors are especially likely to marry younger men, thus adding an element of risk found less often in divorcee-spinster marriages. This might also explain why bachelor-divorcee marriages of grooms aged 20-29 have been less stable

Table 8.10

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
BY AGE OF BRIDE AND RELATIVE MARITAL STATUS OF BRIDE AND
GROOM: 1939-40 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Age of Bride and Relative Marital Status							
	20-29				30-39			
	Bachelor Spinster	Bachelor Divorcee	Divorcee Spinster	Divorcee Divorcee	Bachelor Spinster	Bachelor Divorcee	Divorcee Spinster	Divorcee Divorcee
Exact Marriage Duration								
5 years								
1939-40	5.2 (1.5,25)	0.0 (0)	12.6 (1)	0.0 (0)	1.9 (1)	19.0 (2)	0.0 (0)	0.0 (0)
1941-44	13.5 (2.0,94)	84.4 (39.6,9)	86.7 (38.6,10)	344.8 (2)	9.0 (5.0,7)	32.7 (21.2,5)	41.1 (26.5,5)	26.2 (1)
1945-48	9.6 (1.5,88)	46.9 (18.0,14)	17.0 (10.1,6)	74.3 (3)	5.5 (3.6,5)	25.0 (13.7,7)	4.0 (1)	14.0 (2)
1949-53	6.5 (1.2,67)	28.5 (13.8,9)	10.9 (4)	73.5 (3)	3.7 (3)	12.3 (4)	3.6 (1)	32.4 (19.1,6)
1954-58	5.1 (1.0,53)	18.9 (12.3,5)	21.6 (12.8,6)	0.0 (0)	2.6 (2)	6.2 (2)	4.0 (1)	29.6 (19.2,5)
1959-63	3.9 (0.9,42)	23.5 (13.9,6)	24.7 (13.6,7)	0.0 (0)	5.1 (3)	6.5 (2)	4.2 (1)	18.3 (3)
1964-68	9.3 (1.3,113)	16.4 (10.7,5)	41.9 (15.1,16)	81.5 (3)	15.6 (9.3,6)	19.7 (12.8,5)	9.5 (2)	17.2 (3)
1969-73	13.1 (1.5,174)	28.6 (10.4,16)	36.4 (10.5,25)	48.0 (30.8,5)	30.3 (14.6,9)	7.2 (2)	18.8 (12.3,5)	23.5 (12.9,7)
10 years								
1939-40	37.2 (4.0,177)	95.6 (50.6,7)	113.6 (52.5,9)	0.0 (0)	20.6 (9.0,11)	57.1 (33.3,6)	47.8 (4)	76.3 (2)
1941-44	42.2 (3.6,293)	150.1 (50.9,16)	242.6 (58.7,28)	517.2 (3)	14.1 (6.2,11)	65.4 (29.4,10)	57.5 (31.0,7)	235.6 (101.0,9)
1945-48	31.9 (2.7,293)	133.9 (29.0,40)	76.4 (20.8,27)	148.5 (82.3,6)	15.5 (6.0,14)	71.5 (22.7,20)	16.2 (4)	49.0 (26.6,7)
1949-53	26.5 (2.3,273)	95.0 (24.3,30)	40.7 (15.1,15)	196.1 (91.5,8)	11.1 (5.4,9)	52.4 (18.2,17)	28.8 (14.8,8)	97.2 (32.0,18)
1954-58	22.6 (2.2,233)	64.4 (22.2,17)	64.7 (21.7,18)	71.4 (2)	15.8 (6.7,12)	64.7 (20.1,21)	15.9 (4)	106.4 (34.9,18)
1959-63	28.6 (2.4,304)	86.3 (25.9,22)	77.7 (23.4,22)	110.3 (3)	16.9 (7.8,10)	45.4 (17.4,14)	12.6 (3)	48.8 (24.8,8)
1964-68	43.7 (2.7,531)	101.6 (25.4,31)	143.9 (26.4,55)	326.1 (113.7,12)	41.7 (15.0,16)	130.3 (31.1,33)	19.0 (4)	69.0 (28.3,12)
15 years								
1939-40	56.5 (4.9,269)	136.6 (59.1,10)	176.8 (63.1,14)	0.0 (0)	29.9 (10.8,16)	95.2 (42.1,10)	59.8 (38.2,5)	152.7 (4)
1941-44	58.8 (4.2,408)	197.0 (56.7,21)	320.6 (63.9,37)	689.7 (4)	24.4 (8.1,19)	85.0 (33.2,13)	114.9 (42.5,14)	392.7 (116.3,15)
1945-48	50.4 (3.4,463)	214.2 (34.9,64)	110.4 (24.5,39)	272.3 (103.0,21)	22.2 (7.2,20)	107.3 (27.2,30)	32.4 (16.6,8)	98.0 (36.6,14)
1949-53	43.2 (2.9,446)	142.5 (28.9,45)	81.4 (21.0,30)	294.1 (105.0,12)	17.3 (6.7,14)	86.4 (23.0,28)	50.5 (19.4,14)	129.6 (36.3,24)
1954-58	41.0 (2.9,423)	132.6 (30.7,35)	118.6 (28.5,33)	214.3 (114.1,6)	25.1 (8.4,19)	110.9 (25.6,36)	31.7 (16.2,8)	130.0 (38.0,22)
1959-63	61.7 (3.4,656)	176.5 (35.1,45)	166.1 (32.6,47)	294.1 (128.5,8)	27.0 (9.8,16)	94.0 (24.4,29)	20.9 (13.6,5)	128.0 (38.4,21)
20 years								
1939-40	68.6 (5.4,327)	150.3 (61.5,11)	189.4 (64.8,15)	0.0 (0)	37.4 (12.1,20)	114.3 (45.7,12)	71.8 (41.6,6)	152.7 (4)
1941-44	70.6 (4.5,490)	206.4 (57.7,22)	372.6 (66.2,43)	862.1 (210.7,5)	34.7 (9.7,27)	117.6 (38.3,18)	114.9 (42.5,14)	392.7 (116.3,15)
1945-48	63.2 (3.7,581)	251.0 (36.9,75)	150.0 (27.9,53)	420.8 (114.3,17)	27.7 (8.0,25)	150.2 (31.4,42)	40.5 (18.5,10)	126.1 (40.9,18)
1949-53	60.3 (3.4,622)	199.5 (33.1,63)	119.4 (24.9,44)	294.1 (105.0,12)	24.7 (8.0,20)	108.0 (25.4,35)	57.7 (20.6,16)	167.4 (40.4,31)
1954-58	65.2 (3.6,673)	174.2 (34.3,46)	194.1 (34.9,54)	464.3 (138.7,13)	40.9 (10.6,31)	141.7 (28.5,46)	51.6 (20.5,13)	177.3 (43.2,30)
25 years								
1939-40	80.4 (5.8,383)	232.2 (72.6,17)	214.6 (67.9,17)	250.0 (1)	41.1 (12.6,22)	133.3 (48.8,14)	83.7 (44.6,7)	152.7 (4)
1941-44	85.3 (4.9,592)	225.1 (59.5,24)	398.6 (67.1,46)	" (7)	37.2 (10.0,29)	150.3 (42.5,23)	123.2 (43.8,15)	392.7 (116.3,15)
1945-48	81.8 (4.2,752)	277.8 (38.1,83)	183.9 (30.3,65)	445.5 (115.0,18)	33.3 (8.8,30)	157.4 (32.0,44)	56.7 (21.7,14)	133.1 (41.8,19)
1949-53	82.4 (4.0,850)	247.0 (35.7,78)	162.8 (28.3,60)	392.2 (112.5,16)	34.6 (9.5,28)	138.8 (28.3,45)	64.9 (21.8,18)	172.8 (40.9,32)
30 years								
1939-40	90.9 (6.1,433)	245.9 (74.1,18)	227.3 (69.3,18)	250.0 (1)	43.0 (12.9,23)	152.4 (51.6,16)	83.7 (44.6,7)	152.7 (4)
1941-44	95.2 (5.2,661)	253.3 (62.0,27)	441.9 (68.0,51)	" (7)	44.9 (10.9,35)	150.3 (42.5,23)	123.2 (43.8,15)	445.0 (118.3,17)
1945-48	99.1 (4.6,911)	301.2 (39.1,90)	195.2 (31.0,69)	569.3 (114.6,23)	36.6 (9.2,33)	178.8 (33.7,50)	72.9 (24.3,18)	133.1 (41.8,19)

Source: Divorce file sample; New Zealand Vital Statistics 1939-73.

* Estimate exceeds one thousand divorces per 1000 marriages.

Table 8.11

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
 BY AGE OF GROOM AND RELATIVE MARITAL STATUS OF BRIDE AND
 GROOM: 1939-40 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Age of Groom and Relative Marital Status ¹							
	Bachelor Spinster	20-29 Divorcee	Divorcee Spinster	Bachelor Spinster	Bachelor Divorcee	30-39 Divorcee Spinster	Divorcee Divorcee	
Exact Marriage Duration								
5 years								
1939-40	6.8 (1.8,32)	0.0 (0)	0.0 (0)	4.8 (2.9,6)	19.3 (2)	0.0 (0)	0.0 (0)	
1941-44	16.7 (2.3,115)	93.1 (49.3,7)	40.3 (1)	11.1 (3.6,20)	39.7 (23.4,6)	80.4 (32.7,12)	92.6 (2)	
1945-48	10.8 (1.6,99)	48.2 (23.1,9)	23.6 (3)	7.1 (2.6,16)	27.0 (13.1,9)	11.3 (4)	9.3 (1)	
1949-53	7.3 (1.2,83)	34.4 (18.8,7)	31.4 (20.3,5)	4.7 (2.3,9)	16.6 (9.9,6)	14.0 (9.1,5)	48.3 (28.3,6)	
1954-58	6.9 (1.1,84)	17.9 (3)	43.3 (27.9,5)	6.0 (2.7,11)	13.8 (9.0,5)	6.4 (2)	8.8 (1)	
1959-63	5.2 (0.9,69)	72.4 (38.8,7)	32.3 (4)	5.8 (2.7,10)	0.0 (0)	12.9 (4)	16.9 (2)	
1964-68	11.9 (1.3,192)	42.8 (22.2,7)	52.2 (24.9,9)	7.2 (3.3,10)	9.3 (3)	32.4 (14.1,11)	24.2 (3)	
1969-73	18.3 (1.5,337)	41.8 (16.1,14)	32.7 (13.7,12)	13.3 (5.2,14)	10.0 (7.3,4)	25.0 (10.5,12)	30.1 (16.5,7)	
10 years								
1939-40	50.7 (4.7,240)	135.7 (70.2,7)	58.8 (1)	21.8 (6.1,27)	48.2 (30.9,5)	78.1 (39.0,8)	0.0 (0)	
1941-44	52.1 (3.9,360)	172.9 (64.2,13)	322.6 (138.1,8)	26.6 (5.6,48)	59.5 (28.3,9)	134.0 (20)	277.8 (141.8,6)	
1945-48	40.2 (3.0,369)	171.5 (40.6,32)	94.3 (38.1,12)	19.4 (4.3,44)	63.0 (19.6,21)	56.6 (18.1,20)	74.8 (37.4,8)	
1949-53	32.4 (2.4,367)	137.7 (35.6,28)	75.4 (30.8,12)	15.8 (4.2,30)	44.2 (15.9,16)	53.3 (17.5,19)	136.9 (45.4,17)	
1954-58	31.2 (2.3,378)	77.7 (30.5,13)	112.5 (43.2,13)	26.6 (5.5,49)	74.7 (20.3,27)	38.2 (15.9,12)	70.5 (35.4,8)	
1959-63	38.4 (2.5,507)	169.9 (47.5,23)	64.5 (32.5,8)	28.4 (5.9,49)	40.6 (15.1,15)	54.6 (18.9,17)	92.9 (39.3,11)	
1964-68	58.9 (2.7,951)	220.0 (47.6,36)	162.4 (41.3,28)	30.1 (6.7,42)	93.0 (23.8,30)	109.0 (24.9,37)	105.0 (40.5,13)	
15 years								
1939-40	75.6 (5.7,358)	193.8 (81.0,10)	117.6 (2)	37.1 (7.9,46)	86.7 (40.6,9)	117.2 (46.8,12)	135.1 (2)	
1941-44	72.3 (4.6,499)	252.7 (73.7,19)	483.9 (147.7,12)	39.9 (6.8,72)	72.8 (31.1,11)	181.0 (46.4,27)	463.0 (157.9,10)	
1945-48	62.9 (3.7,577)	300.1 (49.4,36)	133.6 (44.4,17)	31.3 (5.4,71)	87.0 (22.7,29)	84.9 (21.8,30)	168.2 (53.2,18)	
1949-53	52.5 (3.1,594)	201.6 (41.4,41)	119.3 (37.8,19)	28.9 (5.7,55)	82.9 (21.3,30)	81.4 (21.3,29)	177.1 (50.4,22)	
1954-58	55.1 (3.1,667)	179.2 (43.6,30)	199.0 (54.6,23)	38.5 (6.6,71)	116.2 (24.8,42)	76.4 (22.1,24)	114.6 (44.0,13)	
1959-63	81.3 (3.5,1073)	339.7 (59.9,46)	129.0 (44.3,16)	53.3 (8.0,92)	75.8 (20.3,28)	115.7 (26.7,36)	211.1 (55.2,25)	
20 years								
1939-40	90.1 (6.1,427)	232.6 (86.5,12)	117.6 (2)	46.0 (8.8,57)	96.3 (42.6,10)	127.0 (48.4,13)	135.1 (2)	
1941-44	88.5 (5.0,611)	279.3 (76.1,21)	524.2 (147.6,13)	46.0 (7.3,83)	99.2 (35.8,15)	201.1 (48.3,30)	509.3 (158.3,11)	
1945-48	79.9 (4.2,733)	369.8 (52.0,69)	173.0 (49.4,22)	41.5 (6.2,94)	117.0 (25.9,39)	104.7 (24.0,37)	243.0 (61.0,26)	
1949-53	74.0 (3.6,838)	285.2 (46.6,58)	163.3 (43.1,26)	37.3 (6.4,71)	102.2 (23.4,37)	106.6 (24.0,38)	201.3 (52.9,25)	
1954-58	86.6 (3.8,1048)	274.8 (50.8,46)	320.1 (63.8,37)	57.0 (7.9,105)	130.0 (26.0,47)	114.6 (26.4,36)	211.6 (56.4,24)	
25 years								
1939-40	101.5 (6.5,481)	310.1 (94.7,16)	176.5 (3)	57.3 (9.7,71)	134.9 (49.3,14)	146.5 (51.4,15)	202.7 (3)	
1941-44	106.3 (5.5,734)	305.9 (78.2,23)	645.2 (141.4,16)	53.7 (7.8,97)	132.3 (40.5,20)	201.1 (48.3,30)	601.9 (155.0,13)	
1945-48	101.4 (4.6,930)	401.9 (52.8,75)	228.0 (54.7,29)	53.0 (6.9,120)	129.1 (27.0,43)	133.0 (26.6,47)	261.7 (62.5,28)	
1949-53	101.6 (4.2,1150)	368.7 (49.8,75)	232.4 (49.3,37)	49.4 (7.3,94)	121.5 (25.3,44)	129.1 (26.1,46)	241.5 (56.5,30)	
30 years								
1939-40	114.2 (6.8,541)	329.5 (96.3,17)	235.3 (4)	62.1 (10.1,77)	154.1 (52.1,16)	146.5 (51.4,15)	202.7 (3)	
1941-44	118.9 (5.7,821)	305.9 (78.2,23)	685.5 (137.2,17)	61.5 (8.3,111)	145.5 (42.2,22)	227.8 (50.5,34)	648.1 (151.2,14)	
1945-48	121.6 (5.0,1115)	450.2 (53.6,84)	259.4 (57.2,33)	63.6 (7.5,144)	141.1 (28.1,47)	141.5 (27.3,50)	308.4 (65.7,33)	

Source: Divorce file sample; New Zealand Vital Statistics 1939-73.

1 The divorcee-divorcee category is omitted for age group 20-29 because there were too few marriages and sample divorces for results to be meaningful.

than divorcee-spinster ones.

Cumulative divorce rates for relative marital status categories involving widowed persons must be compared carefully (Table 8.9). Mortality is a much stronger competing force for dissolution, and small numbers of marriages and sample divorces mean that its effect cannot be neutralised by computing rates specific for age of bride or groom. Estimated divorce rates for widower-spinster marriages tend to have been lower than those for bachelor-widow ones, the former perhaps having been inclined to end sooner through death. Secondly, compared to widower-divorcee marriages, divorcee-widow marriages which took place during 1941-48 were abnormally unstable. This probably is due to the number of young war widows who remarried in these years. Divorcee-widow marriages consequently were less subject to early dissolution by death, and perhaps more than usually undermined by memories of a deceased former spouse.

Duration-specific divorce rates for the four largest relative marital status groups (Table 8.12) hint at an interesting aspect of the breakdown of normative sanctions against divorce. The two most recent composite marriage cohorts to pass through the 5-9 and 10-14 years duration intervals show much larger increments in duration-specific divorce rates for bachelor-divorcee and divorcee-spinster marriages than for divorcee-divorcee ones. It is as if marriages between a divorced and a never married person previously were sometimes kept legally intact by the latter's opposition to divorce. Lately such opposition probably has become less common.

Table 8.12

ESTIMATED MARRIAGE DURATION-SPECIFIC DIVORCE RATES BY RELATIVE
 MARITAL STATUS OF BRIDE AND GROOM: 1939-40 TO
 1
 1964-68 MARRIAGE COHORTS

Marriage Cohort	Relative Marital Status			
	Bachelor Spinster	Bachelor Divorcee	Divorcee Spinster	Divorcee Divorcee
Marriage Duration				
5-9 years				
1939-40	39.9 (3.6,250)	54.0 (23.3,11)	66.6 (26.3,13)	54.3 (3)
1941-44	33.1 (2.8,302)	43.8 (17.5,13)	77.4 (23.3,22)	149.3 (58.5,12)
1945-48	26.8 (2.2,322)	63.1 (14.0,41)	41.9 (11.2,29)	40.4 (16.8,12)
1949-53	24.2 (1.9,336)	46.3 (11.4,34)	30.0 (9.1,23)	60.2 (17.9,23)
1954-58	24.5 (1.9,362)	53.7 (12.6,37)	28.4 (10.0,19)	55.5 (17.3,21)
1959-63	35.2 (2.1,569)	51.5 (12.5,35)	39.1 (11.1,26)	51.3 (16.0,21)
1964-68	51.5 (2.3,998)	94.4 (16.7,63)	66.6 (13.4,50)	60.2 (16.2,28)
10-14 years				
1939-40	22.6 (2.8,141)	34.3 (18.7,7)	30.8 (18.2,6)	36.3 (2)
1941-44	19.2 (2.1,175)	30.3 (14.6,9)	63.3 (21.2,18)	111.9 (51.7,9)
1945-48	20.4 (1.9,246)	52.4 (12.9,34)	26.0 (8.9,18)	50.5 (18.7,15)
1949-53	19.5 (1.7,271)	39.6 (10.6,29)	31.3 (9.3,24)	41.9 (15.1,16)
1954-58	23.4 (1.8,345)	53.6 (12.6,37)	35.8 (10.6,24)	39.7 (14.8,15)
1959-63	44.4 (2.4,719)	60.3 (13.4,41)	52.5 (12.7,35)	58.6 (17.1,24)
15-19 years				
1939-40	13.4 (2.1,84)	19.7 (4)	10.2 (2)	0.0 (0)
1941-44	14.3 (1.8,130)	26.9 (13.8,8)	24.7 (13.6,7)	24.9 (2)
1945-48	15.5 (1.7,186)	41.6 (11.5,27)	26.0 (8.9,18)	37.1 (16.2,11)
1949-53	20.2 (1.8,281)	35.6 (10.1,26)	26.0 (8.4,20)	20.9 (10.8,8)
1954-58	30.3 (2.1,448)	30.5 (9.6,21)	46.4 (12.0,31)	45.0 (15.7,17)
20-24 years				
1939-40	11.8 (2.0,74)	39.2 (20.0,8)	15.4 (3)	36.2 (2)
1941-44	16.1 (1.9,147)	23.6 (13.0,7)	17.6 (11.5,5)	24.9 (2)
1945-48	19.8 (1.9,239)	15.4 (7.1,10)	27.5 (9.2,19)	10.1 (3)
1949-53	25.8 (2.0,358)	38.2 (10.4,28)	24.8 (8.3,19)	15.7 (9.4,6)
25-29 years				
1939-40	10.7 (1.9,67)	14.7 (3)	5.2 (1)	0.0 (0)
1941-44	12.1 (1.7,110)	10.1 (3)	17.6 (11.5,5)	37.3 (3)
1945-48	18.1 (1.8,218)	20.1 (8.1,13)	13.0 (6.3,9)	20.2 (12.0,6)

Source: Divorce file sample; New Zealand Vital Statistics 1939-68.

1 Rates for marriage duration 0-4 years are not shown as they are identical to the cumulative divorce rates to exact marriage duration 5 years shown in Table 8.9. Note that those rates also cover the 1969-73 marriage cohort.

Bridal Pregnancy

As intimated earlier, there are several reasons why bridal pregnancy might be expected to foreshadow marital instability. If pregnancy actually precipitates marriage mutual affection and commitment may be lacking. It may also be difficult for affected couples to cope with simultaneous transitions to marriage and parenthood, and with problems associated with limited capital and earnings capacities. Then again, to the extent that these couples come from less favourable social backgrounds, are less mature, or are psychologically less stable than other couples, they could be inherently more divorce-prone.

Considering all marriages where the bride was aged less than forty, Table 8.13 shows that only the 1969-73 marriage cohort recorded a significant difference between divorce rates for pregnant and non-pregnant brides at exact marriage duration five years. [25] Curiously the estimate for non-pregnant brides was the higher one. However, by exact duration ten years, rates for pregnant brides were significantly higher for all but the 1939-40 and 1954-58 cohorts, while at longer durations only those for the former cohort were not significantly higher.

The fact that the expected association did not emerge during the first five years of marriage suggests that early parenthood militates against very early divorce. Its reversal for the 1969-73 cohort may signify a fundamental change in the nature of marriages marked by

[25] Divorcing wives were defined as pregnant at marriage on the same basis as brides were defined as pregnant in Chapters 2-4; that is if they gave birth within eight months of marriage.

Table 8.13

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS BY AGE AND PREGNANCY STATUS OF BRIDE: 1939-40 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Age and Pregnancy Status of Bride													
	16-17		18-19		20-21		22-24		25-29		16-39			
	Pregnant	Not Pregnant	Pregnant	Not Pregnant	Pregnant	Not Pregnant	Pregnant	Not Pregnant	Pregnant	Not Pregnant	Pregnant	Not Pregnant	Pregnant	Not Pregnant
Exact Marriage Duration														
5 years														
1939-40	0.0 (0)	0.0 (0)	20.8 (12.4,6)	26.4 (11.6,11)	7.7 (2)	11.0 (4.9,11)	4.6 (1)	5.7 (2.6,10)	0.0 (0)	2.5 (1.8,4)	8.4 (4.1,9)	6.9 (1.6,39)		
1941-44	17.4 (3)	171.4 (66.3,12)	32.8 (13.2,13)	38.8 (11.7,23)	30.6 (12.8,12)	24.1 (5.8,37)	9.6 (3)	12.3 (3.2,31)	15.4 (3)	14.5 (3.7,32)	22.0 (5.5,34)	19.2 (2.2,157)		
1945-48	13.0 (3)	50.5 (29.6,6)	9.0 (5.9,5)	21.6 (7.0,20)	17.0 (8.3,9)	12.3 (3.3,30)	17.5 (9.0,8)	11.6 (2.7,41)	7.1 (2)	7.6 (2.4,22)	12.4 (3.5,27)	11.8 (1.5,138)		
1949-53	7.9 (3)	41.8 (24.6,6)	6.2 (4.1,5)	13.4 (4.6,18)	7.4 (4.9,5)	7.4 (2.2,24)	13.8 (7.6,7)	7.6 (2.1,29)	3.4 (1)	6.7 (2.3,18)	7.8 (2.4,22)	8.6 (1.2,112)		
1954-58	7.2 (4)	23.7 (14.1,6)	10.5 (4.6,11)	13.9 (4.1,24)	5.0 (4)	6.4 (2.0,23)	3.7 (2)	5.1 (1.8,18)	3.3 (1)	7.8 (2.7,18)	6.8 (2.1,23)	7.5 (1.1,98)		
1959-63	12.0 (5.6,10)	24.4 (11.8,9)	11.5 (4.1,17)	10.1 (3.2,22)	4.6 (3.0,5)	5.0 (1.6,22)	1.6 (1)	5.9 (2.0,19)	10.9 (3)	3.5 (2.1,6)	8.1 (2.0,36)	6.8 (1.0,91)		
1964-68	15.5 (5.2,19)	41.6 (13.1,21)	17.1 (4.2,35)	18.4 (3.6,56)	12.4 (4.5,16)	14.3 (2.3,68)	4.3 (3)	9.7 (2.4,36)	6.9 (2)	7.7 (3.0,14)	13.4 (2.2,76)	13.9 (1.4,214)		
1969-73	25.8 (6.3,35)	52.3 (11.7,41)	29.5 (4.1,31)	29.5 (3.8,124)	8.3 (3.8,10)	16.9 (2.4,105)	8.8 (5.3,6)	14.3 (2.7,61)	16.6 (10.8,5)	17.6 (4.2,38)	15.5 (2.4,87)	21.1 (1.5,397)		
10 years														
1939-40	118.7 (42.3,15)	209.1 (82.5,11)	79.8 (23.5,23)	134.4 (24.6,56)	42.3 (18.4,11)	62.8 (11.3,63)	36.8 (18.8,8)	40.0 (6.9,70)	22.9 (3)	26.9 (6.0,43)	55.9 (10.3,60)	47.4 (2.6,268)		
1941-44	92.8 (32.5,16)	400.0 (86.2,28)	88.4 (21.0,35)	118.0 (19.5,70)	91.8 (21.5,36)	76.7 (10.0,118)	51.2 (18.3,16)	39.0 (5.7,98)	46.3 (22.2,9)	34.5 (5.7,76)	74.4 (9.8,115)	52.9 (3.6,432)		
1945-48	65.1 (23.9,15)	185.2 (52.4,22)	60.9 (14.9,34)	79.8 (13.1,74)	62.3 (15.5,33)	43.8 (4.1,107)	48.1 (14.7,22)	35.3 (4.6,125)	35.6 (16.3,10)	27.3 (4.5,79)	53.2 (7.1,116)	39.4 (2.6,462)		
1949-53	52.8 (16.9,20)	201.9 (49.3,29)	48.7 (11.2,39)	52.0 (8.9,70)	41.3 (11.2,28)	33.2 (4.6,108)	49.3 (14.1,25)	25.6 (3.8,98)	13.7 (4)	26.6 (4.6,71)	42.7 (5.6,120)	33.4 (2.3,435)		
1954-58	54.1 (14.1,30)	142.4 (32.3,36)	51.6 (10.1,54)	57.8 (8.3,100)	31.2 (9.0,25)	28.6 (4.1,102)	24.1 (9.7,13)	21.4 (3.6,75)	19.7 (11.7,6)	24.0 (4.7,55)	38.4 (4.9,130)	32.8 (2.3,427)		
1959-63	97.1 (15.1,81)	129.9 (25.7,48)	64.1 (9.4,95)	64.5 (7.8,140)	37.0 (8.4,40)	30.3 (3.8,133)	39.2 (11.5,24)	28.2 (4.3,91)	36.3 (16.6,10)	32.8 (6.3,57)	56.6 (5.1,251)	38.8 (2.5,516)		
1964-68	133.7 (14.3,164)	176.4 (25.0,89)	96.4 (9.6,197)	85.3 (7.5,259)	63.4 (10.0,82)	56.9 (4.7,295)	34.1 (10.1,24)	41.2 (4.8,153)	31.0 (15.0,9)	40.6 (6.8,74)	85.2 (5.5,484)	61.7 (2.9,948)		
15 years														
1939-40	150.3 (46.8,19)	323.2 (94.9,17)	104.1 (26.5,30)	196.7 (28.6,82)	65.3 (22.5,17)	91.7 (13.4,92)	50.6 (21.9,11)	61.7 (8.5,108)	45.8 (26.9,6)	41.2 (7.3,66)	77.3 (12.0,83)	71.1 (5.0,402)		
1941-44	121.8 (36.6,21)	528.6 (87.8,37)	126.3 (24.6,50)	156.8 (22.0,93)	114.7 (23.7,45)	110.6 (11.8,170)	64.1 (20.4,20)	55.7 (6.7,140)	66.9 (26.4,13)	44.5 (6.5,98)	99.0 (11.2,153)	74.6 (3.6,609)		
1945-48	112.8 (30.7,26)	244.1 (58.0,29)	100.3 (18.7,56)	112.2 (15.3,104)	98.2 (19.0,52)	67.5 (7.5,165)	72.1 (17.8,33)	55.4 (5.7,196)	42.7 (17.7,12)	47.3 (5.8,137)	84.4 (8.8,184)	61.1 (3.3,717)		
1949-53	97.6 (22.4,37)	292.5 (55.9,42)	78.7 (14.0,63)	82.5 (11.0,111)	54.5 (12.8,37)	59.0 (6.1,192)	63.0 (15.9,32)	42.6 (4.8,163)	27.4 (14.1,8)	42.3 (5.7,113)	64.7 (6.8,182)	54.8 (2.9,714)		
1954-58	106.5 (19.3,59)	205.7 (37.4,52)	88.9 (12.9,93)	97.2 (10.5,168)	58.6 (12.2,47)	49.8 (5.4,178)	42.7 (12.8,23)	42.5 (5.0,149)	36.1 (15.7,11)	43.1 (6.2,99)	71.3 (6.5,241)	56.4 (3.0,733)		
1959-63	189.4 (20.0,158)	238.2 (32.6,88)	145.7 (13.5,216)	123.8 (10.4,269)	91.5 (12.9,99)	68.5 (5.6,301)	79.9 (16.1,49)	56.7 (6.0,183)	61.7 (21.3,17)	66.2 (8.8,115)	122.9 (7.3,545)	78.2 (3.4,1040)		
20 years														
1939-40	150.3 (46.8,19)	380.2 (98.5,20)	135.3 (29.6,39)	218.3 (29.8,91)	88.4 (25.9,23)	106.7 (14.3,107)	64.4 (24.5,14)	73.6 (9.2,129)	68.7 (32.5,9)	50.0 (8.0,80)	96.9 (13.3,104)	83.8 (5.4,474)		
1941-44	156.6 (40.7,27)	557.1 (87.4,39)	159.2 (27.1,63)	188.8 (23.6,112)	127.5 (24.8,50)	134.6 (12.8,207)	80.1 (22.6,25)	67.2 (7.3,169)	72.0 (27.3,14)	52.2 (7.0,115)	119.0 (12.1,184)	89.1 (4.6,727)		
1945-48	147.6 (34.4,34)	328.3 (63.4,39)	130.7 (21.0,73)	145.6 (17.0,135)	118.9 (20.7,63)	85.1 (8.3,208)	98.3 (20.5,45)	69.5 (6.3,246)	53.3 (19.7,15)	59.0 (6.4,171)	108.3 (9.8,236)	77.7 (3.6,911)		
1949-53	131.9 (25.6,50)	403.9 (60.2,58)	116.1 (16.7,93)	117.4 (12.9,158)	78.1 (15.2,53)	78.4 (6.9,255)	102.4 (19.8,52)	58.6 (5.6,224)	75.2 (22.7,22)	57.3 (6.6,153)	98.5 (8.3,277)	74.1 (3.4,965)		
1954-58	171.4 (23.6,95)	284.8 (41.8,72)	132.9 (15.4,139)	149.2 (12.6,258)	107.3 (16.1,86)	77.8 (6.6,278)	66.8 (15.8,36)	66.2 (6.2,232)	85.4 (23.6,26)	62.3 (7.4,143)	116.5 (8.1,394)	85.1 (3.6,1106)		
25 years														
1939-40	158.2 (47.8,20)	456.3 (101.1,24)	149.2 (30.9,43)	235.1 (30.6,98)	99.9 (27.3,26)	116.6 (14.9,117)	87.4 (28.2,19)	86.8 (9.9,152)	76.3 (34.1,10)	66.2 (9.1,106)	110.9 (14.1,119)	97.1 (5.8,549)		
1941-44	185.6 (43.6,32)	628.6 (85.0,44)	184.4 (28.7,73)	229.3 (25.4,136)	155.5 (26.9,61)	157.4 (13.7,242)	96.1 (24.5,30)	80.7 (8.0,203)	72.0 (27.3,14)	64.0 (7.7,141)	139.1 (13.0,215)	105.4 (5.0,860)		
1945-48	178.0 (37.1,41)	412.5 (66.5,49)	154.0 (22.5,86)	185.5 (18.8,172)	139.7 (22.2,74)	112.4 (9.4,275)	122.4 (22.5,56)	87.0 (7.0,308)	67.6 (22.0,19)	72.2 (7.1,209)	130.3 (10.6,284)	97.0 (4.0,1138)		
1949-53	168.9 (28.3,64)	515.3 (61.4,74)	157.3 (18.9,126)	161.9 (14.8,218)	107.6 (17.5,73)	105.8 (7.9,344)	132.0 (22.1,67)	81.6 (6.5,312)	102.6 (26.1,30)	76.4 (7.6,204)	131.9 (9.4,371)	99.1 (3.9,1291)		
30 years														
1939-40	174.1 (49.6,22)	456.3 (101.1,24)	163.1 (32.0,47)	259.1 (31.6,108)	115.3 (29.1,30)	129.6 (15.6,130)	92.0 (28.8,20)	99.9 (10.5,175)	76.3 (34.1,10)	71.9 (9.5,115)	121.1 (14.7,130)	107.4 (6.1,607)		
1941-44	203.0 (45.1,35)	728.6 (78.2,51)	204.6 (29.8,81)	256.2 (26.4,152)	168.3 (27.8,66)	173.6 (14.2,267)	108.9 (25.9,34)	89.9 (8.4,226)	87.4 (29.8,17)	73.0 (8.2,161)	154.0 (13.5,238)	117.9 (3.0,962)		
1945-48	199.7 (38.8,46)	463.0 (67.3,55)	171.9 (23.5,96)	224.4 (20.2,208)	160.4 (23.5,85)	135.3 (10.2,331)	146.4 (24.3,67)	105.4 (7.6,373)	85.3 (24.5,24)	82.3 (7.5,238)	150.1 (11.3,327)	114.5 (4.3,1343)		

Source: Divorce file sample; New Zealand Vital Statistics 1939-74.

bridal pregnancy. Perhaps they became more committed as the norm that hasty marriage was preferable to ex-nuptial confinement was questioned and as access to induced abortion improved. The flaw in this argument is that during the late 1960s and early 1970s 'forced' marriages (those assumed to be actually brought about by pregnancy) increased as a proportion of all marriages involving bridal pregnancy (Table 3.13). A more likely explanation is that lengthening of the first birth interval during the 1960s (Chapter 6) left non-pregnant couples freer to end unhappy marriages quickly.

Table 8.13 shows divorce rates for 16-17 year-old brides to have been clearly lowest where pregnancy was involved. These figures may be misleading, although the basic finding is not implausible. Basavarajappa's (1968) method for estimating pregnant brides by age could yield overestimates at very young ages, and hence underestimates of non-pregnant brides. [26] But at these ages the motive to marry for non-pregnant brides may often be a desire to legitimate a child born ex-nuptially. [27] Such brides may also tend to be immature or

[26] Basavarajappa's assumption that live nuptial first confinements of women aged x at marriage duration d months ($d < 8$) during year y are evenly spread by exact age between exact ages x and $x+1$ may be in error at young maternal ages. Probably these confinements are concentrated more heavily toward exact age $x+1$. If so, numbers of pregnant brides aged sixteen and seventeen in particular will be overestimated.

[27] This may have especially been the case from the late 1950s onward. Divorce file data show that of 16-17 year-old non-pregnant brides married during 1954-58, 1959-63, 1964-68, and 1969-73 and divorced within twenty, fifteen, ten, and five years respectively, 9.7, 20.5, 28.1, and 19.5 percent took ex-nuptial children into their marriages ($N = 72, 88, 89, \text{ and } 41$). Equivalent figures for 18-19 and 20-21 year-old non-pregnant brides are 10.5, 6.7, 10.8, and 11.3 percent ($N = 258, 269, 259, \text{ and } 124$) and 5.0, 5.6, 6.1, and 10.5 percent ($N = 278, 301, 295, \text{ and } 105$).

psychologically unstable individuals, while almost certainly a high proportion of very young pregnant brides are Maori. Marriages of Maoris probably are apt to dissolve without the formalities of divorce, and pregnancy per se may be less disruptive of these marriages because it is more normal.

At ages 18-19, too, divorce rates for non-pregnant brides tend to be higher, although rarely by statistically significant margins. At ages 20-21 and 22-24 it is estimates for pregnant brides that generally are higher, while no clear pattern emerges at ages 25-29. Again few differences are statistically significant.

The principal conclusion invited by this analysis is that the key to the overall greater instability of marriages of pregnant brides has been the latter's relative youth. In line with the conclusions of American multivariate studies reported earlier, there is little evidence that pregnancy per se has caused instability. Rather pregnancy has been associated with early marriages, which perhaps tend to have flimsy economic foundations and to unite comparatively immature, ill-matched, poorly educated, socially unskilled, and even psychologically unstable individuals. Not that age at marriage necessarily is causally related, as an independent variable, to all of these qualities. It affects the time available for asset accumulation before marriage and may, if directly truncating education, limit earnings capacity thereafter. It presumably bears some relation to maturity as well, and through this to the capacity to select a compatible mate, but is better thought of as the dependent variable relative to other personal qualities mentioned. Economic disadvantages associated with early marriage may also be substantially

the product of personal qualities and family background factors, these causing education, ambitions, and the ability to budget and save to be limited. Early parenthood may be a problem, but those who marry young without being pregnant also face it. Often, it would seem, their marriages legitimate ex-nuptial children, or else a first child is conceived shortly after marriage (see footnote 26 and Table 6.9).

Duration-specific divorce rates by pregnancy status of bride (Table 8.14) yield one further insight. Over bridal ages 16-39 they generally are higher for pregnant brides, and at durations 5-9 to 20-24 years they are particularly clearly so for the most recent composite marriage cohort to pass through each duration interval. Apparently the softening of attitudes to divorce has increased the relative vulnerability of marriages of pregnant brides, at least for cohorts of the period when marriage was the honourable response to premarital pregnancy. Duration-specific divorce rates by age of bride support this conclusion. At ages 16-17 'non-pregnant' rates for the latest cohorts to pass through the 5-9, 10-14, and 15-19 years duration intervals are much closer than previously to 'pregnant' rates. Similarly, at ages 18-19 and 20-21, 'pregnant' rates for these same cohorts tend more clearly to exceed 'non-pregnant' rates.

Timing of the First Birth by Non-pregnant Brides

One reason for investigating the relationship between bridal pregnancy and divorce was the suspicion that having to adjust simultaneously to both marriage and parenthood might cause stress. Extending this line of thought and taking into account as well the advantages of a dual income start to married life it might be expected

Table 8.14

ESTIMATED MARRIAGE DURATION-SPECIFIC DIVORCE RATES BY AGE AND PREGNANCY
 STATUS OF BRIDE: 1939-40 TO 1964-68 MARRIAGE COHORTS¹

Marriage Cohort	Age and Pregnancy Status of Bride									
	16-17		18-19		20-21		22-24		16-39	
	Pregnant	Not Pregnant	Pregnant	Not Pregnant	Pregnant	Not Pregnant	Pregnant	Not Pregnant	Pregnant	Not Pregnant
Marriage Duration										
5-9 years										
1939-40	118.7 (44.3,15)	209.1 (82.5,11)	59.0 (20.4,17)	108.0 (22.4,45)	34.6 (16.7,9)	51.8 (10.3,52)	32.2 (17.6,7)	34.3 (6.4,60)	47.5 (9.6,51)	40.5 (3.9,229)
1941-44	75.4 (29.6,13)	228.6 (73.9,16)	55.6 (16.9,22)	79.2 (16.3,47)	61.2 (17.8,24)	52.6 (8.4,81)	41.6 (16.6,13)	26.7 (4.7,67)	52.4 (8.3,81)	33.7 (2.9,275)
1945-48	52.1 (21.5,12)	134.7 (46.1,16)	51.9 (13.8,29)	58.2 (11.3,54)	45.3 (13.3,24)	31.5 (5.2,77)	30.6 (11.8,14)	23.7 (3.8,84)	40.8 (6.2,89)	27.6 (2.2,324)
1949-53	44.9 (15.7,17)	160.1 (45.0,23)	42.5 (10.5,34)	38.6 (7.7,52)	33.9 (10.2,23)	25.8 (4.1,84)	35.5 (12.1,18)	18.0 (3.2,69)	34.9 (5.1,98)	24.8 (2.0,323)
1954-58	46.9 (13.2,26)	118.7 (29.9,30)	41.1 (9.0,43)	43.9 (7.2,76)	26.2 (8.3,21)	22.2 (3.6,79)	20.4 (9.0,11)	16.3 (3.2,57)	31.6 (4.4,107)	25.3 (2.0,329)
1959-63	85.1 (14.2,71)	105.5 (23.5,39)	52.6 (8.5,78)	54.4 (7.2,118)	32.4 (7.9,35)	25.3 (3.5,111)	37.6 (11.3,23)	22.3 (3.8,72)	48.5 (4.7,215)	32.0 (2.2,425)
1964-68	118.2 (13.6,145)	134.8 (22.4,68)	79.3 (8.8,162)	66.9 (6.7,203)	51.0 (9.0,66)	43.8 (4.2,227)	29.8 (9.4,21)	31.5 (4.2,117)	71.8 (5.0,408)	47.8 (2.5,734)
10-14 years										
1939-40	31.6 (4)	114.1 (64.5,6)	24.3 (13.3,7)	62.3 (17.4,26)	23.0 (13.7,6)	28.9 (7.8,29)	13.8 (3)	21.7 (5.1,38)	21.4 (6.5,23)	23.7 (3.0,134)
1941-44	29.0 (18.8,5)	128.6 (58.9,9)	37.9 (14.1,15)	38.8 (11.7,23)	22.9 (11.1,9)	33.9 (6.8,52)	12.9 (4)	16.7 (3.8,42)	24.6 (3.0,138)	21.7 (2.4,177)
1945-48	47.7 (20.7,11)	58.9 (31.8,7)	39.4 (12.1,22)	32.4 (8.6,30)	35.9 (11.9,19)	23.7 (4.5,58)	24.0 (10.5,11)	20.1 (3.5,71)	31.2 (5.5,68)	21.7 (2.0,255)
1949-53	44.8 (15.6,17)	90.6 (35.3,13)	30.0 (8.9,24)	30.5 (6.9,41)	13.2 (6.4,9)	25.8 (4.1,84)	13.7 (7.6,7)	17.0 (3.1,65)	22.0 (4.1,62)	21.4 (1.9,279)
1954-58	52.4 (13.9,29)	63.3 (22.5,16)	37.3 (8.6,39)	39.4 (6.9,68)	27.4 (8.5,22)	21.2 (3.5,76)	18.6 (8.6,10)	21.1 (3.6,74)	32.9 (4.5,111)	23.6 (2.0,306)
1959-63	92.3 (14.7,77)	108.3 (23.8,40)	81.6 (10.5,121)	59.3 (7.5,129)	54.5 (10.2,59)	38.2 (4.3,168)	40.7 (11.7,25)	28.5 (4.3,92)	66.3 (5.5,294)	39.4 (2.5,524)
15-19 years										
1939-40	0.0 (0)	57.0 (3)	31.2 (15.1,9)	21.6 (10.5,9)	23.1 (13.7,6)	15.0 (5.7,15)	13.8 (3)	11.9 (3.8,21)	19.6 (6.2,21)	12.7 (2.2,72)
1941-44	34.8 (20.5,6)	28.5 (2)	32.9 (13.2,13)	32.0 (10.6,19)	12.8 (8.4,5)	24.0 (5.7,37)	16.0 (10.4,5)	11.5 (3.1,29)	20.0 (5.2,31)	14.5 (2.0,118)
1945-48	34.8 (17.8,8)	84.2 (37.5,10)	30.4 (10.7,17)	33.4 (8.7,31)	20.7 (9.1,11)	17.6 (3.9,43)	26.2 (11.0,12)	14.1 (2.9,50)	23.9 (4.8,52)	16.6 (1.7,194)
1949-53	34.3 (13.8,13)	111.4 (38.6,16)	37.4 (9.9,30)	34.9 (7.4,47)	23.6 (8.6,16)	19.4 (3.6,63)	39.4 (12.7,20)	16.0 (3.0,61)	33.8 (5.0,95)	19.3 (1.8,251)
1954-58	64.9 (15.4,36)	79.1 (25.0,20)	44.0 (9.3,46)	52.0 (7.9,90)	48.7 (11.2,39)	28.0 (4.1,100)	24.1 (9.7,13)	23.7 (3.8,83)	45.2 (5.3,153)	28.7 (2.2,373)
20-24 years										
1939-40	7.9 (1)	76.1 (4)	13.9 (4)	16.8 (9.3,7)	11.5 (3)	9.9 (4.6,10)	23.0 (15.0,5)	13.2 (4.0,23)	14.0 (5.3,15)	13.3 (2.2,75)
1941-44	29.0 (18.8,5)	71.5 (45.3,5)	25.2 (11.6,10)	40.5 (11.9,24)	28.0 (12.2,11)	22.8 (5.6,35)	16.0 (10.4,5)	13.5 (3.4,34)	20.1 (5.3,31)	16.3 (2.1,133)
1945-48	30.4 (16.6,7)	84.2 (37.5,10)	23.3 (9.4,13)	39.9 (9.5,37)	20.8 (9.1,11)	27.3 (4.8,67)	24.1 (10.6,11)	17.5 (3.2,62)	22.0 (4.6,48)	19.3 (1.9,227)
1949-53	37.0 (14.3,14)	111.4 (38.6,16)	41.2 (10.3,33)	44.5 (8.3,60)	29.5 (9.6,20)	27.4 (4.2,89)	29.6 (11.1,15)	23.0 (3.6,88)	33.4 (5.0,94)	25.0 (2.0,326)
25-29 years										
1939-40	15.9 (2)	0.0 (0)	13.9 (4)	24.0 (11.0,10)	15.4 (4)	13.0 (5.3,13)	4.6 (1)	13.1 (4.0,23)	10.2 (4.5,11)	10.3 (2.0,58)
1941-44	17.4 (3)	100.0 (52.8,7)	20.2 (10.4,8)	26.9 (9.8,16)	12.8 (8.4,5)	16.2 (4.7,25)	12.8 (4)	9.2 (2.8,23)	14.9 (4.5,23)	12.5 (1.8,102)
1945-48	21.7 (14.1,5)	50.5 (29.6,6)	17.9 (8.3,10)	38.9 (9.4,36)	20.7 (9.1,11)	22.9 (4.5,56)	24.0 (10.5,11)	18.4 (3.3,63)	19.8 (4.4,43)	17.5 (1.8,203)

Source: Divorce file sample; New Zealand Vital Statistics 1939-69.

¹ Rates for marriage duration 0-4 years are not shown as they are identical to the cumulative divorce rates to exact marriage duration 5 years shown in Table 8.13. Note that these rates also cover the 1969-73 marriage cohort. Note also that the 25-29 age group is omitted from this table because there were too few marriages and sample divorces for results to be meaningful.

that couples whose first children are conceived soon after marriage are more divorce-prone than those whose first children are conceived later. Following similar principles as were used in estimating annual numbers of pregnant brides by age, annual distributions of non-pregnant brides by age and subsequent length of first birth interval were computed (Appendix 13). Cumulative divorce rates by length of first birth interval then were calculated to exact marriage durations since first nuptial confinement at five year intervals. It was inappropriate on this occasion to standardise by the conventional marriage duration since marriage, for the critical event which commenced the period of exposure to risk of divorce in this line of argument was not marriage, but the birth of the first child.

Estimated cumulative divorce rates by first birth interval for non-pregnant brides aged 16-39 (Table 8.15) give little support for the proposition that an early first conception can undermine the marital relationship. Only for the 1959-63 marriage cohort at exact marriage duration ten years and the 1959-60 cohort at exact duration fifteen years is the rate for couples who became parents after 8-11 months significantly higher than rates for couples who delayed parenthood longer. [28] However, the picture changes when marriages of brides aged 16-19 and 20-24 are examined separately.

[28] Because in Table 8.15 marriage durations are calculated relative to the date of first nuptial confinement, not all of the single-year marriage cohorts which hitherto have comprised the most recent composite cohort to pass through each five-year duration interval had done so by the end of 1978. Rather than drop these cohorts altogether, data are presented for those portions of them for which couples who became parents within three years of marriage had all reached specified exact marriage durations since first nuptial confinement.

Table 8.15

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
SINCE FIRST NUPTIAL CONFINEMENT FOR NON-PREGNANT BRIDES BY AGE AT
MARRIAGE AND FIRST BIRTH INTERVAL: 1939-40 TO 1969-70 MARRIAGE COHORTS

Marriage Cohort	Age at Marriage and First Birth Interval											
	8-11 Months	16-19			20-24				16-39			3-4 Years
		1 Year	2 Years	3-4 Years	8-11 Months	1 Year	2 Years	3-4 Years	8-11 Months	1 Year	2 Years	3-4 Years
Exact Marriage Duration Since First Nuptial Confinement:												
5 years												
1939-40	7.0	39.9	22.4	19.5	8.5	5.4	6.7	12.4	8.1	5.7	10.5	11.9
	(1)	(25.7,5)	(2)	(3)	(5.6,5)	(4)	(2)	(3)	(4.0,9)	(2.6,10)	(5.8,7)	(6.6,7)
1941-44	26.7	41.4	20.7	8.2	15.3	7.5	8.6	21.1	13.6	7.6	8.5	12.0
	(14.6,7)	(21.1,8)	(3)	(2)	(5.8,15)	(3.9,8)	(4)	(10.2,9)	(4.0,25)	(2.6,19)	(4.2,9)	(5.1,12)
1945-48	17.9	23.9	23.1	3.4	6.2	11.5	4.6	2.4	8.0	8.7	7.2	3.0
	(9.9,7)	(12.3,8)	(15.0,5)	(1)	(2.7,11)	(3.7,21)	(3)	(1)	(2.3,26)	(2.2,35)	(3.3,10)	(3)
1949-53	12.8	22.3	3.2	7.3	3.7	5.9	7.4	3.7	5.3	6.0	4.8	5.5
	(7.1,7)	(10.3,10)	(1)	(3)	(2.1,7)	(2.4,13)	(4.4,6)	(2)	(1.8,18)	(1.7,27)	(2.5,8)	(3.1,7)
1954-58	14.4	18.3	5.3	6.3	2.9	4.9	2.5	2.1	4.9	5.4	3.0	3.2
	(6.7,10)	(8.4,10)	(2)	(3)	(1.7,6)	(2.2,11)	(2)	(1)	(1.7,18)	(1.6,24)	(2.0,5)	(4)
1959-63	5.2	10.4	16.9	8.8	5.5	4.1	5.5	7.2	4.3	4.3	7.7	6.6
	(4)	(5.8,7)	(8.7,8)	(5.8,5)	(2.4,11)	(1.9,10)	(3.6,5)	(4)	(1.6,15)	(1.4,19)	(3.0,14)	(3.2,9)
1964-68	22.8	46.8	18.8	19.2	6.3	6.3	12.1	15.7	11.3	11.7	13.4	15.4
	(8.6,15)	(12.1,31)	(7.6,13)	(6.4,19)	(3.3,8)	(2.3,16)	(4.3,17)	(5.7,16)	(3.2,27)	(2.4,51)	(3.3,35)	(3.7,36)
1969-70	49.3	51.5	40.6		10.4	9.7	5.8		19.7	14.6	14.4	
	(21.3,11)	(19.1,15)	(16.2,13)		(4)	(4.3,11)	(4)		(7.4,15)	(4.0,28)	(5.0,18)	
10 years												
1939-40	69.7	199.4	78.3	26.0	44.4	38.0	23.3	33.1	37.8	37.9	27.1	27.1
	(31.3,10)	(52.5,25)	(41.8,7)	(4)	(12.5,26)	(10.4,28)	(12.8,7)	(16.9,8)	(8.4,42)	(6.7,66)	(9.3,18)	(9.8,16)
1941-44	72.5	134.4	55.1	16.4	45.9	46.1	30.0	44.6	42.4	36.3	26.4	29.0
	(25.6,19)	(36.1,26)	(27.9,8)	(4)	(9.8,45)	(9.5,49)	(11.6,14)	(14.7,19)	(6.9,78)	(5.5,91)	(7.2,28)	(7.8,29)
1945-48	63.9	77.6	60.0	6.9	29.4	40.7	27.9	28.2	29.7	29.0	27.5	17.1
	(18.2,25)	(21.5,26)	(23.7,13)	(2)	(5.9,52)	(6.8,74)	(9.5,18)	(11.8,12)	(4.4,97)	(3.9,117)	(6.5,38)	(6.1,17)
1949-53	51.3	84.9	32.4	21.8	22.0	25.5	28.5	24.4	22.5	24.8	20.9	22.8
	(13.9,28)	(19.4,38)	(14.8,10)	(10.6,9)	(4.9,42)	(4.9,56)	(8.6,23)	(9.8,13)	(3.7,77)	(3.4,111)	(5.1,35)	(6.2,29)
1954-58	57.6	75.2	24.0	18.9	14.5	19.3	24.0	29.0	22.0	22.6	19.6	22.4
	(13.0,40)	(16.6,41)	(11.6,9)	(9.2,9)	(3.9,30)	(4.3,43)	(8.0,19)	(11.2,14)	(3.6,81)	(3.3,105)	(5.0,33)	(6.2,28)
1959-63	46.5	104.2	63.3	24.6	22.0	32.9	27.6	55.4	38.1	38.1	37.0	40.5
	(11.1,36)	(17.3,70)	(16.5,30)	(9.6,14)	(4.8,44)	(5.3,80)	(8.0,25)	(14.2,31)	(3.9,88)	(4.2,170)	(6.5,67)	(7.9,55)
1964-65	94.3	125.7	56.4		18.9	39.6	42.7		43.4	45.5	40.8	
	(25.9,26)	(30.1,33)	(21.5,14)		(8.3,11)	(9.1,39)	(13.4,21)		(9.2,46)	(7.4,78)	(9.5,38)	
15 years												
1939-40	111.6	255.2	100.7	45.5	70.0	61.1	46.6	45.5	59.3	55.2	48.1	39.0
	(38.7,16)	(57.3,32)	(46.8,9)	(24.7,7)	(15.5,41)	(13.0,45)	(17.9,14)	(19.7,11)	(10.4,66)	(8.1,96)	(12.2,32)	(11.7,23)
1941-44	80.2	243.0	96.4	24.6	63.3	64.9	47.2	63.4	56.0	54.2	44.2	42.0
	(24.7,21)	(45.4,47)	(36.0,14)	(14.6,6)	(11.4,62)	(11.1,69)	(14.5,22)	(17.4,27)	(7.9,103)	(6.7,136)	(9.3,47)	(9.3,42)
1945-48	92.0	116.4	78.4	17.1	50.9	64.9	38.7	47.1	46.8	49.6	40.5	33.2
	(21.5,36)	(25.8,39)	(26.9,17)	(11.2,5)	(7.7,90)	(8.5,118)	(11.2,25)	(15.1,20)	(5.4,153)	(5.0,200)	(7.8,56)	(8.4,33)
1949-53	75.1	129.6	51.8	29.0	40.2	44.7	42.2	56.2	38.9	42.3	35.2	43.2
	(16.6,41)	(23.4,58)	(18.6,16)	(12.1,12)	(6.6,77)	(6.5,98)	(10.4,34)	(14.7,30)	(4.9,133)	(4.4,189)	(6.6,59)	(8.4,55)
1954-58	97.9	135.8	61.4	33.6	30.4	44.0	46.7	86.9	40.4	46.0	41.7	53.6
	(16.6,68)	(21.6,74)	(18.3,23)	(12.2,16)	(5.5,63)	(6.4,98)	(11.0,37)	(18.9,42)	(4.8,149)	(4.6,205)	(7.2,70)	(9.4,67)
1959-60	72.7	140.4	140.1		31.7	60.9	61.8		37.7	64.3	75.2	
	(21.5,23)	(31.1,38)	(38.2,25)		(9.0,26)	(11.4,58)	(19.7,20)		(7.3,55)	(8.5,117)	(14.9,51)	
20 years												
1939-40	118.5	263.2	111.9	45.5	82.0	84.2	59.9	57.9	68.3	67.2	60.2	49.1
	(39.7,17)	(57.9,33)	(49.1,10)	(24.7,7)	(16.7,48)	(15.1,62)	(20.1,18)	(22.1,14)	(11.1,76)	(8.8,117)	(13.6,40)	(13.1,29)
1941-44	95.4	294.7	96.4	28.7	72.5	87.5	79.3	75.2	64.1	70.1	59.3	53.0
	(26.7,25)	(48.2,57)	(36.0,14)	(15.7,7)	(12.2,71)	(12.8,93)	(18.4,37)	(18.8,32)	(8.4,118)	(7.5,176)	(10.7,63)	(10.4,53)
1945-48	120.1	176.1	110.7	24.0	69.6	79.1	60.4	65.9	63.1	64.3	58.6	47.3
	(24.2,47)	(30.6,59)	(31.4,24)	(13.2,7)	(8.9,123)	(9.3,144)	(13.8,39)	(17.7,28)	(6.3,206)	(5.7,259)	(9.3,81)	(9.9,47)
1949-53	110.0	183.2	84.1	55.7	58.5	66.1	58.3	80.6	58.2	60.6	55.5	66.8
	(19.7,60)	(26.9,82)	(23.2,26)	(16.6,23)	(7.9,112)	(7.8,145)	(12.1,47)	(17.3,43)	(5.9,199)	(5.3,271)	(8.2,93)	(10.3,85)
1954-55	126.2	198.8	101.7		33.5	62.0	44.1		51.9	66.3	54.0	
	(31.2,31)	(41.4,40)	(37.9,14)		(9.2,28)	(11.9,55)	(17.0,14)		(8.5,76)	(8.7,118)	(12.9,36)	
25 years												
1939-40	139.5	287.1	134.2	52.0	93.9	92.4	79.8	66.1	80.9	77.0	75.2	55.9
	(42.6,20)	(59.4,36)	(53.0,12)	(26.3,8)	(17.7,55)	(15.7,68)	(23.0,24)	(23.5,16)	(12.0,90)	(9.4,134)	(15.0,50)	(13.9,33)
1941-44	122.1	356.8	130.9	36.9	91.9	109.1	98.6	96.3	80.4	88.5	74.4	65.0
	(29.8,32)	(50.7,69)	(41.2,19)	(17.8,9)	(13.6,90)	(14.1,116)	(20.3,46)	(21.0,41)	(9.3,148)	(8.3,222)	(11.8,79)	(11.5,65)
1945-48	161.0	226.9	143.0	41.2	87.7	112.2	85.2	91.8	79.6	87.4	83.3	66.4
	(27.3,63)	(33.7,76)	(35.0,31)	(17.1,12)	(9.9,155)	(10.9,204)	(16.2,55)	(20.6,39)	(7.0,260)	(6.5,352)	(10.9,115)	(11.6,66)
1949-50	171.1	211.4	89.1		79.4	104.3	109.4		83.4	86.1	88.9	
	(37.7,37)	(45.4,37)	(37.7,11)		(14.7,58)	(15.2,91)	(25.3,36)		(11.2,111)	(9.7,156)	(16.0,61)	
30 years												
1939-40	167.4	319.0	134.2	65.0	105.9	107.3	89.8	82.6	92.6	87.3	81.2	69.4
	(45.9,24)	(61.2,40)	(53.0,12)	(29.2,10)	(18.7,62)	(16.8,79)	(24.3,27)	(26.0,20)	(12.8,103)	(10.0,152)	(15.6,54)	(15.4,41)
1941-44	133.6	398.1	158.4		98.0	123.2	109.3		87.5	102.0	85.7	
	(30.9,35)	(51.8,77)	(44.6,23)		(14.0,96)	(14.8,131)	(21.3,51)		(9.7,161)	(8.9,256)	(12.6,91)	

Source: Divorce file sample; New Zealand Vital Statistics 1939-75.

For non-pregnant teenaged brides there has been for most marriage cohorts a clear tendency for divorce rates to be highest where the first child arrived between the first and second wedding anniversaries (Table 8.15). Not all differences between cumulative divorce rates for first birth interval one year and intervals 8-11 months and two years are statistically significant, but many are. Estimates for interval 3-4 years quite definitely are lower than those for interval one year, no doubt partly because longer first birth intervals are selective of couples who have tested the durability of their marriages. The intriguing finding, however, is that estimates for interval 8-11 months are not the highest of all. There are a number of possible, but conjectural, explanations for it.

Perhaps relatively more first births occurring 12-23 months after marriage are the result of unplanned pregnancies. Some very early marital conceptions are intended, whereas couples wishing to delay the first birth may generally not plan on it occurring as early as the second year of marriage. Perhaps, too, 'honeymoon' conceptions tend to be associated with longer courtships and with being well off, both of which should make for marital stability, and with being Catholic and therefore opposed to divorce. A further possibility is that a brief period on two incomes prior to becoming parents is more damaging for marital stability than is dependence on a single income from the outset. Finally, a relatively high proportion of first births to non-pregnant teenaged brides at marriage duration one year may either represent attempts to improve marriages which have failed to match expectations or have been preceded by ex-nuptial births. [29]

Most marriage cohorts show the tendency for marriages into which a first child is born after one year to be less stable than those into which one is born after 8-11 months for bridal ages 20-24 as well (Table 8.15). Differences between cumulative divorce rates are less frequently statistically significant, but those that are tend to involve the two most recent composite marriage cohorts to attain exact marriage durations since first nuptial confinement ten, fifteen, twenty, and twenty-five years. In other words, significance is based on the period experience of cohorts since 1968. This portends an underlying stability in marriages with first birth intervals of 8-11 months which may be linked to adherence to traditional marital role prescriptions. Conception immediately following marriage may well have been associated throughout the post-war period with a wife's clear perception of herself as a mother and housekeeper. If so, marriages followed by first confinements after 8-11 months may have been relatively less affected by changing attitudes to women's place in society than those followed by later first confinements.

One final point to be made from Table 8.15 is that, for brides aged 20-24, the 1964-68 and 1959-63 marriage cohorts at exact durations five and ten years respectively show relatively high divorce rates for first birth interval 3-4 years. This suggests that the timing of the first birth has begun to affect marital stability in a new way. Longer first birth intervals having become the norm during the 1960s (Chapter 6), the adjustment from a two-income to a one-income lifestyle may have become more difficult the more delayed

[29] Official New Zealand parity data take into account only births subsequent to the date of the current marriage (Carmichael, 1979a). Thus what appear as nuptially conceived first births may be of higher parity.

it has been. Also, with voluntary childlessness now a genuine option (O'Neill, 1977, 1979), perhaps the chances rise that husband and wife disagree on the wisdom of becoming parents at all as the first birth interval increases.

Religion

In New Zealand as elsewhere, religious doctrines historically have opposed divorce to varying degrees. This is clear from accounts of the evolution of divorce legislation (Mansell, 1970; Phillips, 1981). It is to be expected, then, that adherence to these doctrines has prevented some couples from divorcing.

Available data are not ideal. Both published statistics and divorce file data separate marriages into those celebrated by registrars and by ministers of religion. The result is a very crude division according to whether or not strong religious convictions are held. For some couples a religious wedding is a matter of tradition only, while for others the minister differs from a registrar only in his willingness to celebrate the marriage at a location of their choosing. [30] The other religious dimension on which data are available is the denomination of the officiating clergyman. From divorce files this usually had to be inferred from the wedding venue, and where this was not a church problems often arose. [31] But these

[30] Divorce file data permit non-church marriages celebrated by ministers of religion to be identified, but annual numbers of such marriages are unknown.

[31] If the officiating clergyman's name was given it was checked against the register of accredited marriage celebrants, but few gaps in the data were filled in this way.

difficulties aside, the denomination of the marriage celebrant is a poor substitute for data on the religions of bride and groom and the strengths of their beliefs.

Civil marriages celebrated since 1939 have been much less stable than religious ones (Table 8.16). Whether cumulative divorce rates for all marriages or for those categorised by age of bride or groom are compared, differences nearly all are statistically significant at exact marriage durations ten years and over. [32] Almost certainly belief in the sanctity of marriage helps explain the lower divorce rates for religious marriages, but there are other considerations. Doubtless civil weddings have more often involved divorce-prone groups like remarrying divorcees, pregnant brides, and persons from blue collar backgrounds (section 8.2). There are no data to substantiate these claims for entire marriage cohorts, but Table A2.23, Appendix 2 confirms them for those who actually divorce.

Estimated divorce rates by celebrant's denomination for couples married religiously generally are conservative, because for a sizeable number of sample divorces denomination was unknown (Table 8.17). About ninety percent of these 'not specified' divorces ended non-church marriages, and indications are that the majority of these would have been celebrated by Methodists or Presbyterians. [33] As a result divorce rates for these two denominations probably are more conservative than are those for Anglicans and Catholics.

[32] The broad age groups specified in Table 8.16 are the only ones for which vital registration data on civil and religious marriages are published.

Table 8.16

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
 BY TYPE OF MARRIAGE CELEBRANT AND AGE OF BRIDE AND GROOM: 1939-40
 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Marriage Celebrated by:									
	Groom		Minister of Religion Bride		Total Marriages	Groom		Registrar Bride		Total Marriages
	16-20	21+	16-20	21+		16-20	21+	16-20	21+	
Exact Marriage Duration										
5 years										
1939-40	11.0 (2)	5.7 (1.5,33)	13.1 (4.9,15)	4.2 (1.4,20)	5.9 (1.5,35)	42.7 (3)	12.1 (4.7,14)	14.3 (4)	13.7 (5.6,13)	13.8 (4.9,17)
1941-44	53.8 (19.3,16)	13.9 (1.9,115)	30.8 (6.2,51)	11.6 (1.9,80)	15.3 (2.0,131)	64.7 (37.6,6)	37.1 (6.8,62)	56.0 (18.4,19)	34.4 (7.1,49)	38.6 (6.8,68)
1945-48	17.9 (8.7,9)	8.0 (1.2,95)	13.4 (3.4,34)	7.1 (1.2,70)	8.4 (1.2,104)	28.0 (4)	28.7 (5.0,69)	33.7 (12.2,16)	27.5 (5.3,57)	28.7 (4.9,73)
1949-53	9.4 (5.6,6)	6.8 (1.1,90)	9.9 (2.5,35)	5.9 (1.1,61)	6.9 (1.0,96)	15.0 (3)	17.1 (3.5,52)	17.4 (7.3,12)	16.8 (3.7,43)	17.0 (3.3,55)
1954-58	4.5 (4)	6.1 (1.0,82)	9.4 (2.1,44)	4.3 (1.0,42)	6.0 (0.9,86)	3.8 (1)	15.3 (3.3,47)	17.4 (6.6,15)	13.3 (3.4,33)	14.4 (3.0,48)
1959-63	13.7 (4.4,21)	5.5 (0.9,77)	8.9 (1.7,56)	4.6 (1.0,42)	6.3 (0.9,98)	18.2 (9.4,8)	11.0 (2.7,36)	15.6 (5.4,18)	10.2 (2.9,26)	11.9 (2.6,44)
1964-68	18.9 (4.0,48)	12.4 (1.4,171)	15.2 (2.0,129)	11.5 (1.8,90)	13.4 (1.3,219)	29.6 (9.4,21)	19.9 (3.4,71)	30.4 (6.4,48)	16.3 (3.6,44)	21.5 (3.3,92)
1969-73	26.3 (4.0,93)	15.5 (1.4,265)	23.3 (2.2,230)	11.9 (1.5,128)	17.4 (1.3,358)	31.4 (7.8,34)	25.2 (3.4,115)	28.5 (5.0,68)	24.9 (4.0,81)	26.4 (3.1,149)
10 years										
1939-40	149.2 (39.0,27)	37.8 (3.7,218)	85.7 (12.2,98)	30.6 (3.7,147)	41.2 (3.8,245)	185.2 (68.2,13)	66.3 (10.7,77)	100.1 (26.4,28)	65.1 (11.8,62)	73.1 (10.9,90)
1941-44	181.5 (32.9,54)	39.6 (3.2,327)	95.5 (10.6,158)	32.3 (3.1,223)	44.5 (3.3,381)	285.6 (66.9,24)	101.8 (10.9,170)	179.9 (30.7,61)	93.4 (11.3,133)	110.0 (11.0,194)
1945-48	75.5 (17.3,38)	30.0 (2.3,356)	58.6 (6.9,149)	24.9 (2.3,245)	31.8 (2.3,394)	147.1 (43.6,21)	82.0 (8.2,197)	113.6 (21.4,54)	79.3 (8.7,164)	85.7 (8.2,218)
1949-53	54.7 (13.2,35)	26.4 (2.0,350)	44.6 (5.1,158)	21.9 (2.1,227)	27.7 (2.0,385)	104.7 (31.8,21)	60.8 (6.4,185)	91.4 (16.2,63)	56.0 (6.7,143)	63.5 (6.3,206)
1954-58	56.1 (11.3,50)	26.3 (2.0,356)	47.2 (4.6,220)	19.1 (2.0,186)	28.2 (2.0,406)	64.0 (22.1,17)	60.7 (6.3,187)	79.9 (13.6,69)	54.4 (6.7,135)	61.0 (6.1,204)
1959-63	83.2 (10.4,128)	32.2 (2.2,451)	55.1 (4.2,347)	25.2 (2.4,232)	38.6 (2.3,599)	107.1 (21.7,47)	61.3 (6.2,200)	98.7 (12.9,114)	52.2 (6.5,133)	66.7 (6.0,247)
1964-68	118.7 (9.4,302)	57.7 (2.9,795)	82.7 (4.4,701)	50.5 (3.6,396)	67.2 (2.9,1097)	156.4 (20.1,111)	83.6 (6.8,298)	134.9 (12.6,213)	72.7 (7.4,196)	95.7 (6.6,409)
15 years										
1939-40	187.8 (42.7,34)	56.7 (4.5,327)	124.1 (14.3,142)	45.6 (4.4,219)	60.7 (4.6,361)	213.7 (72.0,15)	103.3 (13.1,120)	153.7 (31.7,43)	96.7 (14.1,92)	109.6 (13.1,135)
1941-44	245.3 (36.7,73)	57.1 (3.8,472)	134.2 (12.3,222)	46.8 (3.7,323)	63.7 (3.9,545)	290.9 (69.4,27)	136.5 (12.4,228)	227.1 (33.5,77)	125.0 (12.9,178)	144.6 (12.3,255)
1945-48	105.4 (20.1,53)	42.1 (2.9,584)	89.7 (8.3,228)	41.6 (3.0,409)	51.5 (2.9,637)	196.1 (48.9,28)	117.0 (9.7,281)	164.1 (25.0,78)	111.6 (10.2,231)	121.4 (9.5,309)
1949-53	106.3 (17.9,68)	22.9 (2.6,558)	74.8 (6.5,265)	34.9 (2.7,361)	45.1 (2.6,626)	159.5 (38.0,32)	96.0 (7.9,292)	137.8 (19.3,95)	89.7 (8.3,229)	99.9 (7.7,324)
1954-58	113.3 (15.6,101)	46.6 (2.7,630)	80.2 (5.9,374)	36.6 (2.8,357)	50.7 (2.7,731)	127.9 (30.1,34)	93.2 (7.7,287)	130.9 (16.9,113)	83.8 (8.2,208)	96.0 (7.5,321)
1959-63	171.0 (14.1,263)	68.1 (3.1,952)	115.0 (5.9,724)	53.3 (3.4,491)	78.3 (3.2,1215)	209.7 (28.6,92)	109.9 (8.1,359)	185.3 (16.8,214)	93.0 (8.5,237)	121.8 (7.9,451)
20 years										
1939-40	221.0 (45.4,40)	67.2 (4.9,387)	142.5 (15.2,163)	55.0 (4.8,264)	71.8 (4.9,427)	256.4 (76.7,18)	125.7 (14.3,146)	189.4 (34.5,53)	116.6 (15.3,111)	133.2 (14.2,164)
1941-44	289.0 (38.7,86)	69.9 (4.1,578)	159.6 (13.2,264)	57.9 (4.1,400)	77.6 (4.3,664)	301.7 (70.1,28)	157.5 (13.1,263)	277.3 (35.8,94)	138.3 (13.5,197)	165.1 (13.0,291)
1945-48	135.2 (22.4,68)	62.7 (3.3,744)	115.3 (9.3,293)	52.8 (3.3,519)	65.6 (3.3,812)	217.1 (50.8,31)	148.2 (10.7,356)	214.6 (27.7,102)	137.7 (11.1,285)	152.1 (10.5,387)
1949-53	142.2 (20.3,91)	59.7 (3.0,791)	105.5 (7.6,374)	49.1 (3.1,508)	63.5 (3.0,882)	234.3 (44.0,47)	122.0 (8.7,371)	175.6 (21.3,121)	116.3 (9.3,297)	128.9 (8.7,418)
1954-58	167.2 (18.4,149)	73.1 (3.3,988)	124.8 (7.1,582)	56.9 (3.5,555)	78.9 (3.3,1137)	188.1 (35.3,50)	128.6 (8.9,396)	191.1 (19.7,165)	113.3 (9.4,281)	133.4 (8.7,446)
25 years										
1939-40	243.1 (46.9,44)	76.9 (5.2,443)	154.7 (15.7,177)	64.6 (5.2,310)	81.9 (5.2,487)	284.9 (79.3,20)	150.7 (15.4,175)	218.0 (36.3,61)	140.8 (16.6,134)	158.3 (15.3,195)
1941-44	336.0 (40.3,100)	82.9 (4.5,685)	189.2 (14.2,313)	68.3 (4.5,472)	91.7 (4.6,785)	323.3 (71.4,30)	183.8 (13.9,307)	318.6 (37.2,108)	160.8 (14.3,229)	191.2 (13.8,337)
1945-48	176.9 (25.0,89)	80.0 (3.7,949)	149.1 (10.4,379)	67.0 (3.7,659)	83.9 (3.7,1038)	245.1 (53.0,35)	168.2 (11.2,404)	241.9 (28.9,115)	156.6 (11.8,324)	172.5 (11.0,439)
1949-53	179.7 (22.3,115)	81.4 (3.5,1079)	141.1 (8.6,500)	67.1 (3.6,694)	86.0 (3.5,1194)	304.1 (47.8,61)	154.5 (9.6,470)	242.3 (24.0,167)	142.6 (10.2,364)	163.8 (9.6,531)
30 years										
1939-40	259.7 (48.0,47)	85.7 (5.4,494)	172.2 (16.4,197)	71.7 (5.5,344)	91.0 (5.5,541)	327.6 (82.4,23)	162.7 (15.9,189)	239.5 (37.5,67)	152.3 (17.1,145)	172.1 (15.8,212)
1941-44	379.7 (41.4,113)	92.4 (4.7,764)	210.3 (14.7,348)	76.6 (4.7,529)	102.4 (4.8,877)	344.8 (72.6,32)	203.6 (14.5,340)	359.9 (38.4,122)	175.6 (14.8,250)	211.0 (14.3,372)
1945-48	206.8 (26.6,104)	95.3 (4.0,1131)	176.2 (11.1,448)	80.1 (4.0,787)	99.8 (4.0,1235)	280.1 (55.3,40)	188.6 (11.7,453)	277.7 (30.2,132)	174.4 (12.3,361)	193.7 (11.5,493)

Source: Divorce file sample; New Zealand Vital Statistics 1939-73.

Table 8.17

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
FOR RELIGIOUS MARRIAGES BY DENOMINATION OF CELEBRANT: 1939-40
TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Denomination ¹						Not Specified
	Roman Catholic	Church of England	Presbyterian	Methodist	Other Mainline Protestant	Other	
Exact Marriage Duration							
5 years							
1939-40	7.7 (4.3,7)	6.0 (2.5,12)	4.5 (2.3,8)	6.8 (4.5,5)	3.6 (1)	6.1 (2)	(0)
1941-44	7.9 (3.7,10)	19.8 (3.9,56)	14.6 (3.4,39)	16.6 (5.9,17)	16.5 (9.8,6)	7.5 (3)	(0)
1945-48	6.6 (2.8,12)	8.7 (2.1,36)	8.3 (2.1,34)	11.7 (4.2,17)	2.0 (1)	6.0 (3)	(1)
1949-53	4.9 (2.2,11)	6.8 (1.8,30)	6.3 (1.7,29)	9.3 (3.6,14)	9.3 (6.1,5)	8.3 (5.4,5)	(2)
1954-58	3.8 (1.8,10)	4.9 (1.5,22)	6.3 (1.7,29)	7.0 (3.2,10)	8.1 (5.3,5)	13.3 (6.9,8)	(2)
1959-63	2.8 (1.5,8)	6.3 (1.7,30)	7.1 (1.8,34)	6.4 (3.0,10)	7.8 (4.7,6)	7.0 (4.6,5)	(5)
1964-68	9.2 (2.4,32)	14.6 (2.3,85)	9.6 (2.0,51)	11.5 (3.7,21)	12.6 (5.3,12)	9.2 (4.8,8)	(10)
1969-73	15.1 (2.8,60)	16.1 (2.3,108)	16.2 (2.4,97)	20.0 (4.7,39)	21.3 (6.9,20)	14.3 (5.4,15)	(19)
10 years							
1939-40	31.8 (8.5,29)	44.5 (6.8,89)	35.9 (6.5,64)	54.1 (12.2,40)	32.4 (15.6,9)	39.8 (15.9,13)	(1)
1941-44	31.6 (7.?,40)	49.8 (6.0,141)	45.2 (5.9,121)	44.0 (9.4,45)	43.9 (15.8,16)	39.8 (14.3,16)	(2)
1945-48	22.7 (5.2,41)	30.8 (4.0,127)	32.1 (4.0,132)	43.4 (7.9,63)	20.4 (9.4,10)	38.1 (12.6,19)	(2)
1949-53	20.2 (4.4,45)	27.5 (3.6,122)	26.2 (3.5,121)	38.1 (7.3,57)	22.3 (9.4,12)	33.0 (10.7,20)	(8)
1954-58	16.2 (3.6,43)	26.7 (3.5,121)	33.4 (3.9,153)	26.4 (6.2,38)	26.1 (9.5,16)	38.3 (11.5,23)	(12)
1959-63	31.2 (4.8,90)	42.4 (4.3,203)	34.7 (3.9,166)	35.0 (6.8,55)	28.5 (8.8,22)	28.0 (9.1,20)	(23)
1964-68	52.3 (5.6,182)	65.1 (4.7,381)	56.4 (4.6,301)	52.8 (7.7,96)	52.6 (10.7,50)	54.9 (11.3,48)	(39)
15 years							
1939-40	47.2 (10.3,43)	64.5 (8.1,129)	54.3 (7.9,97)	74.3 (14.2,55)	61.3 (21.2,17)	58.2 (19.1,19)	(1)
1941-44	57.7 (9.6,73)	66.4 (6.9,188)	60.9 (6.8,163)	67.5 (11.5,69)	65.8 (19.1,24)	64.6 (18.0,26)	(2)
1945-48	41.5 (6.9,75)	46.9 (4.8,193)	55.2 (5.2,227)	62.0 (9.3,90)	34.8 (12.2,17)	52.1 (14.6,26)	(9)
1949-53	35.4 (5.8,79)	42.2 (4.4,187)	45.3 (4.5,209)	58.1 (8.9,87)	33.4 (11.4,18)	44.6 (12.3,27)	(19)
1954-58	31.7 (5.0,84)	51.2 (4.8,232)	57.6 (5.1,264)	50.1 (8.5,72)	40.7 (11.7,25)	50.0 (13.1,30)	(24)
1959-63	67.3 (6.9,194)	82.7 (5.9,396)	75.0 (5.6,359)	77.0 (9.9,121)	67.5 (13.3,52)	54.7 (12.5,39)	(54)
20 years							
1939-40	60.4 (11.6,55)	76.5 (8.7,153)	62.8 (8.5,112)	90.6 (15.5,67)	61.3 (21.2,17)	67.4 (20.4,22)	(1)
1941-44	67.2 (10.4,85)	80.2 (7.5,227)	72.9 (7.4,195)	89.0 (13.1,91)	87.8 (21.8,32)	72.1 (19.0,29)	(5)
1945-48	55.9 (8.0,101)	58.7 (5.4,242)	69.5 (5.8,286)	80.6 (10.5,117)	45.0 (13.8,22)	66.1 (16.4,33)	(11)
1949-53	51.1 (6.9,114)	60.9 (5.3,270)	62.6 (5.2,289)	70.1 (9.7,105)	55.7 (14.5,30)	64.4 (14.7,39)	(35)
1954-58	61.9 (6.9,164)	77.1 (5.8,349)	84.8 (6.1,389)	72.3 (10.0,104)	73.3 (15.5,45)	73.3 (15.7,44)	(44)
25 years							
1939-40	65.9 (12.1,60)	91.5 (9.5,183)	68.9 (8.8,123)	101.4 (16.3,75)	68.5 (22.3,19)	79.6 (22.0,26)	(1)
1941-44	80.6 (11.3,102)	93.9 (8.1,266)	84.4 (7.9,226)	104.7 (14.1,107)	101.5 (23.3,37)	91.9 (21.2,37)	(10)
1945-48	77.5 (9.3,140)	77.7 (6.1,320)	84.3 (6.4,347)	97.8 (11.5,142)	61.3 (16.0,30)	78.1 (17.7,39)	(20)
1949-53	72.2 (8.1,161)	83.3 (6.1,369)	84.1 (6.0,388)	87.5 (10.7,131)	76.1 (16.8,41)	82.5 (16.4,50)	(54)
30 years							
1939-40	72.4 (12.6,66)	101.4 (9.9,203)	74.0 (9.1,132)	110.8 (17.0,82)	79.3 (23.9,22)	101.0 (24.5,33)	(3)
1941-44	87.7 (11.7,111)	107.0 (8.5,303)	93.4 (8.3,250)	110.5 (14.4,113)	23.4 (25.3,45)	101.9 (22.2,41)	(14)
1945-48	96.9 (10.2,175)	94.4 (6.7,389)	97.5 (6.8,401)	108.9 (12.0,158)	75.6 (17.6,37)	86.1 (18.5,43)	(32)

Source: Divorce file sample; New Zealand Vital Statistics 1939-73.¹ Baptist, Congregational, Church of Christ, and Salvation Army.

Although at marriage durations ten years and over cohort cumulative divorce rates almost invariably are lower for Catholic than for Anglican, Presbyterian, or Methodist marriages, they are not consistently lower by statistically significant margins (Table 8.17). The pattern seems to be for Methodist and Presbyterian marriages celebrated during the late 1940s and 1950s, and Anglican marriages celebrated during the late 1950s and 1960s, to have been most clearly less stable than Catholic marriages. Catholic - Methodist and Catholic - Presbyterian differences probably are reduced by the exclusion of divorces where the clergyman's denomination was unknown, especially for more recent marriage cohorts. [34] This suggests that denominational differences in willingness to marry couples with no firm religious convictions may be more important than doctrinal differences in explaining the earlier significantly lower Catholic divorce rates. As to the higher divorce rates for Anglican than for Catholic marriages in more recent marriage cohorts, this probably reflects the Church of England's modification of its stance on divorce in its 1966 report Putting Asunder (Lee, 1974). Its effect in New Zealand was to make divorce more respectable for Anglicans.

Published marriage statistics do not permit divorce rates by religious denomination to be refined by other potentially important

[33] Of 8787 sample divorces which dissolved post-1938 church marriages by 31:12:78, 16.5, 36.1, 30.0, and 10.4 percent ended marriages celebrated by Catholics, Anglicans, Presbyterians, and Methodists respectively. Comparable figures for the 598 sample divorces which dissolved non-church religious marriages for which the celebrant's denomination was known were 3.0, 5.0, 40.5, and 23.7 percent. Non-specification of the celebrant's denomination arose from the tendering in evidence of an abbreviated rather than a full marriage certificate, a practice unrelated to denomination.

[34] The use of abbreviated marriage certificates in divorce proceedings (see footnote 33) became common during the 1960s.

variables. It would be useful, for example, to be able to control for socio-economic status. An analysis of sample divorces which dissolved 1945-63 religious marriages within fifteen years shows that proportionately more grooms in Catholic and Methodist marriages than in Anglican ones belonged to the two lowest of Elley and Irving's (1976) six socio-economic groups. [35] It is likely, therefore, that divorce rates standardised for socio-economic status would reveal larger Catholic-Anglican differences than does Table 8.17.

Marriage duration-specific divorce rates show that religious marriages have not been unaffected by the post-1968 upsurge in divorce in New Zealand (Table 8.18). For all denominations, rates for the most recent composite marriage cohort to pass through each duration interval almost all are the highest yet recorded, often by wide margins. Papal disapproval of divorce seems not to have prevented Catholics joining the trend. If anything, Catholic divorce rates may have increased faster than those for major Protestant denominations, perhaps because of a larger backlog of unhappy marriages.

Country of Birth

Statistics on marriages by country of birth have been published only since 1948. The 1949-53 composite marriage cohort is thus the

[35] Some 39.3 percent of 'Catholic' and 41.7 percent of 'Methodist' grooms (N = 430 and 369) belonged to these two groups compared to 32.1 percent (N = 1004) of 'Anglican' grooms. For ages of groom 20-24 the respective figures were 43.8, 45.2, and 30.9 percent (N = 235, 177, and 579). 'Presbyterian' grooms occupied an intermediate position, but were divorces for which the marriage celebrant's denomination was unknown to be taken into account they probably would have tended toward the Catholic figures (see footnote 33). Over sixty percent of grooms in these marriages belonged to Elley-Irving groups five and six.

Table 8.18

ESTIMATED MARRIAGE DURATION-SPECIFIC DIVORCE RATES FOR RELIGIOUS
MARRIAGES BY DENOMINATION OF CELEBRANT: 1939-40 TO
1
1964-68 MARRIAGE COHORTS

Marriage Cohort	Denomination						Not Specified
	Roman Catholic	Church of England	Presbyterian	Methodist	Other Mainline Protestant	Other	
Marriage Duration							
5-9 years							
1939-40	24.1 (7.5,22)	38.5 (6.3,77)	31.4 (6.1,56)	47.3 (11.5,35)	28.8 (14.8,8)	33.7 (14.7,11)	(1)
1941-44	23.7 (6.3,30)	30.0 (4.7,85)	30.6 (4.9,82)	27.4 (7.5,28)	27.4 (12.6,10)	32.3 (13.0,13)	(2)
1945-48	16.1 (4.4,29)	22.1 (3.4,91)	23.8 (3.5,98)	31.7 (6.8,46)	18.4 (8.9,9)	32.1 (11.6,16)	(1)
1949-53	15.3 (3.8,34)	20.8 (3.2,92)	19.9 (3.0,92)	28.7 (6.3,43)	13.0 (7.2,7)	24.8 (9.3,15)	(6)
1954-58	12.5 (3.2,33)	21.9 (3.2,99)	27.0 (3.5,124)	19.5 (5.4,28)	17.9 (7.9,11)	25.0 (9.4,15)	(10)
1959-63	28.5 (4.6,82)	36.1 (4.0,173)	27.6 (3.5,132)	28.6 (6.2,45)	20.8 (7.6,16)	21.0 (7.9,15)	(18)
1964-68	43.1 (5.1,150)	50.6 (4.2,296)	46.9 (4.3,250)	41.2 (6.9,75)	40.0 (9.4,38)	45.8 (10.4,40)	(29)
10-14 years							
1939-40	15.4 (6.0,14)	20.0 (4.6,40)	18.5 (4.7,33)	20.3 (7.6,15)	28.8 (14.8,8)	18.4 (11.0,6)	(0)
1941-44	26.1 (6.6,33)	16.6 (3.5,47)	15.7 (3.5,42)	23.5 (7.0,24)	21.9 (11.3,8)	24.9 (11.4,10)	(0)
1945-48	18.8 (4.7,34)	16.0 (2.9,66)	23.1 (3.4,95)	18.6 (5.2,27)	14.3 (7.9,7)	14.0 (7.7,7)	(7)
1949-53	15.3 (3.8,34)	14.7 (2.7,65)	19.1 (3.0,88)	20.0 (5.3,30)	11.1 (6.6,6)	11.6 (6.4,7)	(11)
1954-58	15.6 (3.6,41)	24.5 (3.4,111)	24.2 (3.3,111)	23.7 (5.9,34)	14.7 (7.2,9)	11.7 (6.5,7)	(12)
1959-63	36.1 (5.1,104)	40.3 (4.2,193)	40.3 (4.2,193)	42.0 (7.4,66)	38.9 (10.2,30)	26.6 (8.9,19)	(31)
15-19 years							
1939-40	13.2 (5.6,12)	12.0 (3.6,24)	8.4 (3.2,15)	16.2 (6.8,12)	0.0 (0)	9.2 (3)	(0)
1941-44	9.5 (4.0,12)	13.8 (3.2,39)	12.0 (3.1,32)	21.5 (6.7,22)	21.9 (11.3,8)	7.5 (3)	(3)
1945-48	14.4 (4.1,26)	11.9 (2.5,49)	14.3 (2.7,59)	18.6 (5.2,27)	10.2 (6.7,5)	14.0 (7.7,7)	(2)
1949-53	15.7 (3.9,35)	18.7 (3.0,83)	17.3 (2.8,80)	12.0 (4.1,18)	22.3 (9.4,12)	19.8 (8.3,12)	(16)
1954-58	30.2 (4.9,80)	25.8 (3.5,117)	27.3 (3.5,125)	22.3 (5.7,32)	32.6 (10.5,20)	23.3 (9.1,14)	(20)
20-24 years							
1939-40	5.5 (3.6,5)	15.0 (4.0,30)	6.2 (2.7,11)	10.8 (5.6,8)	7.2 (2)	12.2 (4)	(0)
1941-44	13.4 (4.8,17)	13.8 (3.2,39)	11.6 (3.0,31)	15.6 (5.7,16)	13.7 (9.0,5)	19.9 (10.2,8)	(5)
1945-48	21.6 (5.0,39)	18.9 (3.1,78)	14.8 (2.8,61)	17.2 (5.0,25)	16.4 (8.5,8)	12.0 (7.2,6)	(9)
1949-53	21.1 (4.5,47)	22.3 (3.3,99)	21.5 (3.1,99)	17.4 (5.0,26)	20.4 (9.0,11)	18.2 (8.0,11)	(19)
25-29 years							
1939-40	6.6 (4.0,6)	10.0 (3.3,20)	5.0 (2.4,9)	9.5 (5.3,7)	10.8 (3)	21.4 (11.8,7)	(2)
1941-44	7.1 (3.5,9)	13.1 (3.1,37)	9.0 (2.7,24)	5.9 (3.5,6)	21.9 (11.3,8)	9.9 (4)	(4)
1945-48	19.4 (4.8,35)	16.8 (3.0,69)	13.1 (2.6,54)	11.0 (4.0,16)	14.3 (7.9,7)	8.0 (4)	(12)

Source: Divorce file sample; New Zealand Vital Statistics 1939-68.

1 Rates for marriage duration 0-4 years are not shown as they are identical to the cumulative divorce rates to exact marriage duration 5 years shown in Table 8.17. Note that these rates also cover the 1969-73 marriage cohort.

earliest for which divorce rates by country of birth can be estimated. Cumulative divorce rates to exact marriage durations ten years and over consistently have been significantly higher for grooms born in England and Wales than for those born in New Zealand (Table 8.19), but no similar differential emerges for brides (Table 8.20). Explanations for this probably are to be found in the different sizes and characters of the single adult populations of English and Welsh males and females living in New Zealand during the 1950s and early 1960s.

Males dominated the flow of single adult migrants from England and Wales during this period. As a result during 1949-53, 1954-58, 1959-63, and 1964-68 64.9, 50.7, 40.0, and 29.2 percent more grooms than brides were born in those countries. Clearly more English and Welsh males than females married non-countrypersons, so that their marriages were more often subject to stress based on cultural differences and on disagreements over whether the future lay in New Zealand or the United Kingdom. It also is likely that English and Welsh brides more often than grooms had lived in New Zealand since childhood or, if recent arrivals, had come with their parents. Either way they would have been less mobile and rootless. They may also have come from slightly higher status backgrounds.

There is no clear evidence in Table 8.19 that post-war marriages of Scottish or Irish grooms were less stable than those of New Zealand grooms. Dutch grooms married during 1954-58 were significantly less likely than New Zealand grooms to have divorced within ten, fifteen, or twenty years, but this differential is not evident for subsequent marriage cohorts. Seemingly as time passed fewer Dutch grooms were recent arrivals and fewer took Dutch wives. Dutch immigration peaked

Table 8.19

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
 1
 BY GROOM'S COUNTRY OF BIRTH: 1949-53 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	New Zealand	England and Wales	Scotland	Country of Birth			2	
				Ireland	Australia	Netherlands	Eastern Europe	Cook Islands W. Samoa, Tonga
Exact Marriage Duration								
5 years								
1949-53	8.5 (1.1,122)	11.8 (4.6,14)	8.8 (3)	6.7 (1)	3.4 (1)			
1954-58	6.1 (1.0,88)	15.6 (5.0,21)	15.3 (10.0,5)	5.4 (1)	16.7 (10.9,5)	3.4 (2)	32.9 (4)	19.5 (3)
1959-63	7.0 (1.0,110)	8.0 (3.5,11)	6.0 (2)	5.9 (1)	21.6 (11.1,8)	6.1 (2)	7.3 (1)	16.1 (4)
1964-68	13.4 (1.2,247)	16.0 (4.5,27)	16.7 (9.9,6)	13.9 (2)	17.0 (7.8,10)	13.1 (3)	32.3 (4)	0.0 (0)
1969-73	19.2 (1.4,419)	20.2 (4.9,36)	26.3 (12.7,9)	17.3 (2)	26.1 (9.5,16)	19.4 (4)	42.2 (4)	11.4 (6.8,6)
10 years								
1949-53	34.1 (2.2,490)	47.3 (9.1,56)	35.2 (14.7,12)	13.4 (2)	30.9 (14.9,9)			
1954-58	31.1 (2.1,447)	58.0 (9.4,78)	45.9 (17.0,15)	26.9 (17.5,5)	30.1 (14.5,9)	20.2 (8.5,12)	123.5 (43.9,15)	45.4 (24.7,7)
1959-63	41.1 (2.3,648)	57.5 (9.2,79)	35.8 (14.9,12)	41.0 (22.3,7)	54.0 (17.3,20)	33.8 (14.7,11)	86.4 (36.6,11)	64.6 (23.0,16)
1964-68	65.6 (2.7,1209)	83.6 (9.9,141)	61.4 (18.7,22)	41.6 (24.5,6)	76.3 (16.1,45)	70.0 (24.8,16)	73.8 (34.8,9)	36.7 (14.2,14)
15 years								
1949-53	55.2 (2.8,793)	70.2 (10.9,83)	61.5 (19.1,21)	26.7 (4)	55.0 (19.7,16)			
1954-58	56.6 (2.8,813)	83.3 (11.1,112)	76.5 (21.6,25)	43.0 (21.9,8)	43.5 (17.4,13)	40.5 (11.9,24)	140.0 (46.3,17)	77.8 (31.7,12)
1959-63	86.0 (3.3,1357)	109.1 (12.4,150)	68.6 (20.3,23)	87.8 (31.9,15)	89.1 (21.8,33)	64.5 (20.0,21)	133.4 (44.3,17)	88.8 (26.6,22)
20 years								
1949-53	75.6 (3.2,1087)	93.8 (12.5,111)	79.1 (21.5,27)	53.5 (27.1,8)	61.9 (20.8,18)			
1954-58	87.1 (3.5,1251)	114.6 (12.8,154)	94.8 (23.8,31)	59.1 (25.4,11)	80.4 (23.2,24)	67.5 (15.2,40)	181.2 (51.4,22)	116.7 (38.0,18)
25 years								
1949-53	99.7 (3.7,1433)	120.0 (13.9,142)	114.3 (25.3,39)	73.5 (31.4,11)	85.9 (24.2,25)			

Source: Divorce file sample; New Zealand Vital Statistics 1949-73.

- 1 Risk populations for the Netherlands, Eastern Europe, and the Cook Islands, Western Samoa, and Tonga not available for 1949-53.
- 2 Includes Czechoslovakia, Hungary, Latvia, Poland, Rumania, and Yugoslavia.

in the early 1950s following the introduction of an assisted immigration scheme (Thomson, 1970; Farmer, 1979). Rapid assimilation and heavy male dominance of the main influx of migrants then soon saw substantial proportions of Dutch males intermarrying with the host

Table 8.20

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
 1
 BY BRIDE'S COUNTRY OF BIRTH: 1949-53 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Country of Birth							2	
	New Zealand	England and Wales	Scotland	Ireland	Australia	Netherlands	Eastern Europe	Cook Islands W. Samoa, Tonga	
Exact Marriage Duration									
5 years									
1949-53	9.0 (1.1,138)	5.6 (4)	4.7 (1)	0.0 (0)	16.4 (4)				
1954-58	7.3 (1.0,112)	12.3 (5.4,11)	8.7 (2)	11.4 (1)	0.0 (0)	0.0 (0)	22.8 (2)	26.2 (4)	
1959-63	7.3 (1.0,123)	7.1 (3.9,7)	0.0 (0)	0.0 (0)	28.0 (14.4,8)	0.0 (0)	0.0 (0)	8.8 (2)	
1964-68	13.7 (1.2,267)	10.7 (4.2,14)	19.6 (12.8,5)	0.0 (0)	13.9 (8.3,6)	24.3 (3)	52.8 (3)	10.9 (4)	
1969-73	19.5 (1.3,449)	19.0 (5.7,24)	33.9 (17.3,8)	13.5 (1)	13.1 (7.8,6)	7.5 (1)	0.0 (0)	15.5 (8.0,8)	
10 years									
1949-53	34.7 (2.2,529)	43.2 (11.2,31)	23.6 (15.3,5)	0.0 (0)	49.1 (20.3,12)				
1954-58	34.1 (2.2,526)	35.9 (9.2,32)	21.8 (14.2,5)	34.2 (3)	36.9 (16.8,10)	9.2 (3)	114.1 (50.0,10)	59.1 (28.1,9)	
1959-63	43.1 (2.3,727)	45.8 (9.8,45)	49.6 (21.5,11)	0.0 (0)	52.5 (19.4,15)	6.5 (1)	30.0 (2)	17.6 (4)	
1964-68	67.3 (2.6,1315)	68.1 (10.3,89)	82.2 (25.3,21)	12.5 (1)	46.2 (14.8,20)	56.6 (30.6,7)	105.6 (60.0,6)	46.1 (16.1,17)	
15 years									
1949-53	55.7 (2.7,849)	61.3 (13.2,44)	42.5 (20.4,9)	13.8 (1)	81.8 (25.8,20)				
1954-58	60.0 (2.8,926)	52.7 (11.0,47)	52.2 (21.6,12)	91.1 (45.2,8)	59.0 (21.1,16)	12.3 (4)	137.0 (54.1,12)	72.2 (30.9,11)	
1959-63	87.9 (3.2,1484)	84.5 (13.1,83)	76.7 (26.3,17)	25.4 (2)	80.5 (23.7,23)	58.3 (27.7,9)	30.0 (2)	39.5 (19.0,9)	
20 years									
1949-53	76.7 (3.2,1169)	72.5 (14.2,52)	70.8 (25.9,15)	13.8 (1)	90.0 (26.9,22)				
1954-58	91.7 (3.4,1415)	67.3 (12.3,60)	74.0 (25.4,17)	91.1 (45.2,8)	88.5 (25.4,24)	24.6 (12.6,8)	159.8 (57.6,14)	98.4 (35.5,15)	
25 years									
1949-53	102.6 (3.6,1564)	83.6 (15.2,60)	75.5 (26.7,16)	41.4 (3)	114.6 (30.0,28)				

Source: Divorce file sample; New Zealand Vital Statistics 1949-73.

1 Risk populations for the Netherlands, Eastern Europe, and the Cook Islands, Western Samoa, and Tonga not available for 1949-53.

2 Includes Czechoslovakia, Hungary, Latvia, Poland, Rumania, and Yugoslavia.

society. [36] They became more and more subject to both New Zealand divorce norms and marital stress associated with ethnic intermarriage.

Contrasting with the stable marriages enjoyed by Dutchmen married in the mid-1950s were those contracted by East European males around

that time. In particular, marriages of Hungarian refugees uprooted by the 1956 Soviet invasion of their country proved unstable, presumably often being hasty and beset by problems of forced resettlement. The other interesting feature of Table 8.19 is the comparatively low divorce rate recorded at exact duration ten years for grooms married during 1964-68 and born in the Cook Islands, Western Samoa, and Tonga. This may reflect a movement away from formal toward informal dissolutions of marriage and an increased rate of return migration among Islanders married in New Zealand. Proportionately fewer Western Samoan grooms in particular took New Zealand-born brides in 1964-68 than in 1959-63. [37] During the 1950s and early 1960s many Samoan-born immigrants were of mixed Samoan-European blood and had European cultural orientations, but as the 1960s progressed full-bloods overwhelmingly dominated a rapidly increasing flow of migrants (Pitt and MacPherson, 1974; Trlin, 1975b).

Several ethnic subgroups of brides seem, for different marriage cohorts, to have been less divorce-prone than New Zealand-born brides (Table 8.20). Irish brides are a case in point, and while the evidence is tenuous it is consistent with their being widely opposed to divorce on religious grounds. Dutch brides, like Dutch grooms, enjoyed more stable marriages relative to the New Zealand-born norm if

[36] During the two years ended 31 March 1952 and 1953 New Zealand received 8380 'permanent' Dutch migrants with a sex ratio of 221. The annual intake thereafter averaged 1388 with a sex ratio of 117 up until 1962-63, the last year in which more than a thousand migrants arrived. Some 47.7 percent of Dutch-born males married during 1954-58 took Dutch-born wives and 40.8 percent New Zealand-born wives. The corresponding figures for the 1964-68 marriage cohort were respectively 19.0 and 64.7 percent.

[37] During 1959-63, 30.9 percent of grooms born in Western Samoa took New Zealand-born brides and 62.2 percent Samoan-born brides. The equivalent 1964-68 figures were 20.8 and 70.9 percent.

married in the mid-1950s than if married a decade later. Similarly Cook Island, Western Samoan, and Tongan brides of the 1960s experienced relatively low rates of formal divorce. So did Australian brides married during 1964-68, but some could easily have divorced in Australia. Only East European women married during 1954-58 show signs of having had significantly less stable marriages than their New Zealand-born contemporaries.

Concerning the notion that some divorce rates by country of birth reflect stresses derived from intermarriage with New Zealanders, it is helpful to examine divorce rates by relative birthplace of bride and groom. Rates shown in Table A2.24, Appendix 2 often are based on small numbers of sample divorces, and are therefore suggestive rather than conclusive. They are clearest in their support of the idea that the instability of marriages of English and Welsh grooms largely manifests the failure of marriages to New Zealand-born women. They also are consistent with marriages of Dutch males to New Zealanders having been less stable than those to Dutch brides, and with the resort to divorce by Pacific Island-born persons being a function of marriage to a New Zealander. Finally, they suggest that East Europeans who married New Zealand women during 1954-63 divorced more frequently than did those who married within their own ethnic group. [38]

[38] Where two persons born in the same country marry the chances probably are greater of them returning to that country and ceasing to be at risk of divorce in New Zealand. One doubts that any of the findings just discussed are due solely to differential rates of return migration by immigrants marrying outside and within their own countries of birth. Nevertheless, the possibility must be allowed.

Socio-economic Status

The relationship between socio-economic status and divorce is of special interest when seeking evidence that normative sanctions against divorce have weakened. A standard explanation for divorce being more common lower down the status hierarchy has been that the effectiveness of these sanctions has varied positively with social status. Thus, their undermining may have led to very rapid increases in divorce rates for white collar couples.

The only indicators of socio-economic status available from divorce files are statements of husband's occupation on the marriage certificate and the petition for divorce. These can be used to classify couples on a six-level scale of socio-economic status developed by Elley and Irving (1972, 1976), who grouped occupations using an equal weighting of census income and educational criteria. Originally based on the 1966 census, the scale was revised after the 1971 census. The latter, more comprehensive version generally was adopted, but where codes changed between versions some modifications were made. [39] If the scale did not cover a particular occupation the code of an intuitively 'similar' one was assigned.

Divorce file data posed special classification problems where statements of occupation were very general. [40] Censuses and sample surveys cope with these cases by utilising information on, for

[39] For example, watersiders and taxi and bus drivers were classed at level five on the 1966 scale and at level four on the 1971 scale. The level five classification was adopted because it tallied better with the semi-skilled and unskilled nature of their work. The Elley-Irving scale was, after all, being applied over a lengthy period, not at a particular point in time. For a critique of the scale see Fergusson and Horwood (1979).

example, education, occupational status, and employer, but no such additional information was available in this instance.

Because data on the occupations of grooms are available only for the 1948-50 marriage cohorts it is necessary in this section to adopt a cross-sectional approach to analysis, deriving populations at risk of divorce from census data. [41] This gives rise to further difficulties. Detailed occupational data are not available refined by marital status. Dealing only with divorces at ages 25-64 eliminates age groups in which large proportions of males are not currently married. Within this age range it had to be assumed that the occupational distributions of the married and the not currently married were identical. [42] Then again, the occupational classification system changed between the 1956 and 1961 censuses, and again between 1966 and 1971. This creates problems, first, over occupations appearing and disappearing between censuses, and second, over occupations which the Elley-Irving scale differentiates between being indistinguishable at some censuses. [43]

[40] For example, an 'Engineer' could be anything from a degree-holding professional to a motor mechanic; the phrases 'Contractor' or 'Manager' say nothing about the scale of the business involved; the description 'Farmer' could apply to substantial landowners and farm labourers alike; and there is no knowing at what level a 'Teacher' practises his profession.

[41] A cohort analysis based on occupations of grooms probably would be of limited value anyway because many men are upwardly mobile in the early years of marriage.

[42] Career-oriented males may tend to delay marriage, while divorce or widowhood not followed by remarriage may be especially common among blue collar males. If these propositions are correct, risk populations at the extreme ends of the status hierarchy may be liberal, and hence divorce rates conservative, under the assumption of identical occupational distributions for married and unmarried males.

With all these sources of error in addition to sampling error, divorce rates shown in Table 8.21 must be interpreted carefully. They derive from the one in five cross-sectional samples of divorce files where the petition was filed in 1956, 1961, 1966, 1971, and 1976, and the divorce became final by 31 December 1978. [44] Ages of grooms are those at decree absolute; generally about six months later than the date divorce was filed for. Divorce rates are shown for individual and, so as to offset to some extent classification uncertainties and inconsistencies, for paired Elley-Irving categories.

By and large divorce rates for husbands aged 25-64 are consistent with an inverse relationship between divorce and socio-economic status at all five dates (Table 8.21). Without exception, rates for paired Elley-Irving categories rise with declining status. Those for single categories show some, generally slight, deviations from this pattern. The most interesting of these is the much lower 1956 rate for level six than for levels four and five, which is observed for all three component age groups as well. The 1956 level six risk populations are considerably larger relative to the levels four and five ones than in subsequent census years, and this suggests that the less detailed 1956

[43] For example, the scale rates managers above working proprietors in the wholesale and retail areas, and those involved in wholesaling above those involved in retailing. But the 1956 classification system prevents either of these distinctions being made, while the 1961-66 system separates out only working proprietors who employ no labour. As a result, some males assigned to level three at the 1956, 1961, and 1966 censuses would have been assigned to levels two and four in 1971 and 1976.

[44] Cross-sectional data for 1951 were also collected, but detailed occupations by sex and age were not produced for the 1951 census. Note also that petitions filed in the years specified had had different periods in which to result in decrees absolute by 31 December 1978. However, as most petitions are finalised within a year this probably affects comparability between dates little.

Table 8.21

ESTIMATED DIVORCE RATES BY AGE AND SOCIO-ECONOMIC STATUS OF
 HUSBAND 1956, 1961, 1966, 1971, AND 1976¹

Year	Age	Elley-Irving Socio-economic Status Category ²								
		1	2	3	4	5	6	1-2	3-4	5-6
1956	25-34	1.5	1.4	3.9	6.0	8.0	3.9	1.5	5.3	6.0
	35-44	4.1	1.9	3.1	5.9	6.6	5.6	2.4	4.9	6.2
	45-64	2.5	2.2	1.6	4.1	5.0	2.6	2.3	3.0	3.7
	25-64	2.7	2.0	2.7	5.3	6.5	3.8	2.1	4.3	5.1
1961	25-34	0.7	3.5	4.4	4.7	4.1	4.7	2.5	4.6	4.3
	35-44	2.9	3.3	1.4	5.6	6.8	5.1	3.2	3.9	6.2
	45-64	3.9	1.8	3.0	5.9	4.4	6.3	2.2	4.6	5.2
	25-64	2.6	2.6	2.8	5.4	5.1	5.5	2.6	4.4	5.3
1966	25-34	1.3	2.9	3.3	3.9	4.7	9.1	2.3	3.7	6.3
	35-44	3.1	4.3	4.0	4.8	4.9	7.4	4.0	4.5	5.8
	45-64	6.2	2.1	4.3	4.0	3.4	4.7	3.0	4.1	4.0
	25-64	3.7	2.9	3.9	4.2	4.2	6.6	3.1	4.1	5.1
1971	25-34	3.1	6.6	7.9	10.2	9.1	11.8	5.3	9.2	10.1
	35-44	9.7	6.9	7.3	8.0	10.3	11.5	7.6	7.7	10.7
	45-64	2.6	4.0	4.4	6.0	6.5	6.9	3.7	5.2	6.6
	25-64	4.9	5.4	6.2	8.0	8.3	9.4	5.3	7.2	8.7
1976	25-34	8.6	8.6	11.6	13.6	16.2	15.9	8.6	12.7	16.1
	35-44	6.3	7.9	9.5	11.8	10.2	18.7	7.4	10.8	13.1
	45-64	6.6	4.9	6.4	8.0	6.1	4.9	5.3	7.2	5.6
	25-64	7.3	6.7	8.9	11.1	10.4	11.8	6.9	10.1	10.9

Source: Divorce file sample; 1956-76 censuses.

- 1 No confidence intervals are given since rates are subject to potentially serious classification errors and inconsistencies as well as to sampling error.
- 2 General descriptions of the Elley-Irving categories are:
 - 1 University educated professionals.
 - 2 Business managers (except in services and retailing), insurance and real estate salesmen, and farmers (especially pastoral).
 - 3 Professional technicians, clerical workers, other managers, buyers, and commercial travellers, protective service workers, working proprietors (except in retailing), production foremen, and quality controllers.
 - 4 Shop assistants and proprietors, and skilled tradesmen.
 - 5 Semi-skilled production workers, watersiders, warehousemen, and drivers.
 - 6 Labourers and unskilled agricultural and service workers.

occupational classification caused some persons to be wrongly classified at that level.

Both the 1956 and 1961 sets of divorce rates for ages 25-64 feature a particularly sharp increase between levels three and four (Table 8.21). Rates for levels 1-3, the white collar levels, are distinctly lower than those for levels 4-6, the blue collar levels. By contrast, in 1966, 1971, and 1976 there is a steadier gradation upward in the divorce rate as socio-economic status declines. Apparently as the divorce rate has increased it has done so more rapidly among white collar than among blue collar couples. Glick (1975) reports a similar finding for the United States, yet there is reason to suppose that introduction of the DPB would have tended to raise divorce rates most lower down the status hierarchy. American research (Hannan et al, 1977, 1979) suggests that the 'independence effect' of such welfare schemes is strongest there. On the other hand a more recent legislative initiative, the Matrimonial Property Act 1976 (see Chapter 7), may have further boosted the white collar compared to the blue collar divorce rate.

Between 1961 and 1966 divorce rates at levels four and five fell while those at levels 1-3 rose. This ties in with divorce rates at longer marriage durations having begun to rise before the major upsurge after 1968 (Chapter 7), since socio-economic status is to some extent a function of age, and thus of marriage duration. It seems that by the mid-1960s traditional sanctions against divorce already were beginning to lose their hold over higher status couples. Possibly upward social mobility facilitated by the prosperity of the 1950s and early 1960s resulted to some extent in the transfer of lower

class divorce practices and norms up the status hierarchy. As of 1976, however, white collar divorce rates had not risen sufficiently for the negative status-divorce relationship to have disappeared.

Estimated divorce rates by socio-economic status for ages of husband 25-34, 35-44, and 45-64 years do not always follow a neat pattern of increase with declining status (Table 8.21). Those for paired Elley-Irving categories mostly do, but not those for single categories. At ages 25-34 disruptions to the pattern occur at levels five and six. This may indicate that semi-skilled and unskilled blue collar couples have resorted less quickly to the divorce courts, perhaps being less often childless when marital problems arose, less at ease with legal processes, and less able to meet the cost of a divorce. At ages 35-44 the pattern of very much lower white collar (levels 1-3) than blue collar (levels 4-6) divorce rates in 1956 and 1961 giving way to less sharply differentiated rates in 1966, 1971, and 1976 stands out. Of special interest is the 1971 level one rate, which is three times the 1966 rate but had fallen again by 1976. Seemingly a backlog of unhappy marriages of professional couples ended in divorce in the late 1960s and early 1970s. Again there is evidence for this trend having commenced first among those married longer. The 1966 level one divorce rate at ages 45-64 is as high as the level six rate, and higher than rates for levels 2-4. Couples whose children were no longer dependent probably were pacesetters. Later, even dependent children became less of a barrier to divorce.

8.4 SUMMARY

Linkage of data extracted from divorce files to published marriage statistics has permitted several potential correlates of divorce in New Zealand to be studied for composite marriage cohorts covering the period 1939-73. Regrettably most independent variables had to be examined in isolation, although it was often possible to control for age at marriage.

Age at first marriage showed a clear negative association with divorce for both sexes, marriages of teenaged brides and grooms aged 16-21 being especially unstable. This relationship held both cumulatively to any exact marriage duration and within particular duration intervals, and seemed to have persisted as the divorce rate rose after 1968. Examining the relative ages of brides and grooms it was found that among teenaged brides age similarity between spouses was linked with higher divorce rates, although youthfulness apparently was less disadvantageous among couples married during the prosperous 1950s than it was among those married in the 1940s and 1960s. Brides aged 20-24 and 25-29 who were older than their husbands generally had been especially divorce-prone, as had brides aged 20-24 and grooms aged 30-39 who entered marriages in which the husband was more than ten years the older partner. There was some hint that, more recently, the relative instability of marriages marked by extreme age dissimilarity had lessened.

Remarriages of divorced persons generally had been less stable than first marriages, again for both sexes. The relationship was not as clearcut for wartime marriage cohorts owing to the abnormal pressures placed on first marriages. Neither was it apparent at exact

marriage duration five years for females married during 1969-73, a finding which seemed to confirm a growing caution about formal remarriage, especially among divorced women in their thirties. Among marriages of divorcees, those between divorced men and spinsters seemed, for post-war marriage cohorts, to have been the most stable, especially for brides aged 30-39. This, it was suggested, reflected more careful mate selection and more conventional age differences between spouses. Marriage duration-specific divorce rates for bachelor-divorcee and divorcee-spinster marriages appeared recently to have risen faster than those for divorcee-divorcee marriages, suggesting that the desire of once-married partners to keep such marriages legally intact has declined.

Among those married at ages 16-39, bridal pregnancy was clearly associated with a higher frequency of divorce for most female marriage cohorts studied. This pattern was not, however, maintained within age-at-marriage subgroups; indeed at the youngest bridal ages it appeared to be reversed. Methodological shortcomings could have accounted for this, but it was concluded that difficulties experienced by bridally pregnant couples have been substantially functions of early marriage and of personal and social background characteristics shared by many others who married young. Marriage duration-specific divorce rates indicated that the recent increase in divorce has affected marriages of bridally pregnant couples to a greater extent than it has those of other couples.

An unexpected finding when divorce rates for non-pregnant brides by first birth interval were computed by age of bride was that marriages producing a first child within 8-11 months had been more

stable than those with a first birth interval of one year. It was clearest at bridal ages 16-19, but detectable also at ages 20-24 where, possibly because early childbearing had selected for acceptance of traditional marital roles, the differential had become stronger as the period divorce rate increased. Another recent development was comparatively high divorce rates at longer first birth intervals (3-4 years) for 20-24 year-old brides married during the 1960s. This suggested that the transition to parenthood has become more stressful as it has increasingly become the norm to spend the early years of marriage enjoying two incomes.

For all marriage cohorts civil marriages had been less stable than religious ones. Among religious marriages, those celebrated by Methodists and Presbyterians during the late 1940s and 1950s and those celebrated by Anglicans during the late 1950s and 1960s had ended in divorce more often than those celebrated by Catholics. The latter differential probably developed at least partly in response to changes in the Church of England's official position on divorce. The former may have reflected more a greater willingness of Methodists and Presbyterians to marry non-adherents than doctrinal differences, and its failure to persist may have been due to celebrant's denomination more often being unknown for more recent non-church religious marriages. There was evidence also that the Catholic-Anglican divorce rate differential would be wider were it possible to control for socio-economic status, and that Catholic divorce rates had risen as fast since 1968 as those for major Protestant denominations, if not faster.

Males, but not females, born in England and Wales and married during the 1950s and 1960s were found to have had high divorce rates. This was attributed to their having been forced, because immigration was heavily male dominated, to marry New Zealanders and to their having been relatively mobile and rootless. Dutch brides and grooms married in the mid-1950s enjoyed very stable marriages, but with assimilation and intermarriage later marriage cohorts were more similar to New Zealand-born cohorts in their divorce behaviour. Cohort divorce rates for Pacific Island-born persons bore the imprint of changes in the volume and character of migration flows, and those for East Europeans reflected the traumatic experiences of refugees from the 1956 Soviet invasion of Hungary.

Finally, cross-sectional analysis, albeit with less than ideal data, indicated a negative association between socio-economic status and divorce. In line with the assumed diminished effectiveness of normative sanctions against divorce, this appeared to have weakened since the mid-1960s, despite it being possible that introduction of the DPB would have tended to strengthen it. There was some suggestion of the trend having commenced first among couples whose children were independent, then later having affected younger couples. Age-specific divorce rates were also to some extent consistent with semi-skilled and unskilled workers and their wives having resorted rather slowly to the divorce courts.

CHAPTER 9

CHILDREN IN DIVORCE AND THE RISE OF SOLO PARENTHOOD

9.1 INTRODUCTION

Public concern over the rising divorce rate in New Zealand rests on a number of grounds, but none stronger than the notion that marital disruption is affecting an increasing proportion of the nation's children. [1] This final analytic chapter begins with a brief examination of the relationship between family size and divorce. It goes on to show that as the divorce rate has increased the proportion of childless couples among those divorcing has declined. Changes in the extent to which children have experienced marital disruption leading to divorce are then discussed, followed by patterns and trends in the custody arrangements made for children of divorcees.

Marital breakdown creates new family structures, one of which - the solo parent family - has in particular aroused much social concern in New Zealand in recent years. Unfortunately, because of deficiencies in official statistics, it is difficult to measure the

[1] The increased involvement of children in marital disruption has similarly caused concern in other Western countries, and research on the trend and on the effects of marital disruption on children has proliferated. Earlier studies on the latter theme include those of Despert (1953) and Landis (1960), while Schlesinger (1978) reviews the literature of the period 1965-75. More recent studies include those of Ferri (1976), Clay and Robinson (1978), and Wallerstein and Kelly (1980). See also Levinger and Moles (1979: Part V), Renouf (1981), and special issues of the Australian Journal of Sex, Marriage and Family (2(1), 1981) and the Journal of Social Issues (Levitin, 1979). Demographic perspectives on children in divorce are provided by Glick (1979), Bumpass (1981a), and Spanier and Glick (1981).

precise extent of the recent increase in solo parenthood. However, the final section of this chapter brings together such evidence as there is, pointing out that in the historical past death was a major creator of solo parent families in New Zealand. It then presents a profile of solo parents and solo parent families based on 1976 census data.

9.2 FERTILITY AND DIVORCE

American, British, and Australian research completed during the 1950s and 1960s reported a negative association between number of children and the divorce rate after controlling for marriage duration (Jacobson, 1950; Rowntree and Carrier, 1958; Day, 1965). [2] A variety of explanations were advanced (Thornton, 1977; Kanoy and Miller, 1980). Children, it was suggested, delayed or prevented separation, couples staying together 'for the good of the children', because it was too costly to part while they were dependent, or because of affection for them. A second, less widely accepted proposition was that children enhanced marital stability by increasing marital satisfaction. It was also argued that marital discord reduces the frequency of coitus and the desire to have more children, and that marital stability and larger families are joint products of such qualities as willingness to work and sacrifice, conventionality, and non-pursuit of individualistic goals.

[2] Earlier research had produced a similar finding, but had been criticised for its failure to control for duration of marriage. See Monahan (1955) for a review of this literature.

Other writers pointed to serious weaknesses of studies showing the negative fertility-divorce relationship (Monahan, 1955; Chester, 1972). Principal among these was their reliance on divorce as the indicator of marriage dissolution, which meant that informally dissolved marriages were defined to be stable. More important, it exaggerated the infertility of divorcees by treating the period from separation to divorce as one of exposure to the risk of marital conception. The comparability of numerators and denominators derived from divorce records and censuses respectively in parity-specific divorce rates was also queried, and it was argued that remarriages should be discounted as contributing inordinately to both divorce and the childlessness of divorcees. Chester further advocated the refinement of analyses by age at marriage, and noted that as some first children were conceived premaritally not even the duration of marriage to separation was an ideal index of the opportunity to bear children. Thornton's (1977) study avoided these pitfalls and found, after controlling for marriage duration, a moderate U-shaped pattern of dissolution rates by family size for once-married women who were childless at exact marriage duration eight months. Childless couples, however, remained clearly the most dissolution-prone.

The 1971 New Zealand census was the first since 1921 to include a question on fertility. That is therefore the earliest post-war date at which an examination of the relationship between fertility and divorce can be contemplated. Ever married women were asked to indicate the number of children ever born alive to them, including those now deceased. However, following parliamentary criticism of the implied requirement that ex-nuptial births be acknowledged, the Government Statistician announced shortly before the census that an

answer giving only nuptial births was acceptable. How women actually answered the question is thus uncertain, but it is assumed here that they included ex-nuptial children other than those dying or placed for adoption shortly after birth.

The New Zealand census has never asked either duration of current marriage or number of times married. Hence it is not possible to control directly for marriage duration or to eliminate women married more than once. Controlling for age provides but a rough control for marriage duration, and there is no way of separating out women whose first child was conceived premaritally.

Divorce petitions list all 'children of the marriage', whether dependent at the time of petitioning or not. Ex-nuptial children taken into the marriage, deceased children, and adopted children are all covered, the latter two types being clearly indicated and the former generally readily identifiable as well. [3] Children of previous marriages are stated to be such, and their natural parentage is specified where both parties are remarried. Information may not be available on children of a wife's earlier marriage who, because of age or because their custody was awarded to someone else, were never dependents of the current marriage. It is suspected, however, that

[3] The one area of uncertainty here concerns 'adopted' children born prior to the date of marriage. Some ex-nuptial children are adopted by their natural mother and stepfather on the former's marrying the latter. The entire divorce file sample yielded 193 adopted children born before the date of marriage and 314 born after it. The great majority of adoptions by strangers involve children under two years of age, and are unlikely to occur within the first two years of marriage because of the time needed to establish incapacity to have one's own children and then effect an adoption. In view of this and the high ratio of adoptees born before the date of marriage to those born after it, it was assumed that all of the former group were in fact natural children of their 'adoptive' mothers.

this is a minor problem, and that, ignoring adopted children born after the date of marriage and wives' stepchildren, divorce file data yield a measure of fertility which, for most women, is comparable to that assumed to be yielded by the census.

Overall, an analysis of the relationship between fertility and divorce which meets all recognised criteria for purity is simply not possible. Taking divorce as the indicator of marriage dissolution the classical negative association emerges for 1971 over all ages of wife and for individual age groups except 20-24 years (Table 9.1). This exception probably reflects a tendency for women married young enough to be divorcing at these ages to have been pregnant or already mothers at marriage. A broadly similar result is obtained for 1976, in a not strictly comparable analysis (Table A2.25, Appendix 2). [4]

Bearing in mind the tendency to exaggerate the infertility of divorcing women when measuring their fertility at divorce a second analysis was undertaken for 1971 which focused on the date of 'marriage breakdown' (Chapter 7). While not necessarily strictly a date of separation, this date clearly marks the end of a woman's exposure to the risk of childbearing within a marriage more accurately than does the date of divorce. The analysis could only be

[4] The 1976 analysis is not comparable because the 1976 census fertility question specifically asked only for children born alive while married. It had to be assumed, albeit with misgivings, that the question was answered as asked, and so parities from divorce file data were computed excluding ex-nuptial children. The 1976 results show a more marked association between childlessness and divorce than do the 1971 ones, and the much lower divorce rate for childless than for first parity married women aged 20-24 in 1971 does not emerge in 1976. Both of these findings are likely to be substantially due to the procedural change outlined, although they may also reflect previously discussed trends toward longer first birth intervals and away from marriage when premaritally pregnant.

Table 9.1

ESTIMATED DIVORCE RATES BY AGE OF WIFE AT DIVORCE¹
AND NUMBER OF OWN CHILDREN 1971

Age of Wife	Number of Children					
	0	1	2	3	4	5+
20-24	3.7 (21)	10.7 (45)	4.4 (15)	3.9 (4)	- (0)	- (0)
25-29	19.3 (51)	11.2 (32)	8.7 (49)	6.9 (23)	- (0)	- (0)
30-39	18.3 (43)	15.8 (31)	10.0 (69)	5.9 (46)	4.5 (22)	5.1 (23)
40-49	12.2 (31)	8.2 (17)	6.1 (37)	4.6 (30)	6.8 (33)	4.2 (24)
50+	4.5 (29)	2.9 (15)	2.0 (19)	1.8 (14)	1.8 (9)	1.4 (9)
All Ages	8.5 (177)	8.1 (142)	6.1 (190)	4.4 (117)	4.0 (65)	3.3 (58)

Source: 1971 cross-sectional divorce file sample;
1971 census.

1 Rates are expressed per 1000 married women and numbers of divorces on which they are based are given in parenthesis.

contemplated for 1971 because few marriages which 'broke down' in 1976 had resulted in divorce by the end of 1978. It is biased, but probably not seriously, by the exclusion of two categories of marriages which 'broke down' in 1971 (apart from those that would never be formally dissolved): those which would end in divorce after 1978; and those which took place before 1939 and were thus excluded by the sampling procedure.

Age-specific and all-ages patterns of divorce rates by parity presented in Table 9.2 do not show the neat negative associations

Table 9.2

ESTIMATED RATES OF 'MARRIAGE BREAKDOWN' LEADING TO DIVORCE BY AGE
 OF WIFE AT 'BREAKDOWN' AND NUMBER OF OWN CHILDREN 1971¹

Age of Wife	Number of Children					
	0	1	2	3	4	5+
16-19	8.9 (9)	20.3 (20)	15.0 (3)	- (0)	- (0)	- (0)
20-24	12.7 (73)	15.3 (65)	14.4 (49)	6.1 (6)	16.5 (4)	- (0)
25-29	16.3 (43)	9.0 (25)	13.0 (71)	9.2 (31)	8.8 (11)	10.5 (7)
30-39	10.3 (24)	15.1 (29)	9.3 (65)	6.3 (49)	4.6 (23)	5.5 (25)
40-49	5.8 (15)	5.7 (12)	4.5 (27)	3.9 (25)	3.4 (16)	3.7 (21)
All Ages	8.8 (183)	9.1 (159)	7.2 (226)	4.3 (114)	3.4 (56)	3.4 (59)

Source: Divorce file sample; 1971 census.

1 Rates are expressed per 1000 married women and numbers of divorces on which they are based are given in parenthesis. 'Marriage breakdowns' resulting in divorces after 31:12:78 are not included.

apparent in Table 9.1. In particular, there is little suggestion of childless women being especially prone to marriage dissolution. Results might be different were it possible to exclude women who conceived their first child premaritally, and who seemingly are responsible for a large proportion of teenage 'marriage breakdowns'. However, even supposing they were there could be no certainty as to their meaning. Even a study as careful as Thornton's (1977) leaves doubt as to the nature of the causal relationship between

childlessness and marital disruption. The reason is that exposure to the risk of childbearing may well end for many women well before separation, so that basing analyses on marriage durations at separation may still exaggerate that exposure and predispose toward a finding that childless couples are more dissolution-prone.

There is perhaps a suggestion in Table 9.2 that couples with three or more children are less likely to separate, and subsequently divorce, than are those with fewer children. One would wish, however, to eliminate couples in which the wife had previously been married before attaching much significance to this. The other interesting feature of Table 9.2 is the low rate of 'marriage breakdown' for first parity married women aged 25-29 compared to rates for zero and second parity women. This probably highlights the limitations of age as a proxy control for marriage duration and the desirability of refining one's analysis by age at marriage. Basically it must be concluded that whether children act as a deterrent to marriage dissolution is a question which cannot be answered satisfactorily with New Zealand data presently available. Neither can Cherlin's (1977) claim that the deterrent effect of children is strongest when they are young nor Spanier and Glick's (1981) finding that it is weaker when a couple has only daughters be adequately tested. Note, though, that the relationship has been explored here only cross-sectionally. There remains the question of change through time in the capacity of children to bind husbands and wives together.

9.3 TRENDS IN CHILDREN'S INVOLVEMENT IN DIVORCE

It was suggested earlier that public concern over New Zealand's rising divorce rate derives substantially from a belief that marital

disruption is affecting ever more children. Before presenting evidence confirming this the argument that in consequence fewer children are spending prolonged periods in intact, but seriously discordant domestic situations should be noted. While difficult to substantiate it almost certainly has some validity, raising the question of which experience is the more harmful. The debate here is complex (Longfellow, 1979), and beyond the scope of this thesis. But the potential for interpreting the findings of this section too negatively should be appreciated.

Official divorce statistics for the years 1915-76 show petitions for divorce filed (1915-23) or decrees absolute granted (1924-76) by 'number of living issue'. These data, which are thought to cover all living children who were at some stage dependents of a marriage, show that since the mid-1950s the proportion of childless couples among those divorcing has dropped from just under one-third to little more than one-fifth (Table 9.3). [5] The proportion of divorcing couples with just one child has fallen by about the same amount, whilst divorces involving 2-4 children have become relatively more common. The trend takes on added meaning when considered in relation to a rising divorce rate, although it was well established before the major increase began in the late 1960s. It has also occurred despite longer first birth intervals increasing the opportunity for non-premaritally pregnant couples to divorce childless if their marriages founder very early.

[5] To be more explicit, Table 9.3 probably includes most adopted children, children of either party who were born ex-nuptially, and children of previous marriages who were ever dependents of the marriage being dissolved. At the same time, the Department of Statistics cannot be certain how regularly these fringe groups, and especially the last of them, were included in their statistics.

Table 9.3

PERCENTAGE DISTRIBUTION OF DIVORCING COUPLES BY NUMBER OF
LIVING ISSUE 1915-19 TO 1970-76¹

Period	Number of Living Issue						Total
	0	1	2	3	4	5+	
1915-19	32.4	23.9	18.8	10.2	6.2	8.6	100.1
1920-23	31.4	24.1	19.1	10.3	6.7	8.5	100.1
1924-29	31.7	26.5	19.2	10.4	5.6	6.5	99.9
1930-34	31.9	28.7	19.3	10.1	4.5	5.5	100.0
1935-39	32.3	28.9	18.8	9.6	5.6	4.8	100.0
1940-42 ²	32.4	28.4	19.1	9.2	5.1	5.7	99.9
1945-49 ²	36.0	28.5	18.5	8.5	4.1	4.4	100.0
1950-54	32.0	27.7	20.2	10.6	5.1	4.4	100.0
1955-59	28.9	25.1	22.7	12.5	5.5	5.2	99.9
1960-64	27.3	22.3	22.7	14.4	7.6	5.7	100.0
1965-69	25.0	20.5	23.3	15.6	8.3	7.3	100.0
1970-74	22.2	19.4	25.3	17.0	9.2	6.9	100.0
1975-76	22.4	18.0	27.4	16.2	8.8	7.1	99.9

Source: Statistics of the Dominion of New Zealand, 1915-20;
New Zealand Justice Statistics, 1921-76.

- 1 'Divorcing couples' are defined as those filing petitions for divorce until 1923 and as those granted decrees absolute thereafter.
- 2 Data for 1943, 1944, and 1946 not available.

Table 9.3 covers all children, not just dependent ones. In Table 9.4 divorces represented in the six cross-sectional divorce file samples are distributed by age of youngest child at decree absolute and at 'marriage breakdown'. The decline in the proportion of divorces affecting childless marriages is again evident, but

Table 9.4

ESTIMATED PERCENTAGE DISTRIBUTIONS OF COUPLES FILING FOR DIVORCE IN
 SELECTED YEARS BY AGE OF YOUNGEST CHILD AT DECREE ABSOLUTE¹
 AND AT 'MARRIAGE BREAKDOWN'

Year Filed	Petition N	Marriage Childless	Age of Youngest Child ³					Total
			0-4	5-9	10-14	15-19	20+	
At Decree Absolute								
1951	322	29.5	15.8	28.6	10.6	8.4	7.1	100.0
1956	331	29.0	13.0	24.2	16.9	8.2	8.8	100.1
1961	379	32.5	9.2	23.0	14.8	11.1	9.5	100.1
1966	415	22.7	13.3	27.2	14.5	11.8	10.6	100.1
1971	749	22.3	17.2	26.7	15.0	8.7	10.1	100.0
1976	1075	22.1	12.3	31.5	16.1	9.9	8.1	100.0
At 'Marriage Breakdown'								
1951	320	29.7	40.3	15.3	7.5	5.9	1.3	100.0
1956	330	29.1	40.0	16.4	10.0	3.0	1.5	100.0
1961	379	32.5	32.8	18.7	8.4	5.5	2.1	100.0
1966	414	22.7	42.1	15.9	10.1	7.2	1.9	99.9
1971	749	22.4	40.6	17.7	9.9	5.8	3.7	100.1
1976	1073	22.2	37.6	19.8	11.7	6.0	2.8	100.1

Source: Cross-sectional divorce file samples.

- 1 Table relates only to couples whose petitions for divorce had resulted in decrees absolute by 31:12:78.
- 2 Values for the lower panel of the table are in some cases lower because cases where the date of 'marriage breakdown' was unknown are omitted.
- 3 In the lower panel of the table this category includes cases where the youngest child was unborn.

compensating increments show no clear tendency to have accrued mainly to particular 'age of youngest child at decree absolute' categories. With the date of 'marriage breakdown' as the reference date the most striking finding is that throughout the post-war period about forty percent of marriages dissolved by divorce have ended with a child of pre-school age. Again it is difficult to isolate just where the

increments to balance the decline in the percentage of dissolutions affecting childless marriages have occurred. Perhaps the main point is that there has been no obvious increase in the proportion of marriage breakdowns involving a youngest child of pre-school or primary school age.

Still, combining the facts that the divorce rate has risen, that increasingly divorcing couples have had two or more children, and that there has been no marked reduction in the percentage of divorces involving a youngest child aged under ten it is clear that for children to live through parental separations leading to divorce has become more common. Table 9.5 shows estimated total rates of involvement of children in divorce to selected exact ages at parents' decree absolute for post-1945 census years. Analogous to the total fertility rate and similarly liable to exaggerate real birth cohort trends, this measure gives the sum of single-year age-specific rates of involvement in divorce for children below a specified exact age. [6]

Declines in total involvement rates to exact ages five and ten years between 1951 and 1956 probably reflect the elimination in 1953 of rapid divorce on the ground of failure to comply with an ORCR.

[6] Age-specific rates were computed by inflating numbers of children of each age at parents' decree absolute obtained from census year cross-sectional divorce file samples by a factor of five and relating these products to the numbers of similarly aged children enumerated at the census. They are impure in that censuses were not conducted at mid-year and divorce file samples were of petitions filed in a year which resulted in decrees absolute by 31:12:78, rather than of decrees absolute granted in a year. Moreover, the condition that to be included in a sample a petition had to have resulted in a decree absolute by 31:12:78 may render recent rates, especially those for 1976, conservative compared to earlier ones owing to the shorter period available for completion of the legal process.

Table 9.5
 ESTIMATED TOTAL RATES OF INVOLVEMENT OF CHILDREN IN
 DIVORCE BY SELECTED EXACT AGES

Year	Exact Age in Years			
	5	10	16	20
1951	6.8	27.9	44.1	52.4
1956	2.9	18.5	37.6	47.9
1961	3.7	18.7	37.4	51.8
1966	5.1	21.8	41.9	56.1
1971	12.0	42.5	75.9	95.7
1976	11.5	59.9	108.9	136.5

Source: Cross-sectional divorce file samples; 1951-76 censuses.

Basically, Table 9.5 indicates little change over the first three intercensal periods it covers, with consistently around forty children per thousand seeing their parents divorced before they turned sixteen. [7] However, between 1966 and 1976 this figure increased substantially. By 1976 some six percent of children could expect to be involved in divorce by the age of ten and some eleven percent by the age of sixteen. These figures would be higher were it possible to confine calculations to children with legally married parents.

Recognising again that children experience the breakup of their parents' marriages earlier than they experience their formal

[7] Sixteen is the age below which children are always considered to be dependent and below which their custody is always an issue in divorce proceedings. At older ages below the age of majority (now twenty but formerly twenty-one) custody may be formally awarded, but usually is not.

dissolution a table similar to Table 9.5 was constructed based on children's ages at 'marriage breakdown'. For each cross-sectional sample, children at each single year of age at their parents' decree absolute were split into those aged 0-4, 5-9, 10-15, and 16-19 years at 'marriage breakdown'. Each of these component groups was divided by the risk population for that age-at-parents'-decree absolute category. Values obtained were then summed for ages at 'marriage breakdown' 0-4, 0-9, 0-15, and 0-19 years.

These sums, expressed as rates per 1000 children, appear in Table 9.6. They again indicate relative stability through the 1950s and on into the mid-60s, although there is some suggestion that more older teenagers saw their parents part after 1956. As expected 1966-76 shows up once more as a decade of rapid increase in rates of children's involvement in marital disruption. By 1976 almost five percent of children could expect to see formally married parents separate preparatory to divorcing before they turned five. By exact age ten about ten percent could expect to have been affected, and by exact age sixteen some fourteen to fifteen percent.

Study of the childhood experience of divorce of nuptial birth cohorts is constrained on three counts. The divorce file sample only yields data on children whose parents were married after 1938. It is thus necessary to deal with portions of cohorts defined by the parents' marriage duration at confinement, and the length of the series of involvement rates able to be computed shortens as duration increases. [8] Secondly, one cannot distinguish in the divorce file data between children born in New Zealand and overseas. The only options open are to assume either that all children were born in New

Table 9.6

ESTIMATED TOTAL RATES OF INVOLVEMENT OF CHILDREN IN 'MARRIAGE
BREAKDOWNS' LEADING TO DIVORCE BY SELECTED EXACT AGES

Year	Exact Age in Years			
	5	10	16	20
1951	24.1	41.5	55.9	63.8
1956	20.7	38.4	56.2	62.0
1961	18.3	40.4	59.6	69.5
1966	23.1	42.7	63.7	75.7
1971	37.9	71.3	104.8	122.8
1976	45.8	96.8	142.6	164.3

Source: Cross-sectional divorce file samples; 1951-76 censuses.

Zealand or that all children of marriages contracted in New Zealand were born in New Zealand and all others overseas. Results presented assume the former, but this has no major effect on trends disclosed. Finally, until 1962 annual tabulations of live nuptial confinements by duration of marriage, used to obtain risk populations, excluded Maoris. [9] All that were known were annual numbers of Maori live births. In the early 1960s about twenty percent of Maori live births were ex-nuptial (see Table 3.2). This figure subsequently rose

[8] For example, for nuptial children born at marriage duration 0 years rates may be calculated from 1940 onward. However, for those born at durations 0-4 years they may be computed only from 1944 onward, since some 1940-43 nuptial births at these durations occurred to women married during 1935-38.

[9] Note that risk populations were expressed as confinements rather than as births. In consequence where multiple births occurred in the divorce file data only one child was included in the analysis.

rapidly, but primarily because of declining marital fertility. With nothing better to go on it was assumed that throughout 1940-61 eighty percent of Maori live births were nuptial. Annual numbers of Maori live nuptial confinements were then estimated by assuming identical Maori and non-Maori incidences of multiple births, and these were distributed by single years of marriage duration pro rata with the non-Maori figures. [10] In general, risk populations were adjusted upward by about ten percent.

Estimated rates of involvement in divorce by age at parents' decree absolute (together with ninety percent confidence interval half-widths and numbers of sample children on which rates are based) are shown for composite birth cohorts by parents' marriage duration at birth in Table 9.7. Cumulative rates of involvement by exact ages five, ten, and sixteen years for single-year cohorts are plotted in Figure 9.1. The increase in the proportion of children affected by divorce clearly has been a period phenomenon, since involvement rates at ages 0-4, 5-9, and 10-15 years all show sharp increases for the two most recent composite cohorts for which they can be calculated (Table 9.7). Similarly, upward movements in trend lines in Figure 9.1 are staggered, affecting earlier birth cohorts the older the exact age at parents' decree absolute. At ages 16-19 involvement rates for children born early in marriage appear to have been rising for longer (Table 9.7), perhaps reaffirming that older couples with mature families led the contemporary trend toward more widespread

[10] This pro rata distribution seemed reasonable in that while higher Maori fertility implies that more Maori women would have given birth at longer marriage durations, the 'Third World' Maori age structure would have meant that married Maori women of reproductive age would have been more concentrated at shorter marriage durations.

Table 9.7

ESTIMATED RATES OF INVOLVEMENT OF CHILDREN IN DIVORCE BY AGE AT
PARENTS' DECREE ABSOLUTE: 1940-44 TO 1969-73 BIRTH COHORTS
BY PARENTS' MARRIAGE DURATION AT CHILD'S BIRTH

Birth Cohort	Child's Age at Parents' Decree Absolute ¹				Birth Cohort	Child's Age at Parents' Decree Absolute ¹			
	0-4	5-9	10-15	16-19		0-4	5-9	10-15	16-19
Parents' Marriage Duration at Child's Birth									
0 years					0-2 years				
1940-44	14.7 (2.6,67)	36.4 (4.1,166)	25.5 (3.4,116)	10.3 (2.2,47)	1942-44	13.0 (2.0,91)	31.2 (3.1,218)	25.6 (2.8,179)	9.7 (1.7,68)
1945-48	18.1 (3.2,68)	31.2 (3.5,166)	23.5 (3.1,125)	15.6 (2.5,83)	1945-48	11.0 (1.3,151)	25.7 (2.0,352)	20.9 (1.8,286)	15.0 (1.5,205)
1949-53	7.5 (1.6,46)	25.9 (3.0,158)	24.4 (2.9,149)	22.3 (2.8,136)	1949-53	6.8 (0.9,123)	21.6 (1.6,392)	22.6 (1.6,409)	19.0 (1.5,344)
1954-58	7.2 (1.5,50)	24.9 (2.7,174)	32.2 (3.1,225)	27.5 (2.9,192)	1954-58	5.8 (0.8,115)	20.4 (1.5,402)	26.5 (1.7,522)	25.7 (1.7,506)
1959-63	7.9 (1.5,63)	35.9 (3.1,287)	52.9 (4.1,336)		1959-63	6.3 (0.8,141)	29.7 (1.7,660)	47.7 (2.4,845)	
1964-68	14.6 (1.9,120)	63.7 (4.0,523)			1964-68	12.9 (1.1,280)	52.3 (2.2,1138)		
1969-73	20.6 (2.4,159)				1969-73	17.9 (1.3,388)			
0-4 years					0-9 years				
1945-48	10.5 (1.1,199)	23.4 (1.6,446)	20.0 (1.5,380)	14.7 (1.3,279)	1949-53	5.8 (0.6,233)	17.2 (1.0,692)	19.7 (1.0,792)	16.6 (0.9,667)
1949-53	6.2 (0.7,175)	19.3 (1.2,544)	21.1 (1.3,594)	17.5 (1.1,494)	1954-58	5.3 (0.5,243)	17.2 (0.9,784)	25.0 (1.1,1136)	23.0 (1.0,1048)
1954-58	5.6 (0.6,170)	18.9 (1.2,568)	25.9 (1.3,779)	24.9 (1.3,749)	1959-63	5.2 (0.5,258)	23.6 (1.0,1175)	40.4 (1.5,1611)	
1959-63	6.0 (0.6,202)	26.5 (1.3,892)	45.2 (1.9,1215)		1964-68	10.3 (0.7,479)	42.4 (1.4,1961)		
1964-68	11.5 (0.9,376)	48.3 (1.7,1576)			1969-73	15.3 (0.8,730)			
1969-73	17.2 (1.0,581)								
0-14 years					0-19 years				
1954-58	5.2 (0.5,265)	16.4 (0.8,829)	24.4 (1.0,1234)	22.3 (1.0,1132)	1959-63	4.7 (0.4,273)	22.0 (0.9,1274)	38.4 (1.3,1782)	
1959-63	4.8 (0.4,270)	22.4 (0.9,1259)	39.2 (1.3,1761)		1964-68	9.4 (0.6,500)	39.3 (1.2,2080)		
1964-68	9.7 (0.6,495)	40.3 (1.3,2059)			1969-73	14.4 (0.8,764)			
1969-73	14.6 (0.8,756)								

Source: Divorce file sample; New Zealand Vital Statistics 1940-73.

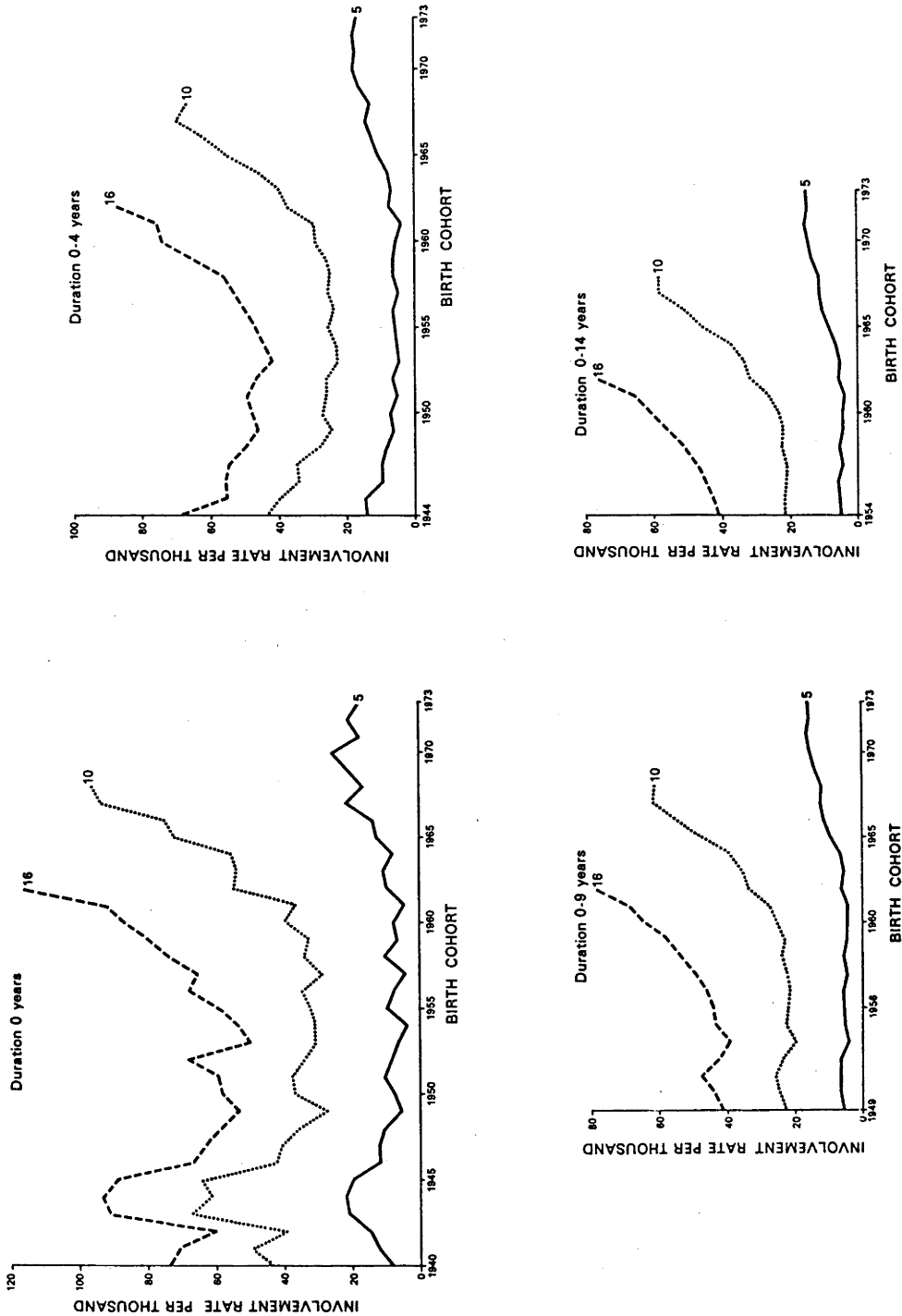
¹ Rates shown as being for the 1959-63 birth cohort for children aged 10-15 years in fact pertain to the 1959-62 birth cohort.

divorce. [11]

[11] It should be noted, however, that the earliest birth cohorts for which data are presented in Table 9.7 are wartime ones, which may have been affected less by divorce at ages 16-19 than earlier cohorts because they were affected more at younger ages.

Figure 9.1

ESTIMATED RATES OF INVOLVEMENT OF CHILDREN IN DIVORCE BY SELECTED EXACT AGES AT PARENTS' DEGREE ABSOLUTE: 1940-1973
 NUPTIAL BIRTH COHORTS BY PARENTS' MARRIAGE DURATION AT CHILD'S BIRTH



Source: Divorce file sample; New Zealand Vital Statistics 1940-73.

Involvement rates decline as parents' marriage duration at child's birth increases. This reflects the vulnerability of children conceived premaritally, and probably also a tendency for achievement of higher parities to be associated with marital stability. Looking to cumulative involvement rates, some six percent of nuptial children born at marriage durations 0-14 years during 1967-68 had had their parents divorce by the time they turned ten (Figure 9.1). This is similar to the 1976 cross-sectional estimate for all children reported above. No nuptial birth cohort had, as at the end of 1978, attained exact age sixteen with anything like the eleven percent experience of divorce estimated cross-sectionally for all children for 1976. However, assuming no dramatic fall in the rate of involvement at ages 10-15 recorded for the 1962 cohort, it was clear that ultimately the figure for nuptial birth cohorts of the late 1960s would be at least ten percent. [12]

Bane (1979) has estimated that thirty percent of U.S. children growing up in the 1970s would experience a parental divorce by the time they were eighteen (see also Bumpass and Rindfuss (1979) and Furstenberg and Nord (1982)). Cross-sectional evidence for 1976 (Table 9.5) suggests a comparable New Zealand figure of about twelve percent, which can be updated to almost fifteen percent in 1980 using

[12] Note at this point that, for technical reasons, repeating the birth cohort analysis taking children's ages at 'marriage breakdown' into account offers limited return. As was noted in Chapter 7, the divorce file sample covers only 'marriage breakdowns' which had actually led to divorce by 31:12:78. To avoid truncation bias one must therefore control for parents' marriage duration at decree absolute. This results in some more recent birth cohorts being 'lost' from series of involvement rates, since for any cohort the parents of members born within the first year of marriage needed to have all passed the control marriage duration by the end of 1978. The unfortunate thing is, of course, that more recent birth cohorts are of greatest interest.

data on dependent children of divorcing couples published since 1977. [13] Another 2-3 percent of children in 1980 could expect their parents to part before, but divorce after they turned eighteen. Superficially the problem of marital disruption's effect on children seems less severe in New Zealand than in the United States. The proportion of New Zealand children affected by separation and divorce is nonetheless high, has risen rapidly, continues to increase, and would be even higher were it possible to take informal dissolutions of marriage and dissolutions of consensual unions into account. It is not unlikely, given that Maoris are suspected of bothering little with formal divorce, that more than one-fifth of births in 1980 were ex-nuptial, and that at least forty to forty-five percent of these births occurred to cohabiting couples (Chapter 5), that under conditions prevailing in 1980 a child had between a one in five and a one in four chance of experiencing some form of permanent parental separation before the age of eighteen.

9.4 THE CUSTODY OF CHILDREN AFFECTED BY DIVORCE

When marriages of which there are dependent children dissolve responsibility for the care of those children becomes an issue. In the case of formal dissolutions the courts formally assign this responsibility. Generally they merely approve an arrangement agreed on by the parents or one which arises by default because of the lack of interest of one parent. However, they sometimes are required to

[13] Total involvement rates equivalent to those of Table 9.5 to exact ages five, ten, fifteen, and eighteen years may be computed from these data. Rates for 1977 were 12.9, 58.2, 100.0, and 123.4 per 1000 respectively, while those for 1980 were 12.7, 67.4, 119.1, and 146.2 per 1000.

rule on custody disputes and to consider applications for custody by non-parents. Assignment of responsibility may also entail approving placements for adoption.

It is well known that custody is normally awarded to the mother. Table 9.8 confirms this, indicating that among post-1938 marriages dissolved with one or more children aged under sixteen custody has generally been awarded exclusively to the mother in about three-quarters of cases. There is some evidence that this monopoly has recently strengthened, for custody has been awarded exclusively to the father only about ten percent of the time among the most recent composite marriage cohorts for which data are available for marriages dissolved at durations 0-9, 10-14, and 15-19 years. Formerly fathers seem to have been granted custody in 15-20 percent of cases, but one cannot conclude that the legal process has become less favourably disposed toward them. A more plausible explanation is that the circumstances surrounding dissolutions of marriage involving dependent children have changed.

In the immediate past a larger proportion of such dissolutions probably followed desertion and/or the formation of a new relationship by one partner. These days there is greater acceptance of the philosophy that children are better off with one parent than with two who are regularly in conflict, and women are economically better placed to leave husbands who treat them unreasonably. Thus it is likely that proportionately more marriages which break down with dependent children do so following mutual agreements to separate rather than following abandonment of the marriage by one partner. It is also likely that divorcing wives are more frequently the aggrieved

Table 9.8

PERCENTAGE DISTRIBUTIONS OF CUSTODY AWARDS BY SEX: 1939-40 TO 1969-73
 1
 MARRIAGE COHORTS BY MARRIAGE DURATION AT DECREE ABSOLUTE

Marriage Cohort	Custody to:	Marriage Duration at Decree Absolute				
		0-9	10-14	15-19	20-24	25-29
1939-40	Wife	72.9	73.5	75.9	80.5	100.0
	Husband	20.0	21.4	16.5	14.6	0.0
	Jointly	7.1	3.4	7.6	2.4	0.0
	N	170	117	79	41	22
1941-44	Wife	82.2	76.0	72.6	68.3	80.6
	Husband	13.4	15.6	18.5	22.0	12.9
	Jointly	3.5	5.0	7.3	8.5	6.5
	N	314	179	124	82	31
1945-48	Wife	76.1	69.0	70.8	81.0	86.1
	Husband	17.0	19.6	20.1	14.6	10.1
	Jointly	4.9	8.5	8.1	3.8	-
	N	347	271	209	158	79
1949-53	Wife	78.7	74.6	74.5	76.7	87.7
	Husband	16.4	18.3	17.0	17.5	12.3
	Jointly	3.6	5.3	7.5	3.9	-
	N	329	284	318	257	57
1954-58	Wife	78.4	75.7	76.1	76.5	
	Husband	14.6	15.5	12.6	17.5	
	Jointly	5.5	6.7	10.5	5.5	
	N	343	374	494	183	
1959-63	Wife	80.3	78.1	79.2		
	Husband	15.3	14.8	10.1		
	Jointly	3.9	5.7	10.4		
	N	542	792	355		
1964-68	Wife	85.0	82.3			
	Husband	10.0	10.2			
	Jointly	3.3	6.5			
	N	1015	571			
1969-73	Wife	84.4				
	Husband	11.3				
	Jointly	3.3				
	N	768				

Source: Divorce file sample.

1 Note that percentages do not total 100.0 because sometimes neither parent is awarded custody. Note also that data for the lower diagonal of the table were incomplete at 31:12:78 when collection ceased.

party in cases where one partner has clearly 'wronged' the other. Both these 'trends' could be expected to have increased the maternal monopoly of formal custody by reducing the proportion of cases in which the mother could be shown to be clearly unfit to care for her children or disinterested in them.

The awarding of custody to fathers apparently has been linked strongly to desertion of marriages by wives. In Table 9.9 custody awards made in respect of post-1938 marriages dissolved by 31:12:78 to mothers, fathers, and jointly to both are distributed by ground for divorce and sex of petitioner. [14] Mothers were more often the petitioners for divorce when they were awarded exclusive custody by a ratio of about three to two. However, when fathers were awarded custody they were three times as likely as mothers to have been the petitioner, and they were twice as likely to have petitioned when custody was awarded jointly. One cannot necessarily assign fault by who petitions for divorce; neither party may be clearly to 'blame', and when the ground cited is a separation agreement or having lived apart the petitioner may simply be the partner most anxious to remarry. Nonetheless, given that until 1981 New Zealand divorce law strongly emphasised matrimonial fault the ratios cited have significance.

Table 9.9 also shows that more than one-third of custody awards to fathers arose out of petitions filed on the ground of mothers' adultery. Furthermore, fathers' petitions on the grounds of adultery, desertion, or failure to comply with an ORCR account for almost half

[14] 'Joint' custody awards are those where the mother and father are each awarded custody of one or more children.

Table 9.9

PERCENTAGE DISTRIBUTIONS OF CUSTODY AWARDS TO WIVES, HUSBANDS, AND BOTH
¹
 PARTIES BY SEX OF PETITIONER AND GROUND FOR DIVORCE

Ground for Divorce	Petitioner	Custody Awarded to:		
		Wife	Husband	Jointly
Adultery	Wife	12.3	3.3	6.9
	Husband	12.8	36.6	32.4
Desertion	Wife	4.6	0.8	2.0
	Husband	2.7	9.3	3.7
Separation Order	Wife	9.7	1.6	4.1
	Husband	3.6	2.5	2.9
Separation Agreement	Wife	26.5	14.2	19.6
	Husband	19.1	19.6	21.0
Lived Apart	Wife	3.5	4.7	3.9
	Husband	2.7	4.6	2.0
ORCR	Wife	0.5	0.1	-
	Husband	1.4	2.0	1.4
Other	Wife	0.6	0.1	0.2
	Husband	0.1	0.7	-
Total		100.1	100.1	100.1
All Grounds	Wife	57.7	24.7	36.7
	Husband	42.3	75.3	63.3
N		7086	1285	491

Source: Divorce file sample.

¹ Table is based on decrees absolute granted in respect of post-1938 marriages by 31:12:78.

of awards of exclusive custody to fathers. A similar, though less pronounced pattern exists in respect of joint custody awards. Quite clearly the awarding of custody to fathers frequently has accompanied divorce ultimately precipitated by mothers abandoning their families

and/or becoming involved with other men.

Data not presented here show little difference between percentage distributions of custody awards to mothers and fathers by number of children affected. Some 46.1 percent of awards to mothers compared to 40.2 percent of those to fathers in the main divorce file sample involved at least one child who at 'marriage breakdown' was aged less than three. Thus fathers left with dependent children have been slightly less likely than mothers to be left with extremely young ones. However, it is the magnitudes of these percentages that is striking. They are biased upward on two counts. First, some older children who were their parents' youngest would have ceased to be dependent between 'marriage breakdown' and decree absolute. Second, for more recent marriage cohorts the main divorce file sample includes only divorces at short marriage durations, which would be expected to involve younger children.

The six cross-sectional divorce file samples indicate, for 1951, 1956, 1961, 1966, 1971, and 1976 respectively, that 47.5, 37.0, 35.2, 45.0, 42.0, and 32.1 percent of marriages with a child aged under sixteen at 'marriage breakdown' (N = 202, 219, 227, 282, 509, and 741) had a child aged under three at that date. These figures are still high. They also suggest that dissolutions of marriage affecting dependent children were more likely to affect very young ones in the early post-war years than in the mid-1950s to early 1960s, that they became more likely to do so again as the 1960s progressed, and that more recently the trend has reversed again. Some early post-war marriages may have been rather hasty. There was then the upsurge during the 1960s in marriages precipitated by pregnancy, and the

reversal of that trend during the 1970s (Chapters 3, 4, and 6). [15]

Returning to custody, one of the frequently expressed concerns for the welfare of children affected by divorce is over the prospect of their being the subject of custody disputes. Data from Supreme Court divorce files shed limited light on this issue. The main divorce file sample, which included 9018 divorces between couples with one or more dependent children aged under sixteen at decree absolute, yielded only 188 cases where custody had been contested before the Supreme Court. However, other custody disputes will have been resolved in the Magistrates Court, and in still other instances fathers will have been dissuaded from seeking custody, convinced that they had no chance of winning it. Even under these latter circumstances children may be exposed to considerable parental bitterness.

In short, no reliable estimate of how frequently dependent children of divorcing couples have been the subject of custody wrangles is possible. All that can be said is that about one in fifty awards appears to have been contested before the Supreme Court, and that mothers have been less successful in obtaining custody when it was contested at that level. In contested cases encountered, custody was awarded to the mother, the father, and jointly to both 43.1, 36.2,

[15] Marital breakdown with a child aged under three seems clearly to have been associated with bridal pregnancy. The 1951, 1956, 1961, 1966, 1971, and 1976 cross-sectional divorce file samples show 29.2, 38.3, 41.3, 43.3, 48.1, and 40.8 percent of divorces following 'marriage breakdown' with a child aged under three (N = 96, 81, 80, 127, 214, and 238) as against 23.8, 28.3, 19.0, 24.5, 30.5, and 31.7 percent of those following 'marriage breakdown' with a youngest child aged 3-15 (N = 105, 138, 147, 155, 295, and 503) to have ended marriages where the bride was pregnant.

and 13.3 percent of the time (c.f. Table 9.8). In a further 6.4 percent of cases the final custody arrangement could not be ascertained.

9.5 SOLO PARENTHOOD AND SOLO PARENT FAMILIES

Marital breakdown inevitably deprives the children involved of one everyday parent. Sooner or later many acquire stepparents, to whose presence they must also adjust. [16] Other children find that relatives, particularly grandparents, begin to figure more prominently in their lives. However, many, perhaps most, spend at least some time as children of solo parents. [17]

Solo parents and their children have been the subject of a good deal of recent research in New Zealand. [18] This has been stimulated mainly by an awareness that solo parenthood has become a more common phenomenon in association with previously described trends in ex-nuptial childbearing, the placement of ex-nuptial children, and

[16] See, for example, Simon (1964), Duberman (1975), Maddox (1975), Rappoport *et al* (1977), Social Development Council (1978b), Visher and Visher (1979), and Fishman and Hamel (1981). Regrettably there are no data which permit the proportions of New Zealand children living with stepparents to be estimated (Social Development Council, 1978b).

[17] As divorce rates in Western countries have risen, so has the research emphasis on the consequences of divorce, including solo parenthood, increased. See, for example, Kriesberg (1970), Sweet (1971), Brandwein *et al* (1974), Ross and Sawhill (1975), Bahr and Garrett (1976), Glick (1976), Hoffman (1977), Rashke (1979), and Wallerstein and Kelly (1980). Further references are provided by Schlesinger (1978).

[18] See Society for Research on Women in New Zealand (1970, 1975), Wilson (1972, 1974), Wahlund (1973), Schlesinger (1973, 1979), Bookman (1975, 1977), Davey (1977), Steincamp (1977), Clay and Robinson (1978), Fergusson and Horwood (1978), Social Development Council (1978a), and Ritchie (1980).

marital breakdown. Marital breakdown is not, of course, the only path to solo parenthood. Death also creates solo parent families. So does ex-nuptial childbearing if a decision is made to retain the child by a mother who has no partner.

Studies to date have been concerned with the characteristics, needs, and problems of solo parents and their children. Samples have been limited in size and geographic coverage, and generally have been non-random. In the analysis which follows census and some vital registration data are used to obtain a broader perspective on solo parenthood in New Zealand. The contemporary incidence of solo parenthood is first placed in historical perspective, and then a profile of solo parents and their families in the mid-1970s is presented.

Solo Parenthood in Historical Perspective

New Zealand census data have considerable limitations for tracing trends in solo parenthood. Prior to the 1966 census, data on household composition are of no help whatsoever; it is not even possible to compute levels of female headship. Indeed, over the longer term the only reasonable information relates to but one of the three paths to solo parenthood - death.

Writing on the United States, Bane (1979) concluded that recently there had been a substantial increase in the probability of experiencing a permanent parental separation before the age of eighteen. However, because of high mortality levels, even around the turn of this century almost thirty percent of children encountered some form of parental marital disruption by that age. In New Zealand,

too, loss of a parent through death whilst dependent was once considerably more common than it now is. The censuses of 1921, 1926, and 1936 asked specifically whether non-Maori children aged under sixteen had had either or both parents die. They showed respectively that 9.1, 8.0, and 6.0 percent had, while figures for children aged 10-15 were 13.9, 13.4, and 10.2 percent. Another innovation at the 1921 census was an enquiry into the number of 'dependent' children (i.e. living children aged under sixteen, wherever resident) of married men, widowers, and widows. In 1921 6.8 percent of these children were dependents of widowers or widows, this figure falling continuously to 4.0 percent in 1945 and to 2.1 percent in 1966.

Further data on parental mortality are available in annual vital statistics for the period 1890-1940. These show, by single years of age, the numbers of children left by married and widowed males dying each year, and permit the calculation of total rates of father loss to any exact age for census years (Table 9.10). Analogous again to the total fertility rate, these rates are obtained by summing single-year age-specific rates of father loss in which the numerator for any age group x was taken to be the mean annual number of children whose fathers died when they were aged x during the five-year period centred on the census year.

It is unfortunate that Table 9.10 covers only father loss. However, indications from 1921, 1926, and 1936 census data, which distinguish between children who had had their fathers, their mothers, and both parents die, are that were it to relate to the loss of either parent the figures shown would rise by some fifty-five to sixty percent. [19] In other words, on a cross-sectional basis, 18-19

Table 9.10

ESTIMATED TOTAL RATES OF FATHER LOSS DUE TO MORTALITY BY SELECTED
EXACT AGES: NON-MAORIS 1896-1936

Year	Exact Age in Years				
	5	10	16	18	20
1896	26.3	62.6	118.3	140.5	163.5
1901	23.7	57.9	109.9	131.1	154.3
1906	19.2	48.3	95.5	116.2	138.5
1911	19.0	45.4	91.4	110.5	131.4
1916	27.9	63.4	115.4	137.5	163.2
1921	19.5	46.3	87.3	104.6	126.1
1926	17.3	41.1	79.5	95.0	114.3
1936	14.4	36.1	74.3	91.8	110.6

Source: Statistics of the Dominion of New Zealand, 1894-1920; New Zealand Vital Statistics, 1921-38; 1896-1936 censuses.

percent of non-Maori children in the mid-1890s lost one or other parent before they turned sixteen. A decade into the present century the figure was about fourteen percent, and by the mid-1930s it had dropped to 11-12 percent.

These estimates, which may double count some children who lost more than one parent of a given sex, can be compared to the 1976 cross-sectional estimate of about fourteen percent of children experiencing a 'marriage breakdown' leading to divorce by age sixteen (Table 9.6). Admittedly additional children today experience informal

[19] The rise for 1916 would be smaller because total rates of father loss were boosted by deaths during World War 1.

dissolutions of marriage and dissolutions of informal marriages. The former, however, seem likely to have been quite common in the historical past (Chapter 7). Furthermore, a proportion of children whose parents separate move more or less immediately into stepfamilies, whereas those who have a parent die almost inevitably become members of solo parent families. Today, because of longer life expectancies and the fact that earlier marriage and smaller families mean that the average child's parents are younger than they used to be, dependent children who have a parent die probably are distinctly older than those who experience a permanent parental separation. But a comparison of Tables 9.6 and 9.10 shows this difference to be not especially marked as between children aged under sixteen who experienced a death-induced marital disruption late last century and those who experienced a parental separation leading to divorce in the mid-1970s. The conclusion seems inescapable that solo parent families containing young children are not a new phenomenon in New Zealand.

Concerning the contemporary period, data on household composition from the 1966 census combine 'one-parent, one-family-only' households where the missing parent was permanently and temporarily absent. [20] However, assuming identical 1966 and 1971 ratios of the latter households to 'complete one-family-only' households there were about thirty thousand 'permanent' 'one-parent, one-family-only' households, comprising 5.1 percent of all 'family' households. At the 1971 and 1976 censuses there were 37652 and 47917 such households, representing 5.8 and 6.6 percent of all 'family' households. These percentages and the increments in them are smaller than might have been anticipated,

[20] 'One-family-only' households are those which comprise only members of a single nuclear family.

although the numerical increases, as in Australia (Jordan, 1980), are substantial. The fact that in 1976 only 3.2 percent of children aged under five and 5.3 percent of those aged under sixteen lived in 'one-parent, one-family-only' households may not seem startling either. But two points should be kept in mind. First, not all solo parents live alone with their children. Some live with their own parents, others with one or more other solo parents, and still others head households which include other persons besides their children. These types of households cannot be isolated in official census tabulations, yet they may be quite common. Second, census data relate only to current household membership. In reality children move into and out of solo parent situations, perhaps quite rapidly in many instances. What are needed, therefore, are data which show whether children have ever lived with a solo parent, and if so, for how long.

Solo Parents and Their Families in Profile 1976

Data of the type just described simply are not available. However, a specially constructed ten percent systematic sample of households from the 1976 census (see Chapter 1) allows a profile of solo parents and their families to be developed. Its one real flaw is that never married solo parents and their children living in the households of their parents are not classified as separate families. As a result, this group of families can be incorporated into the analysis to only a limited extent. [21]

The sample indicates that at the 1976 census 9.1 percent of children aged under fifteen living with parents were living with solo parents. Assuming it to be absolutely representative, some 79300

children under fifteen were in solo parent families. [22] Of these an estimated 85.9 percent were living with solo mothers and 14.1 percent with solo fathers.

Paths to Solo Parenthood and Household Types

The best available indicator of the path followed by a family to solo parent status is the marital status of the solo parent. A never married parent may have a consensual union dissolve; a married, legally separated, or divorced one may have an ex-nuptial child; and a widowed parent may do likewise or be widowed following separation. But almost certainly these three groups become solo parents in the main by becoming unmarried parents, through marital breakdown, and through widowhood respectively. At the 1976 census an estimated 10.0 percent of children living with solo mothers were living with never married ones, 58.6 percent with married, legally separated, or divorced ones, and 31.4 percent with widowed ones. When only children

[21] By identifying families in which there was both a grandchild and a never married female child who could have been its mother present, some information on this group was obtained. But in about one case in six there was more than one potential mother whilst in about one in twenty-two there was also more than one grandchild, raising the possibility that more than one solo mother was present. In other instances a grandchild's mother may not have been a member of the household, despite appearances to the contrary.

[22] These figures include children living with never married mothers in the latter's families of origin. Note also two other points. An upper age limit of fifteen rather than sixteen has been used here. This inconsistency with previous practice stems from the early point at which ten percent sample data were processed, and as processing was of necessity carried out on New Zealand government computer equipment and charged for, reprocessing to eliminate it was considered unwarranted. Second, Lloyd and Bedford (1981) cast some doubt on just how representative 1976 census samples are. They are, however, critical mainly of the two percent and five percent samples. Standard statistical procedures yield a ninety-five percent confidence interval half-width of about 2500 children.

under fifteen are considered the figures are 15.7, 69.8, and 14.5 percent (Table 9.11). Marital breakdown was therefore overwhelmingly the main reason for dependent children living with solo mothers, with widowhood and being born ex-nuptially seemingly of about equal second importance. A cross-sectional analysis, though, is sensitive to different mean periods spent as dependents of solo parents. The figures quoted also mislead in that never married solo mothers have fewer dependent children than do other solo mothers. On both counts the frequency with which solo mother families are created by ex-nuptial childbearing probably is understated.

Of solo mothers whose youngest child was aged under fifteen, 21.5 percent were never married, 64.0 percent were married, legally separated, or divorced, and 14.6 percent were widowed. On these figures marital breakdown remains the main creator of solo mother families with dependent children, but ex-nuptial childbearing moves to a clear second place. The age distribution of dependent children of never married mothers is heavily skewed toward the very young ages (Table 9.11), because most of these children acquire solo mothers at birth. Marital breakdown and widowhood, on the other hand, affect children at all ages, so that comparisons of cross-sectional age distributions of dependent children cannot establish differences in the mean lives of solo mother families created by different demographic events. They do, however, suggest that solo motherhood is a reasonably short-term proposition for many unmarried mothers, notwithstanding that some undoubtedly re-enter the status through marital disruption.

Table 9.11

CHILDREN LIVING WITH SOLO MOTHERS BY AGE, TYPE OF HOUSEHOLD, AND
MARITAL STATUS OF PARENT 1976

Marital Status of Mother and Type of Household	Age of Child						Total
	0-2	3-4	5-9	10-14	15-19	20+	
Never Married							
Solo Parent	188	110	139	41	16	7	501
Multi-family	371	104	89	28	6	5	603
Total	559	214	228	69	22	12	1104
Married, Legally Separated, or Divorced							
Solo Parent	381	498	1516	1658	1157	444	5654
Multi-family	192	157	223	128	61	22	783
Total	573	655	1739	1786	1218	466	6437
Widowed							
Solo Parent	42	50	263	552	791	1538	3236
Multi-family	6	5	20	51	52	81	215
Total	48	55	283	603	843	1619	3451

Source: 1976 census ten percent sample.

Further attention will be paid presently to the ages of dependent children of solo mothers. The other variable to be commented on in Table 9.11 is household type. Multi-family households are those comprising two parents or at least one parent and one child from each of two or more nuclear families, including those where a solo mother is both a child in one family and a parent in another. Residence in such households is easily most common among never married solo mothers; in 1976 an estimated 54.6 percent of children of never married solo mothers were so resident, compared to 12.2 percent of children of married, legally separated, or divorced solo mothers and

6.2 percent of those of widowed solo mothers. Undoubtedly this finding reflects the youth of never married solo mothers and their children, the likelihood of their being of first parity, and the likelihood of their having not left home when becoming solo mothers. Fully 66.4 percent of 0-2 year-old children of never married solo mothers were living in multi-family households, and three-quarters of these were in households headed by grandparents. Older children were much more likely to live in one-family households headed by their mothers, yielding a negative relationship between age of child and residence in multi-family households which is also found for children of married, legally separated, or divorced solo mothers. Here mothers of older children perhaps more often occupy freehold matrimonial homes and have too many children to consider sharing accommodation. They are also less likely to need help with child care and more likely to have achieved an independence from their households of origin which precludes rejoining them.

Table 9.12 shows similar information to Table 9.11 for children of solo fathers. It excludes children of never married solo fathers who were living with their grandparents. [23] These, however, would not alter the conclusion that virtually all solo fatherhood results from either marital breakdown or being widowed. Being widowed is obviously much more frequently the path to solo parenthood for males, although once again marital breakdown appears to be the main path.

[23] It was felt that any attempt to identify such children in the same way children of solo mothers living with grandparents were identified was likely to result in too many misclassifications as solo fathers of males who really were uncles of the children concerned. Some aunts may have been misclassified in this way, but they are likely to have formed only a small proportion of all 'solo mothers' living with their parents.

Table 9.12

CHILDREN LIVING WITH SOLO FATHERS BY AGE, TYPE OF HOUSEHOLD, AND
MARITAL STATUS OF PARENT 1976

Marital Status of Father and Type of Household	Age of Child					Total
	0-4	5-9	10-14	15-19	20+	
1						
Never Married						
Solo Parent	11	10	5	1	-	27
Multi-family	3	1	1	-	1	6
Total	14	11	6	1	1	33
Married, Legally Separated, or Divorced						
Solo Parent	81	222	332	307	133	1075
Multi-family	49	49	54	27	13	192
Total	130	271	386	334	146	1267
Widowed						
Solo Parent	17	53	186	186	271	718
Multi-family	4	11	24	22	17	78
Total	21	69	210	208	288	796

Source: 1976 census ten percent sample.

1 The 'multi-family' category here excludes children living in their fathers' parents' homes.

Consistent with their tending more to seek assistance with child care, fathers caring for their children after separation or being widowed seem a little more likely than similarly placed mothers to do so in multi-family households (compare Tables 9.11 and 9.12).

Characteristics of Solo Parents and Their Families

The structures of solo parent families identified from the 1976 census ten percent sample are summarised in Table 9.13. Never married

Table 9.13

SOLO PARENT FAMILIES BY TYPE, SIZE, AND AGE OF YOUNGEST CHILD 1976

Number of Children	Age of Youngest Child and Type of Parent						Total
	0-2	3-4	5-9	10-14	15-19	20+	
Never Married Mother							
1	372	121	114	24	9	10	650
2	92	21	7	4	-	-	124
3	21	10	-	2	-	-	33
4+	13	5	5	1	-	-	24
Total	498	157	126	31	9	10	831
Married, Legally Separated, or Divorced Mother							
1	187	142	204	185	241	234	1193
2	184	159	306	252	111	21	1033
3	71	80	191	145	31	3	521
4+	68	63	140	65	7	-	343
Total	510	444	841	647	390	258	3090
Widowed Mother							
1	11	6	19	89	219	1036	1380
2	8	16	39	116	129	136	444
3	9	10	40	67	35	25	186
4+	13	13	56	42	13	1	138
Total	41	45	154	314	396	1198	2148
All Mothers							
1	570	269	337	296	471	1280	3223
2	284	196	352	370	242	157	1601
3	101	100	231	214	66	28	740
4+	94	81	201	108	20	1	505
Total	1049	646	1121	988	799	1466	6069
All Fathers ¹							
1	39	20	49	84	162	253	607
2	16	9	49	92	71	36	273
3	8	13	40	60	11	5	137
4+	6	20	54	31	1	1	113
Total	69	62	192	267	245	295	1130

Source: 1976 census ten percent sample.

1 Excludes never married fathers living with their parents.

solo mother families not only contained very young children but were small as well. A mere 21.8 percent were other than one-child families, and 59.3 percent consisted of a mother and one pre-school child only. Relatively few widowed solo mother families included dependent children, especially young ones, and they, too, were characteristically small. Perhaps widows tended to have been solo mothers for longer than other marital status groups, and perhaps their children are older on leaving home. But almost certainly widows are also older on becoming solo mothers. The largest solo mother families were those formed through marital breakdown. Reverting briefly to Table 9.11 it is clear that children of solo mothers encountered by educationists overwhelmingly have experienced parental separations. Three-quarters of 5-14 year-old children of solo mothers were children of married, legally separated, or divorced women.

Given that they more often had been widowed it is not surprising that solo fathers generally had older families than did solo mothers (Table 9.13). But even where solo parenthood was due to marital breakdown this was true. Only 10.3 percent of children living with married, legally separated, or divorced solo fathers were aged under five, compared to 19.1 percent of children living with solo mothers of similar marital status. Putting it differently, 15.2 percent of married, legally separated, or divorced solo fathers had at least one pre-school child as against 30.9 percent of comparable solo mothers. This may reflect several things. It is likely that older children of separated parents exercise some choice over who they will live with, whereas younger ones usually are deemed to be better off with their mothers. Second, mothers may more readily give up older children to their fathers. Third, fathers left with very young children may

remarry more quickly than mothers in similar circumstances. Finally, custodial fathers may sometimes entrust the care of very young children to non-coresident relatives or foster parents.

Solo mothers were generally younger than husband-present mothers of dependent children because those who had never been married were heavily concentrated at ages below twenty-five (Table 9.14). On the other hand, married, legally separated, or divorced solo mothers of children aged under fifteen were distributed by age in very similar proportions to husband-present mothers. Solo mothers were also more often non-European than husband-present mothers. All marital status groups showed this tendency, but it was strongest for never married solo mothers (Table 9.14). This ties in with illegitimacy ratios being higher for Maori and Pacific Island women than for other women (Chapter 3). Likewise the higher proportion of non-Europeans among widowed solo mothers of dependent children than among husband-present mothers probably reflects a combination of higher mortality and childbearing to later ages among Polynesians than among Europeans in New Zealand. Attempts to discover whether educational differences existed between solo and other mothers were thwarted by the limited nature of the 1976 census question on the topic. [24]

Labour Force Participation and Welfare Dependence

It is often claimed that solo parent families, and more precisely solo mother ones, are economically disadvantaged. Compared to other

[24] Preliminary investigations showed little difference in proportions with some tertiary education, but with no information on the extent of secondary schooling a meaningful analysis was not possible.

Table 9.14

PERCENTAGE DISTRIBUTIONS OF SOLO AND HUSBAND-PRESENT MOTHERS OF
CHILDREN AGED UNDER FIFTEEN BY AGE AND ETHNIC ORIGIN

Age	Solo Mothers by Marital Status			Total	Husband-present Mothers
	Never Married	Married, Legally Separated, or Divorced	Widowed		
<20	26.1	1.1	-	5.9	1.5
20-24	34.7	12.8	1.6	15.5	10.9
25-29	20.2	22.7	4.9	19.6	22.2
30-39	15.0	39.2	27.3	32.7	39.9
40-49	3.8	19.7	37.9	19.2	20.9
50+	0.3	4.5	28.3	7.2	4.5
Total	100.1	100.0	100.0	100.0	99.9
Ethnic Origin					
European	69.3	80.0	73.5	76.9	84.2
Non-European	30.7	20.0	26.5	23.1	15.8
Total	100.0	100.0	100.0	100.0	100.0
1					
N	744	2441	554	3739	36116

Source: 1976 census ten percent sample.

1 Samples for never married and total solo mothers exclude 68 cases where personal details of a mother living with her parents were unknown.

parents, solo parents might also be expected to want for adult companionship. On both of these counts it might be anticipated that solo mothers would find paid employment especially attractive. Table 9.15, however, shows minimal differences between age-specific labour force participation rates for solo and husband-present mothers of children aged under fifteen. The only noticeable difference between the two groups is that solo mothers have a stronger commitment to the labour force in that they work more hours. At ages 20-49 higher

Table 9.15

LABOUR FORCE PARTICIPATION RATES OF SOLO AND HUSBAND-PRESENT MOTHERS
 OF CHILDREN AGED UNDER FIFTEEN BY AGE OF MOTHER¹

Type of Mother	Age of Mother					
	<20	20-24	25-29	30-39	40-49	50+
²						
Solo Mother						
Part-time	2.9	7.8	12.7	17.0	16.1	16.5
Full-time	5.7	13.3	19.3	32.2	33.2	19.1
Total	8.6	21.1	32.0	49.2	49.3	35.6
N	105	487	685	1196	714	267
³						
Husband-present Mothers						
Part-time	4.5	9.7	16.3	23.5	23.6	16.7
Full-time	8.3	9.1	12.1	22.8	27.6	21.7
Total	12.8	18.8	28.4	46.3	51.2	38.4
N	554	3936	8035	14446	7573	1617

Source: 1976 census ten percent sample.

- 1 'Mothers' are defined as women with at least one own child living with them.
- 2 Excludes never married mothers living with their parents.
- 3 Excludes mothers not in their normal households of residence on census night.

percentages were working full-time (thirty or more hours per week) whilst lower percentages were working part-time (1-29 hours).

This pattern must be interpreted in the light of social welfare provisions in New Zealand. At the 1976 census most solo mothers of dependent children were eligible for either the Domestic Purposes Benefit or the Widows' Benefit, provided that they were otherwise unsupported. Recipients of these benefits were permitted to earn some additional income, but earnings from other than minimal part-time work severely eroded benefit payments. [25] Undoubtedly some solo mothers were being denied the social advantages of part-time employment by a

feeling that it offered no worthwhile economic gain. Others may have taken on full-time jobs when they would have preferred part-time ones.

Comparative labour force participation rates, split into part-time and full-time components, are shown for solo and husband-present mothers of children aged under fifteen by age of youngest child and number of coresident children in Table 9.16. For solo mothers the combined rate rises sharply with age of the youngest child, both overall and within number-of-children categories. By contrast it changes little overall as the number of children increases from one to three, falling noticeably only for mothers of four or more children. This suggests that labour force participation is governed more by the ages of children than by their number. However, there is greater variation within age-of-youngest-child categories. Where the youngest child was aged 0-2 or 3-4 employment seems to have been more usual if there was only one child than if there were two or more. Probably this reflects both the greater ease with which child care arrangements can be made, and the cost of child care met, when there is only one child and a greater tendency of mothers of one pre-school child to live in multi-family households, with free child care at their disposal. [26] Where the youngest child was aged 5-9 a steady inverse relationship between labour force activity and number of children is apparent. The same applies among solo mothers whose youngest child was aged 10-14, except if that child was the only one still living at home.

[25] At the time of the 1976 census both the DPB and the Widows' Benefit carried an income exemption of \$21 per week. Benefits then abated at the rate of \$1 for every \$2 earned up to a maximum of \$25, and by \$3 for every \$4 earned thereafter. There was thus limited incentive to work part-time, particularly if receiving maintenance income.

Table 9.16

LABOUR FORCE PARTICIPATION RATES OF SOLO AND HUSBAND-PRESENT MOTHERS OF CHILDREN AGED UNDER FIFTEEN BY
NUMBER OF CORESIDENT CHILDREN AND AGE OF YOUNGEST CORESIDENT CHILD¹

Number of Children		Age of Youngest Child in Years					Total Standard	Husband-present Mothers				
		0-2	3-4	5-9	10-14	Total		0-2	3-4	5-9	10-14	Total
1	Part-time	7.3	13.5	15.8	13.8	12.1	10.4	10.1	15.9	22.3	20.6	14.5
	Full-time	12.7	27.4	41.9	39.6	29.3	23.6	8.2	21.2	30.2	33.5	17.7
	Total	20.0	40.9	57.7	53.4	41.4	34.0	18.3	37.1	52.5	54.1	32.2
	N	385	215	303	283	1186		3831	765	891	1425	6912
2	Part-time	6.3	13.5	21.7	23.0	17.5	15.5	10.8	21.3	31.0	24.6	21.1
	Full-time	3.3	16.1	29.9	37.4	24.5	20.4	5.9	13.4	24.8	35.7	19.2
	Total	9.6	29.6	51.6	60.4	42.0	35.9	16.7	34.7	55.8	60.3	40.3
	N	240	192	351	369	1152		4664	2171	3604	3251	13690
3	Part-time	3.1	11.1	20.3	13.1	13.9	12.4	11.7	20.5	30.4	26.0	22.7
	Full-time	9.4	17.2	26.8	35.2	25.5	22.6	6.9	12.8	24.7	35.6	20.6
	Total	12.5	28.3	47.1	48.3	39.4	35.0	18.6	33.3	55.1	61.6	43.3
	N	96	99	231	213	639		2403	1486	2855	2203	8947
4+	Part-time	6.7	5.1	15.9	14.8	12.2	11.1	10.7	17.9	23.3	22.8	18.8
	Full-time	4.5	12.7	20.9	25.0	17.4	15.6	8.5	17.2	27.2	33.7	21.3
	Total	11.2	17.8	36.8	39.8	29.6	26.7	19.2	35.1	50.5	56.5	40.1
	N	89	79	201	108	477		1746	1336	2414	1116	6612
Total	Part-time	6.4	12.0	18.7	17.3	14.3	13.0	10.8	19.6	28.1	24.0	19.8
	Full-time	8.6	20.0	30.9	36.2	25.3	22.5	7.2	15.2	25.9	35.0	19.6
	Total	15.0	32.0	49.6	53.5	39.6	35.5	18.0	34.8	54.0	59.0	39.4
	N	810	585	1086	973	3454		12644	5758	9764	7995	36161
Standard	Part-time	6.1	10.9	19.3	17.5	14.6	12.9					
	Full-time	7.5	17.1	27.9	35.5	24.4	20.7					
	Total	13.6	28.0	47.2	53.0	39.0	33.6					

Source: 1976 census ten percent sample.

¹ Never married solo mothers living with their parents and husband-present mothers not in their normal households of residence on census night are excluded.

Husband-present mothers show the same pattern of increasing labour force participation with increasing age of youngest child as do solo mothers (Table 9.16). The participation rate for mothers of one child is distinctly lower than are rates for mothers of more than one child, but this is because one-child mothers predominantly have very young children. Within age-of-youngest-child categories there is very little variation in participation rates by number of children. That the number of children apparently affects the probability of labour force participation independently of the age of the youngest child only for solo mothers suggests two things. One-child solo mothers of pre-school children tend to be young and either never married or parties to very brief, probably often pregnancy-induced marriages. Labour force participation may thus be fostered by a determination not to allow an unplanned birth or an unwise marriage to disrupt one's life more than is necessary, whereas one-child husband-present mothers of pre-schoolers generally are in the midst of a planned period of childbearing. Secondly, greater economic incentive to work perhaps results in solo mothers taking more account of family size in making employment decisions.

It may seem strange that with 'greater economic incentive to work' solo mothers do not have markedly higher participation rates than husband-present mothers (Table 9.16). However, one has to bear

[26] By an oversight, no tabulation of household type by number of children was made for solo mothers of pre-school children when census ten percent sample data were processed. However, it was found that younger mothers with pre-school children were the most likely to be resident in multi-family households. Of those aged under twenty-five, 38.5 percent with a youngest child aged 0-2 and 25.0 percent with a youngest child aged 3-4 were so resident, compared to 27.5 and 17.4 percent respectively of those aged 25-39. This finding makes it almost certain that one-child solo mothers of pre-schoolers were the most likely to live in multi-family households.

in mind that this incentive exists alongside disincentives such as the provisions of the welfare benefit structure, which tend to require a full-time commitment to employment, and the need to meet child care costs from a single income. Comparisons of participation rates of solo and husband-present mothers by age of youngest child and by number of children are best made by comparing standardised rates for the former group to 'total' rates for the latter. Standardised rates assume the distribution by number of children or age of youngest child as appropriate of husband-present mothers.

Standardised labour force participation rates for solo mothers almost all are lower, often by moderately large margins, than corresponding 'total' rates for husband-present mothers. Yet if rates of full-time participation are compared the standardised rates for solo mothers generally are higher, if only slightly so in most cases. Once again the economic unattractiveness of part-time employment to solo mothers would seem to be indicated.

Pursuing the economic theme further, the pattern of solo mothers' dependence on welfare benefits is of interest. Published 1976 census data show that 70.1 percent of widows who during the previous year received the Family Benefit, payable in respect of each child until age sixteen and extendable while a child remains at school, also received the Widows' Benefit. By comparison only 43.8, 52.4, and 44.0 percent, respectively, of never married, legally separated, and divorced women who received the Family Benefit also received the Domestic Purposes Benefit. Since it was earlier noted (Chapter 2, footnote 7) that cohabiting parents are generally classified by the New Zealand census as 'married', these figures probably approximate

closely those for solo mothers. Thus, despite having older children, which should facilitate labour force participation, widowed solo mothers appear the most reliant on welfare benefits. Their being older themselves and having access to a more 'respectable' form of welfare assistance may account for this in part. Other factors may be more limited access to alternative forms of non-employment support (maintenance payments and parental support, for example), and a greater ability to subsist on welfare income. The Widows' and Domestic Purposes Benefits are paid at the same rate, but widows may more often than other solo mothers occupy freehold homes on which mortgage repayments have finished or are small. They also are more likely to have employed children from whose incomes they benefit without affecting their welfare eligibility.

The previous paragraph ignores married solo mothers, who in tables from which the statistics quoted were obtained are lost amongst the mass of husband-present mothers. Another published table, relating only to solo mothers with at least one child aged under five who were living alone with their children, indicates that a mere 31.1 percent who were married received the DPB compared to 67.3 and 68.3 percent of those who were legally separated and divorced. Possibly more married solo mothers had separated from their husbands recently and were in the process of applying for the DPB. They may also have been a group who more often were still being adequately maintained by their husbands, perhaps partly because they were wealthier and partly because final decisions to formally end their marriages had not been taken. Supporting the latter proposition is the fact that ten percent sample data show married solo mothers of pre-school children having a lower rate of labour force participation (17.9 percent; N = 358) than

either legally separated (24.3 percent; N = 494) or divorced (33.9 percent; N = 109) solo mothers of pre-schoolers.

Overall, ten percent sample data show 53.3 percent of never married and 48.8 percent of married, legally separated, or divorced solo mothers with a child aged under fifteen having received the DPB during the previous year. Standardisation for age of youngest child raises the latter figure to 54.3 percent in comparison with the former. As might be expected, reliance on the DPB decreases as age of youngest child increases. Among married, legally separated, or divorced solo mothers 57.0, 47.9, 37.7, and 16.4 percent of those with a youngest child aged 0-4, 5-9, 10-14, and 15-19 respectively had received this benefit (N = 954, 842, 644, and 391) [27]

Housing and Rural-urban Residence

Discussion to date has only speculated as to the housing situations of different types of solo parent families. Home ownership is an important concept in this context, for it insulates a family from the whims of landlords and acts as a crude index of both housing quality and the economic burden housing imposes. [28] Table 9.17 shows that compared to husband-present mothers of children aged under fifteen, solo mothers living in solo parent households were much less likely to own their own homes and much more likely to live in rented

[27] A similar pattern is found for never married solo mothers, but the vast majority (77.7 percent) had a youngest child of pre-school age.

[28] Once a home has been purchased mortgage repayments tend, in the absence of major increases in interest rates, to decrease as a proportion of income over time, whereas rents tend to rise regularly with inflation and property values.

Table 9.17

PERCENTAGE DISTRIBUTIONS OF SOLO AND HUSBAND-PRESENT MOTHERS OF
CHILDREN AGED UNDER FIFTEEN BY TYPE AND TENURE OF HOUSING

Category of Mother	N	Type and Tenure of Housing					Total
		Owned House	Rented House	Owned Flat	Rented Flat	Other	
Solo Mother in Solo Parent Household							
Never Married	348	15.8	42.5	1.7	36.5	3.4	99.9
Married, Legally Separated, or Divorced	2042	44.8	35.0	1.6	15.2	3.3	99.9
Widowed	511	68.1	23.5	2.3	3.5	2.5	99.9
Total	2901	45.5	33.9	1.7	15.7	3.2	100.0
Solo Mother in Multi-family Household							
	1						
Never Married	110	50.0	38.2	-	6.4	5.5	100.1
Married, Legally Separated, or Divorced	400	62.8	31.5	1.0	2.3	2.5	100.1
Widowed	43	81.4	11.6	-	-	7.0	100.0
Total	553	61.7	31.3	0.7	2.9	3.4	100.0
	2						
Husband-present Mother	36161	71.3	19.0	0.5	4.3	4.9	100.0

Source: 1976 census ten percent sample.

1 Excludes mothers living with their parents.

2 Excludes mothers not in their normal households of residence on census night.

houses or flats. Among the latter group never married mothers had a particularly low level of home ownership and were easily the most likely to occupy a rented flat. Their youth, marital status, and the small sizes of their families undoubtedly are reflected here, home ownership generally being a function of marriage and its duration. Widowed mothers, on the other hand, were almost as likely to own their homes as were husband-present mothers; indeed if all parents with coresident children of any age are considered they were more likely

to. Married, legally separated, or divorced solo mothers exhibited intermediate levels of home ownership and occupancy of flats.

Comparing this last group to husband-present mothers (Table 9.17) there are several possible explanations for its greater dependence on rental accommodation. Age structures of the two groups are very similar, so it cannot be argued that the latter was older and had thus had longer on average to purchase a home. What can be argued is that husband-present mothers had on average probably spent longer in intact marriages devoted to the joint welfare of nuclear family members, and in this sense had had longer to become home owners. It is also likely that marital disruption is selective of non-home owners, partly because certain factors (such as early marriage) predispose toward both conditions and partly, perhaps, because inability to achieve home ownership in itself undermines some marriages. Then there is the probability that some separations involve solo mothers rather than their husbands leaving matrimonial homes. Finally, marriage dissolution often entails selling the matrimonial home and dividing the proceeds. Some solo mothers enumerated at a census will thus be in the process of doing this before purchasing their own homes. In other cases the mother's equity coupled with her income is insufficient to buy a replacement.

Solo mothers living in multi-family households at the 1976 census were considerably more likely to live in owned houses and much less likely to live in rented flats than were those living in solo parent households (Table 9.17). The percentage living in owned houses would be even higher if never married mothers living with their parents were included. Many, if not most, of these mothers would not themselves

have been home owners, but then living in accommodation owned by another household member presumably often carries the advantage that weekly housing costs are minimal.

Distributions of solo and husband-present mothers of children aged under fifteen by rural-urban residence (Table 9.18) show that the former were more likely to live in cities, and in particular in Auckland, and less likely to live in towns and in rural areas. Among solo mothers widows had a rural-urban distribution similar to that for husband-present mothers, except for being relatively more numerous in provincial cities and less numerous in rural areas. Migration of farmers' widows may be indicated. The concentration of solo mothers in Auckland was due entirely to the mothers of ex-nuptial children and mothers whose marriages had broken down. Undoubtedly Auckland's being the home of most of New Zealand's Polynesian population helps explain why so many never married solo mothers lived there. As to married, legally separated, or divorced solo mothers it is possible that marriages of Aucklanders are less stable than those of other New Zealanders because of the pressures and temptations to which living in a large city exposes them. It is also possible that marital breakdown results in a net migration gain of solo mothers to Auckland as women return to live near relatives. Almost certainly the low percentage of married, legally separated, or divorced solo mothers living in rural areas (Table 9.18) stems partly from separating wives leaving farming areas, although it may also stem from rural marriages being more stable. More generally, marital breakdown may result in a net movement up the urban hierarchy for wives, although this remains to be confirmed by further research.

Table 9.18

PERCENTAGE DISTRIBUTIONS OF SOLO AND HUSBAND-PRESENT MOTHERS OF
CHILDREN AGED UNDER FIFTEEN BY RURAL-URBAN RESIDENCE

Category of Mother	N	Place of Residence ¹					Total
		Auckland	Other Urban	Main Other Cities	Towns	Rural	
Solo Mother							
Never Married ²	458	33.2	22.3	23.4	9.0	12.2	100.1
Married, Legally Separated, or Divorced	2442	31.4	25.3	22.2	12.3	8.8	100.0
Widowed	554	23.5	19.9	26.4	15.9	14.4	100.1
Total	3454	30.3	24.1	23.0	12.4	10.1	99.9
Husband-present ³ Mother							
	36161	23.3	22.4	18.8	16.5	18.9	99.9

Source: 1976 census ten percent sample.

- 1 'Other main urban' places of residence comprise Wellington, Christchurch, and Dunedin, while 'Other cities' are provincial cities with populations of at least twenty thousand.
- 2 Excludes mothers living with their parents.
- 3 Excludes mothers not in their normal households of residence on census night.

9.6 SUMMARY

This chapter has focused on the theme of children in divorce and the related, but broader theme of solo parenthood. Deficiencies in data available precluded any firm conclusion being reached as to whether, cross-sectionally, the presence of dependent children acts as a deterrent to marriage dissolution. Indeed it was suggested that even the most careful overseas study to date, that of Thornton (1977), leaves doubt as to how its finding that childless couples are particularly divorce-prone should be interpreted. What was more clear was that over time children seem to have lost some of their capacity

to keep marriages intact.

While the divorce rate has been rising rapidly the distribution of divorcing couples by family size has shifted noticeably from the childless and one-child categories to the 2-4 children categories. The latter trend began first, and may to some extent have stimulated the former. No clear evidence was found that non-childless marriages breaking down prior to divorce were more frequently affecting at least one child of pre-school or primary school age. But that is not to say that proportionately more children in those age groups have not been experiencing pre-divorce separations.

Cross-sectional measures indicated sharply increased rates of involvement in such separations over the decade 1966-76. Analysis by birth cohort showed the trend to be clearly a period phenomenon which may have been initiated by couples with older families. No real birth cohort which had attained age sixteen by the end of 1978 had experienced parental divorce to anything like the extent indicated cross-sectionally for 1976, but some of those which shortly would turn sixteen obviously would come close to doing so. Allowing for children who experienced only informal dissolutions of marriage or dissolutions of consensual unions, it was possible that by 1980 between one in five and one in four children could expect to experience a permanent parental separation by age sixteen.

As the divorce rate has risen, custody awards have favoured mothers more than ever. This, it would seem, reflects couples divorcing under circumstances which previously would not have seen them do so, with proportionately fewer divorces involving mothers who had abandoned their families. Awards of custody to fathers appeared

quite clearly to have been made mainly in cases of desertion by mothers, and involved a very young child only a little less often than did awards to mothers. Indeed, throughout the post-war period a surprisingly high percentage of custody awards had affected at least one child aged under three at 'marriage breakdown'.

The incidence of solo parenthood in the mid-1970s was not necessarily unprecedented. Last century and early this century it was probably at least as common for children to have a parent die as it now is for them to have legally married parents separate, and solo parenthood is probably more inevitable where marital disruption is due to death. Still, the number of solo parent families probably increased by more than fifty percent during 1966-76. At the latter date almost one child in ten was living with a solo parent, and a much higher percentage would do so at some stage before they turned sixteen. Most lived with solo mothers, so that the contemporary incidence of solo mother families almost certainly is unprecedented.

Marital breakdown is today easily the main demographic process creating solo parent families. Of next importance, at least in the creation of solo mother families, is ex-nuptial childbearing. This tends to produce one-child families which often reside in multi-family households. Many of these children seem to acquire fathers or stepfathers within a few years of birth, but how permanent these are is unknown.

Widowed solo mother families also are usually small, but rarely contain very young children. Solo mother families created by marital breakdown are larger, include children of all ages, and more often include pre-school children than do similarly created solo father

families. Generally solo mothers are younger and more often non-European than husband-present mothers, particularly if they have never been married.

Labour force participation rates for solo and husband-present mothers differ little. Both groups also show a marked positive relationship between labour force activity and age of youngest child. However, solo mothers' participation rates vary more by number of children within age-of-youngest-child categories, and full-time employment is more common among solo mothers. The latter finding manifests a welfare benefit structure which discourages part-time employment, and on which widowed solo mothers are the most dependent. Amongst women whose solo motherhood stems from marital breakdown, those who remain 'married' and those with older children are clearly the least welfare-dependent.

Finally, home ownership is less common among non-widowed solo mothers living alone than it is among widowed ones and husband-present mothers. Low home ownership among married, legally separated, or divorced solo mothers probably reflects a higher separation rate among non-home owners, the fact that separation entails one partner vacating the matrimonial home, and the division of matrimonial property. Some migration undoubtedly is associated with marital breakdown, and may result in net movement of solo mothers up the urban hierarchy. Overrepresentation of non-widowed solo mothers in Auckland may also stem from geographic variation in marital stability, and clearly is partly due to the effect of the city's ethnic composition on the level of never married solo motherhood.

CHAPTER 10

CONCLUSION

Roles within marriage are less and less stereotyped In what is a very private world a great deal of experimentation is ... under way where great importance is still attached - but in less conventional forms - to conjugal relations, to the child and to the conditions of child-rearing and education. ... Obviously people are in pursuit of an even greater freedom of action within their personal, emotional and sexual lives; seeking an even greater degree of personal control over their own existence. (Franklin, 1978: 37)

10.1 A RECAPITULATION OF MAJOR FINDINGS

Analytically the objective of this thesis has been to provide a comprehensive insight into post-war socio-demographic trends in New Zealand which point to profound changes in attitudes to sex, marriage, the family, and interrelations between these phenomena. Findings have been summarised at the end of each chapter, so that at this point one need only briefly recapitulate the major ones.

Nonmarital Pregnancy and Ex-nuptial Fertility

An analysis of longer term trends in nonmarital pregnancy and ex-nuptial childbearing among the non-Maori population (Chapter 2) indicated that, before World War 2, nonmarital sexual behaviour was comparatively restrained. Absolute continence outside marriage was by no means a universally observed standard, and bridal pregnancy ratios were especially high during the 1920s. However, this was largely because adverse economic conditions discouraged non-pregnant women

from marrying. An especially revealing finding was that whereas age-specific bridal pregnancy ratios fell sharply as the first marriage rate rose during the middle and late 1930s, they did not do so under similar circumstances during the 1950s. This suggested that World War 2 was something of a watershed so far as girls, at least, remaining chaste until marriage was concerned.

Attention was next turned (Chapter 3) to examining post-war change in nonmarital sexual standards in detail. An upward trend in the illegitimacy ratio which still continues has become increasingly misleading as time has passed. The more meaningful illegitimacy rate began to drop after the early 1970s, but it, too, understates behavioural change during the 1950s compared to that during the 1960s. What did happen during the 1960s was that increases in ex-nuptial fertility and conception rates became concentrated at ages 15-19 and 20-24. Unmarried adolescents and young adults became sexually more active, while at older ages the pill and an increasing attachment to paid employment saw women exert greater control over pregnancy outside marriage.

During the 1950s and early 1960s bridal pregnancy became more common, mainly because of rising age-specific ex-nuptial conception rates. However, the impact of further increments in these rates on bridal pregnancy during the middle and late 1960s was more than offset by declining probabilities of marriage when nonmaritally pregnant and higher marriage rates among non-pregnant women. Accelerated decline in the bridal pregnancy ratio after 1970 reflected strengthening of these negative forces and emphatic reversals of the upward trends in ex-nuptial conception rates at ages under twenty-five.

While improved contraception may have contributed, these reversals were mainly brought about by better access to safe, legal abortion in Australia. This development affected women in their twenties more strongly than it affected teenagers, but it had a noticeable impact on childbearing following nonmarital conception right down to age at conception sixteen years. During the late 1970s, ex-nuptial fertility rates at ages 20-29 began to rise again, suggesting increased childbearing within consensual unions. Thus, although a considerably higher proportion of all childbearing was taking place outside formal marriage in 1980 than in 1970, this childbearing was apparently to a much greater extent planned childbearing.

Ex-nuptial childbearing and bridal pregnancy were shown to be rather more common among the Maori than among the non-Maori population. These two populations have displayed broadly similar trends in ex-nuptial fertility rates since 1962, but for different reasons. Whereas non-Maoris have evolved a more permissive morality and more recently have resorted to abortion more frequently when pregnant, explanation of trends for the Maori population must emphasise the disruption of traditional culture through rapid urbanisation and improved contraception within consensual unions.

The evolutionary character of post-war change in standards of premarital sexual behaviour was especially evident in results of the multiple decrement analysis presented in Chapter 4. Initially, it would seem, coitus began more frequently during engagement, or at least in circumstances which made marriage likely should pregnancy occur. Then, through the 1960s, single women increasingly agreed to

intercourse in relationships marked only by mutual affection. This trend was part of a quest for generational independence by the young, but it may also owe much to the pill, which in relieving males of the onus for marital contraception may also have caused unmarried men to exert unprecedented pressure on their partners for sexual favours. During this phase, premarital sexual encounters were often furtive and guilt-laden. The dominant feature of the third phase in the evolutionary process has been a greater openness about premarital sexuality and a growing determination not to allow one's life to be affected by an unplanned birth or a hasty marriage.

These latter trends may have particularly involved better educated young people (especially young women). Reduced childbearing following premarital conception appeared to have mainly affected women who in earlier times would have married before confinement, and was accompanied (Chapter 5) by a sharp decline in the placement of ex-nuptial children for adoption. Both of these findings suggest a higher social class bias in the utilisation of new abortion facilities after 1971.

Another major point to emerge from Chapter 4 was that as the life cycle probability of conceiving a child premaritally increased between 1950 and the early 1970s, the age distribution of women at conception became markedly younger. This trend continued into the 1970s as improvements in nonmarital fertility control perhaps showed a positive correlation with age. Quite clearly young people became sexually active at ever younger ages. Cross-sectional analysis exaggerates the change compared to birth cohort analysis, but a significant behavioural revolution is undeniable.

Decline in the frequency of placement of ex-nuptial children for adoption from the late 1960s onward (Chapter 5) affected all maternal ages, but was most pronounced above age nineteen. It was balanced by more frequent placement with solo mothers and, in particular, with cohabiting parents. Interpretation of these trends requires that one first bear in mind the impact of increased use of abortion on the adoption market, and not overemphasise the notion that 'more girls kept their babies'. In effect a new choice - whether to proceed to term or have an abortion - has entered the decision-making process leading from nonmarital conception to pregnancy outcome. It accounts in part for more frequent placement with cohabiting parents as well, although this trend also shows a growing preference for consensual over formal marriage, both as a permanent arrangement and as an interim response to unplanned childbearing.

Taken together, trends discussed in Chapters 3 and 5 show that, currently, a rather smaller proportion of New Zealand children spend their infancy with two legally married parents than was the case fifteen to twenty years ago. The largely overseas research literature presents a quite favourable prognosis for ex-nuptial children who are adopted soon after birth and a relatively gloomy one for those who are kept by solo mothers. Thus there is cause for concern that proportionately more children are being born to solo mothers, and some basis for doubting that whatever tendency there has been for solo mothers to effectively replace adoptive parents has been in the best interests of the children concerned.

American research has also suggested that conventional families in which the wife/mother was pregnant at marriage are disadvantaged

compared to those where she was not pregnant. Having become relatively more numerous among newly formed families during the 1950s and early 1960s, families of the former type have since become less numerous again. However, problems associated with premature parenthood and limited assets may to some extent have been transferred to cohabiting parent families.

The possibility was raised that, because of improved access to abortion and changed attitudes to variant family forms, the outlook for children conceived ex-nuptially and not placed for adoption was today more favourable than quite recent research would suggest. However, data from the Christchurch Child Development Study showed that early, nonmarital, and early marital childbearing continue to be associated with a variety of adverse indicators of maternal and infant wellbeing, early child development, living standards, maternal education and social wellbeing, and conjugal stability. As to the solo and cohabiting parental situations into which New Zealand children are increasingly being born, these would seem to remain distinctly less favourable than the conventional two married parents model, even if only first births are considered. It is, however, uncertain just what the causal mechanisms giving rise to differentials established are, and to what extent disadvantaged children remain disadvantaged in the longer term.

The Formation of Conjugal Unions

Post-war trends in first marriage in New Zealand can be divided into three phases (Chapter 6). Through the late 1940s and the 1950s young people set about finishing a task begun by the youth of the

1930s - dismantling the prescription for marriage which required that a man be of some means before taking a wife. Aided by the impetus which the War gave to their cause, favourable economic conditions, and modest material aspirations, males married at increasingly younger ages. Female ages at marriage were affected by the same forces, by a belief that marriage and motherhood were a woman's ultimate calling, and by the immigration-induced marriage squeeze which males faced. In insisting on deciding for themselves when to marry the young also asserted an independence which initiated the evolution of the new sexual morality.

Indeed, as noted above, the 1950s saw considerable change in premarital sexual standards, and the rising level of premarital pregnancy was another factor in the trend to earlier first marriage. It continued to be a force into the 1960s, although the major reason for continuation of the trend throughout that decade was the pill. The pill enabled couples to marry and work jointly toward acquiring a home, confident that they could delay the arrival of the first child indefinitely. By permitting regular, risk-free sex in a socially approved setting it also helped couples to reconcile mounting pressures to be sexually active with traditional morality.

As it became more the norm for the early years of marriage to be childless it also became inevitable that the wisdom of formalising relationships without testing their durability would be questioned, especially once the divorce rate began to rise rapidly. The key to reversal of the downward trend in age at first marriage was again abortion. Not only did this substantially reduce marriages precipitated by pregnancy; the accompanying public debate helped the

young to articulate more coherently a moral code which demanded the right to express their sexuality openly and without guilt or risk of unplanned parenthood. The rising tides of feminism and individualism also caused the desirability of early marriage, and even of marriage itself, to be questioned. Moreover, significant life cycle events were no longer closely tied to marriage, the more so as soaring real estate values rendered home ownership a more remote prospect. Marriage became a less meaningful event, and the flexibility offered by informal cohabitation became more appealing.

Widespread rejection of the notion of marriage as a requisite for cohabitation was confirmed by data showing a much higher level of coresidence at marriage in 1976 than in 1961. Coresidence levels had risen substantially for virtually all age, marital status, relative age, and relative marital status groups. Some groups had been more affected than others, and some of these differentials pointed to the importance of changed attitudes among women to the increased incidence of living together. However, it could not be concluded that the traditional pattern of cohabitation commencing at marriage had, as of 1976, ceased to be the dominant model in New Zealand.

Divorce

Historically New Zealand's divorce rate has risen sharply in response to major legislative reforms and social dislocations (Chapter 7). Before World War 2 the former characteristically extended divorce to new groups of married couples. The War itself, except insofar as it helped set in motion the process of attitudinal change which today sees marriage widely regarded as no longer necessarily permanent, had

a relatively modest lasting impact on marital stability.

Marriage cohort divorce rates increased from the early 1960s at longer marriage durations. At this time the pattern of married women rejoining the labour force as their children grew older was becoming firmly established, and the two trends are very likely linked. The overall divorce rate really began to rise after the passage of the Matrimonial Proceedings Amendment Act 1968, but in the longer term this Act probably affected the normative more than the formal availability of divorce. Introduction of the Domestic Purposes Benefit (DPB) at about the same time was a more important legislative event, because it, too, affected wives' ability to be self-supporting. Both parliamentary initiatives were, however, to a large extent responses to demands within the community, and these can in turn be traced to several social and demographic trends.

By the 1960s marriages had to survive rather longer, and for longer with no children present, than they had had to in previous generations. Earlier marriage, more marriages precipitated by pregnancy, and reduced parental influence over courtship had also raised the scope for poor mate selection. Women, under the influence of resurgent feminism and their growing capacity to earn income, began to demand more from marriage, whilst increased employment of wives exposed both sexes to potential new partners and undermined the traditional household division of labour. Material aspirations were high following a long period of prosperity, and this, together with such things as better education and diminished respect for the Church, saw people's values assume a more individualistic emphasis.

With the rapid increase in the divorce rate since 1968, remarrying divorcees have formed larger proportions of New Zealand marriage cohorts. However, at ages below forty divorced females have since the mid-1960s become more reluctant to remarry, while males have done likewise at these ages since the early 1970s. The trend among female divorcees, especially those divorced in their thirties, has been particularly strong, and it was argued that since the DPB was introduced proportionately fewer divorces have been ultimately precipitated by the remarriage process itself. However, simple disenchantment with marriage, a growing preference for consensual remarriage, and decreased economic incentive to remarry are also plausible explanations.

In Chapter 8 attention was turned to correlates of divorce among successive post-1938 marriage cohorts. Early marriages were found to have been especially divorce-prone and to have remained so as the divorce rate rose. Relative age of bride and groom affected the likelihood of divorce differently depending on ages at marriage, but for brides aged 20-24 being older or markedly younger than one's husband both seemed to be risk factors. Consistent with overseas findings, remarriages of divorcees were less stable than first marriages, although there was some hint that growing caution over formal remarriage may be moderating this relationship. Evidence was also found which suggested, first, that divorcee-spinster marriages had lasted better than bachelor-divorcee ones, and second, that lately the determination of once-married partners in these types of marriages to resist their formal dissolution had diminished.

Bridal pregnancy was clearly associated with divorce over marriage ages 16-39, but not within age-at-marriage subgroups. It was concluded that difficulties experienced by bridally pregnant couples have been substantially functions of their youth and of background factors common to others who married young. Unexpectedly, marriages producing a first child after 8-11 months had been more stable than those with a first birth interval of one year, particularly for bridal ages 16-19 but also for ages 20-24. But perhaps more significantly, comparatively high divorce rates for women married during the 1960s at ages 20-24 and first giving birth 3-4 years later suggested that the transition to parenthood has become more difficult as a dual-income start to married life has become the norm.

Civil marriages had been consistently less stable than religious ones. Among religious marriages, some divorce rate differentials by denomination of celebrant seemed more functions of willingness to marry non-adherents than of doctrinal differences, although change in the Church of England's official stance on divorce appeared to have seen Anglican divorce rates rise relative to Catholic rates. The latter, for all the Catholic Church's condemnation of divorce, had risen as fast or faster in recent years than those for major Protestant denominations. As to country of birth, the most notable finding was that marriages during the 1950s and 1960s of males born in England and Wales, and particularly those to brides born in New Zealand, were especially likely to have ended in divorce.

The final independent variable examined was an occupation-based index of socio-economic status. Although the data used had several shortcomings, the negative relationship between socio-economic status

and divorce appeared to have weakened since the mid-1960s. This was taken as confirming that normative sanctions against divorce had lost some, if not much, of their effectiveness.

The final analytic chapter (Chapter 9) focused on children in divorce and solo parenthood. No firm conclusion could be reached as to whether, cross-sectionally, children were a deterrent to marriage dissolution. Over time, however, the distribution of divorcing couples by family size had shifted noticeably from the 0-1 to the 2-4 child categories. Sharply increased period rates of involvement of children in separations leading to divorce were indicated for the decade 1966-76, and while no birth cohort had yet experienced parental loss through divorce on the scale indicated for the latter date, some were well on the way to doing so. Moreover, broadening one's thinking to include children experiencing only informal dissolutions of either formal or consensual marriages it was possible, if conditions in 1980 remained unchanged, that twenty to twenty-five percent of children born that year would experience a permanent parental separation by age sixteen.

As the divorce rate has risen, custody awards have favoured mothers more than ever. Probably proportionately fewer divorces of couples with dependent children have involved mothers abandoning their families, as these seem to be the sorts of circumstances in which awards to fathers are most often made.

The number of solo parent families probably rose by over fifty percent during 1966-76, until at the latter date almost one child in ten aged under fifteen currently lived in such a family. Solo parenthood was also common earlier in New Zealand's history when

parental mortality was high. Today marital breakdown is its major cause, and the incidence of solo mother families is unprecedented. Ex-nuptial childbearing tends to create one-child solo mother families which often live in multi-family households. Widowed solo mother families are also small, but the children in them are much older.

Marital breakdown creates larger solo parent families and is overwhelmingly the main reason for school-aged children living with solo parents. It also creates larger and younger solo mother than solo father families. Generally solo mothers are younger and more often non-European than husband-present mothers, especially if never married. They are members of the labour force to about the same extent for any age of youngest child, but probably because of New Zealand's welfare benefit structure are more likely to be employed full-time. Widowed solo mothers are the most dependent on welfare, while of solo mothers from broken marriages those with older children and those who still consider themselves to be 'married' rely least on the State. Home ownership is lower among non-widowed solo mothers than among widowed and husband-present mothers, and these solo mothers are clearly overrepresented in Auckland, New Zealand's largest city and the home of most of its Polynesian population.

10.2 DISCUSSION: WHAT HAS BEEN HAPPENING TO MARRIAGE AND THE FAMILY IN NEW ZEALAND AND WHERE ARE THEY HEADED?

The second of two broad objectives established in introducing this study was to provide a sounder socio-demographic basis for assessing the current status of, and future prospects for, marriage and the family in New Zealand. These are not issues that have

attracted much scholarly attention as yet, unlike overseas, where they have attracted a good deal. [1] Indeed, research literature on New Zealand families generally is more notable for what it does not cover than for what it does cover (Swain, 1978), and it has only been since about 1970 that a reasonably concerted effort to fill some of the gaps has been made (Koopman-Boyden, 1978). [2] But that is not to say that there have not been frequent claims that 'the New Zealand family' is seriously threatened. For example, the 1954 Mazengarb Report, having catalogued a series of social ills and undesirable social trends, concluded:

It is the view of the Committee that during the past few decades there have been changes in certain aspects of family life throughout the English-speaking world leading to a decline in morality as it has generally been understood. A remedy must be found before this decline leads to the decay of the family itself as the centre and core of our national life and culture. (Mazengarb, 1954: 45)

Gloomy prognoses for the family in New Zealand invariably presuppose that there is a typical, and inherently preferable, structural model. The reality is that there has always been diversity among New Zealand families, both structural and with respect to family roles and relationships (McCreary, 1969; Swain, 1978; Social

[1] The many American and British studies and collections of readings include those by Rosser and Harris (1965), Edwards (1967), Pollak (1967), Elliot (1970), Otto (1970), Winch (1970), Barbeau (1971), Cooper (1971), Keller (1971), Zimmerman (1971, 1972a, 1972b), Bernard (1972), Olson (1972), Schulz (1972), Smith and Smith (1974), Thamm (1975), Giele (1976, 1978), Haspel (1976), Duberman (1977), Keniston (1977), Lasch (1977), Libby and Whitehurst (1977), and Savells and Cross (1978).

[2] A comprehensive bibliography of the family in New Zealand covering the period until 1974 has been published by Koopman-Boyden (1975). More recent material appears in, or is referred to in, such volumes as those by Koopman-Boyden (1978) and Ritchie and Ritchie (1978).

Development Council, 1981). To speak of 'the New Zealand family' is thus to speak of a singularly elusive phenomenon and to perpetuate a simplistic image of how New Zealanders have historically organised their domestic lives. Accordingly the discussion which follows is concerned rather with 'the family in New Zealand'.

Evidence presented in this thesis establishes the period 1945-80 as one of unprecedented social change in New Zealand. New standards of sexual behaviour have evolved to the point where the enjoyment of sex is far less the prerogative of males and of married couples than it once was. As it proceeded, this not yet necessarily completed process naturally had some undesirable consequences. Increasing proportions of females became unintentionally pregnant at ever younger ages. They did so partly because the Judaeo-Christian moral code could not be overthrown overnight; it shrouded premarital sex in guilt (Stewart, 1973) and, through the attitudes of those in authority, limited young people's access to the means of preventing pregnancy. Traditional morality also caused many couples to respond to pregnancy by marrying, whilst others undoubtedly married so as to reconcile its tenet of premarital chastity with peer group pressure to be sexually active. The impact which these influences have had, through variables related to early marriage and poor mate selection, on recent period levels of marital breakdown has possibly been substantial.

Transitional instability is inevitable when old and new moral or social codes clash. However, transitions are, by definition, temporary, so that one must always be wary of too readily attributing permanence to the undesirable consequences of social trends. It is

something of a paradox that while proportionately more childbearing in New Zealand occurs outside formal marriage today than ever before, yet the extent to which ex-nuptial children are wanted and planned has almost certainly increased markedly since 1970. That is not to claim that New Zealand society has eliminated all adverse consequences of a more permissive sexual morality. The practising of that morality more openly and with greater ideological conviction during the 1970s has been greatly facilitated by improved access to induced abortion, whereas ideally fertility control would be based exclusively on contraception. Moreover, childbearing following unintended nonmarital conception continues to disrupt the lives of some young women, and perhaps especially women from lower status backgrounds.

Insofar as New Zealand young people are today less willing than earlier post-war generations to allow an unintended pregnancy or the desire for regular sex to dictate when they marry and when they become parents, prospects for marital happiness and family stability should have been enhanced. On the other hand the sexual revolution has undoubtedly also had a destabilising influence on marriages and families. It has increased the scope for forming extramarital relationships by increasing the pool of potential partners. Then again, through the fuller sexual identity it has seen women acquire, and in conjunction with forces making for greater emphasis on personal happiness and satisfaction in life, it has caused the quality of the marital sexual relationship to become a more important barometer of the quality of the marital relationship as a whole.

Post-war trends in the formation of conjugal unions in New Zealand have been closely linked with changes in standards of

premarital sexual behaviour. Indeed it would seem that the latter were largely brought about as a consequence of young people's resolve, following the Depression and World War 2, to let their hearts dictate when they married. In firmly wresting from their parents control over courtship, mate selection, and the decision to marry they established a generational independence which, given affluence, daily contact with peers through the education system, and widespread access to motor vehicles, rendered increased premarital sexual activity inevitable. Through the 1960s, as already intimated, the direction of cause and effect probably reversed to some extent - the gathering momentum of the sexual revolution helped prolong the decline in age at first marriage. The pill, and the capacity it gave couples to delay the first birth, was of major significance here. But as the first birth interval widened it also became certain that eventually the notion of marriage as a requisite for cohabitation would be queried.

By the mid-1970s a sizeable and growing minority of first marriages involved couples who already lived together. Clearly the concept of trial marriage has entered the courtship process on a not insignificant scale, although how consciously cohabiting relationships are treated as trial marriages, even by couples who eventually do marry, is unknown. The trend toward informal cohabitation undoubtedly also embraces an element of outright rejection of formal marriage. Data on this phenomenon are as yet lacking. Obviously, though, formal marriage is nowadays being approached more circumspectly, and in some quarters with outright suspicion.

Contemporary concern for the family in New Zealand rests heavily on an awareness that the divorce rate has risen rapidly and that, in

association with this trend, reconstituted, and more especially solo parent families have become more common. Data on divorce must be interpreted with special care, but for all that one can hardly conclude other than that marriages in New Zealand have since the late 1960s become considerably more prone to disrupt to the point of permanent separation. Many of the forces identified in reviewing trends affecting marriage and the family in the West (Chapter 1) are reflected here. Equality, personal happiness, and the retention of individual identity are to a rather greater extent than formerly qualities demanded in a marriage today, and their elevation in society's hierarchy of values can, as in other countries, be traced mainly to the youth of the 1960s and the Women's Movement.

Potentially, the new feminism has had an especially destabilising influence on marriages in New Zealand. The male-centredness of society, rooted in the institution of male mateship to which the nineteenth century frontier period gave rise (Chapter 7), has long invited rebellion by women. It produced a very strict division of marital roles in which the place of the wife and mother was very definitely at home with the children (Ritchie and Ritchie, 1970, 1973); it limited women's social horizons (McCreary, 1969); and it left many wives bereft of emotional fulfilment (Philips, 1980). Through the 1970s there has undoubtedly been a considerable female reaction to this state of affairs. It has been facilitated by the economic independence which married women have acquired through labour force participation and the advent of the DPB. Nevertheless, one has the intuitive feeling that many New Zealand marriages have to date proved surprisingly resilient to feminist ideology. Possibly the open and unsubtle manner in which New Zealand women have been said to

dominate the home (Ausubel, 1960) has limited their acceptance of feminist ideals and also helped them to achieve greater sharing of domestic duties without destroying their marriages.

In appraising the upsurge in New Zealand's divorce rate it is wise to bear in mind several points. First, early marriage is a well established correlate of marital breakdown (Chapter 8), so that to some extent a higher divorce rate has been a logical response to declines in male and female ages at first marriage during the 1950s and 1960s. Second, marriage cohorts of the period 1945-70 almost certainly contained unprecedentedly high proportions of individuals with marginal orientations toward marriage and parenthood who were simply swept by the tide into conjugal and parental roles. [3] Third, due consideration must be given to the recency of demands for greater equity and greater recognition of individuality within marriage. Finally, the period since the mid-1960s has apparently seen a breaking down of normative sanctions against divorce which, along with innovations such as the DPB, has probably brought a backlog of unsatisfactory marriages before the divorce courts. All of these considerations suggest that the recent period incidence of divorce partly reflects a unique combination of circumstances which will not continue indefinitely.

In the immediate future the interest so far as divorce in New Zealand is concerned will be in the effect of the introduction of

[3] Carlson (1979) makes this point in respect of American marriage cohorts which produced the post-war baby boom. He sees the trend having affected American divorce rates primarily indirectly via its impact on the socialisation of children who married during the 1960s. But it also seems likely to have had a more direct impact on rates of marriage breakdown.

irreconcilable breakdown of marriage as the sole ground for divorce. It may not be too dramatic, for the waiting period before final divorce proceedings can be taken remains the same as under the most commonly used ground under the old law. Moreover, couples who formerly would have obtained quicker divorces on the ground of adultery will have to wait out the same two year period as everyone else. On the broader issue of marital breakdown, however, it is clear that divorce statistics will in future give an even less complete picture than they do now. Disruption among the increasing numbers of consensual marriages in New Zealand is a phenomenon which there is as yet no satisfactory way of monitoring.

What constitutes a family is a notoriously difficult question to answer (Social Development Council, 1981). There can be little question, however, but that the majority of New Zealanders live in families and will continue to do so. Previous studies have traced important historical changes in the size, process of formation, and demographic character of New Zealand families (Gilson, 1969, 1970; Gibson, 1971; Vosburgh, 1971, 1978; O'Neill, 1979). What the data presented here suggest is distinctive about the contemporary period is the increased prevalence of variant family structures (especially among families which perform a child-socialising function), weakening of the relationship between formal marriage and family formation, and significant change in marital roles and role expectations.

It is from the perspective of children and their wellbeing that it is most important to consider these trends. Child socialisation and the meeting of emotional needs are perhaps the two major functions of modern Western families, and it is undoubtedly true that the

perceived importance of the latter has of late risen relative to that of the former. It could be argued convincingly that in the earlier post-war period New Zealand families overstressed their children's interests at the expense of conjugal relations. Now the danger is of overcorrecting.

Whether this has happened, or is happening, cannot be determined satisfactorily without further research. It has been shown (Chapter 9) that for New Zealand children to live through a parental divorce has become a much more common experience, and it follows that living in solo parent and reconstituted families has become more common as well. A start has been made toward understanding the problems of solo parent families (see footnote 18, Chapter 9) and of children whose parents separate (Clay and Robinson, 1978), but more work based on statistically reliable samples is called for. There has been no attention given to reconstituted families and the adjustment of children to stepparents. Longitudinal and retrospective studies are also needed to monitor the life cycle experience of children in solo parent and reconstituted families, and further research should examine objectively the claim that children are better off in these types of families than with unhappily married natural parents. Finally, it is important to study cohabiting parent families and not simply assume that, from the point of view of children, they are no different from married parent families. If cohabiting parents are as a group ideologically less committed to conjugal permanence, are their children less secure?

New Zealand is not witnessing the breakdown of the family. Rather it has seen a particular family model - that embracing the

nuclear unit of two adults and their children wherein the former have clearly defined domestic and breadwinner roles and are bound together by a formal marriage contract which they see as lifelong - prove less and less satisfactory for more and more individuals. Except for perhaps considerable modification of expectations and behaviour along the dimension of conjugal roles, this model undoubtedly remains the dominant and preferred one. Webster and Williams (1977) cite evidence for the continued health and viability of the New Zealand kinship system. They comment that problems faced by families seem to be largely personal, and that one should be wary of inferring 'system change' from indicators of marriage breakdown. The family in New Zealand has been required to adjust to very rapid social change. Adjustments are being made, and young people in the 1980s seemingly are assuming family responsibilities in a more careful and considered way than did those in the 1950s and 1960s. At the same time changes that have occurred in personal values and in the hold of religiously based behavioural norms over society have rendered conjugal unions and the nuclear family inherently more fragile. Formal marriage may increasingly become a casualty of this state of affairs. So far as families are concerned New Zealand society must accept greater diversity and endeavour to understand and alleviate problems specific to particular types of families and to transitions between them.

10.3 POSSIBILITIES FOR FUTURE RESEARCH

One of the features of this thesis is that it is largely based on data from official sources. Such sources, the research potential of which is often secondary to their administrative utility, cannot possibly provide more than a partial understanding of social change.

Indeed, one has been ever conscious while writing this volume of the frequency with which the phrases 'may', 'probably', and 'almost certainly' have been used. This alone suggests that considerable scope exists for further, especially survey based, research.

A few of the possibilities have been noted already in this chapter. Concerning premarital sexual behaviour there remains a need for research of the type undertaken by Kantner and Zelnik in the United States (see footnote 20, Chapter 3) to be conducted in New Zealand. Regrettably the chance to measure changes in levels of sexual activity, use of reliable contraception, experience of abortion, and so on on a national basis over a period when obviously there were substantial changes has been missed. But unintended pregnancy remains a problem for adolescent girls, and the value of research which would yield nationally representative data on its extent in different sectors of the population, on the circumstances of and reasons for such pregnancies, and on their resolution is plain. Periodic repetition of this research should permit closer monitoring of future trends in premarital sexual behaviour.

With respect to trends in the formation of conjugal unions, a really intriguing topic concerns the relative explanatory importance of postponement as against rejection of marriage in accounting for the sharp drop in first marriage rates since 1971. The recent tendency for ex-nuptial fertility rates at ages 20-29 to begin rising again may be relevant here, and trends over the next few years should be closely watched. More generally, the whole question of the precise nature and extent of the trend toward informal cohabitation and what it means has yet to be answered in the New Zealand context. To what extent has

trial marriage been consciously incorporated into the New Zealand courtship system? How widely do cohabitants see their relationships as appropriate settings for family formation? These are some of the unknowns that good survey research might help to resolve.

Data available from divorce files and marriage registers have limited potential when it comes to understanding divorce and why it occurs. Survey research is once again called for, and that research should focus on the broader concept of marital breakdown. It also needs to be recognised, quickly, that keeping track of the extent of marital breakdown has become a much more complex task with the increased popularity of consensual marriage. The question immediately arises of when a living together arrangement becomes a consensual marriage. Surveys are needed which will probe the stability of informal cohabiting unions, but the data they yield must be interpreted carefully in relation to the perceived purposes and permanence of those unions and in relation to whether they support children.

The consequences of trends discussed in this thesis for New Zealand's children are undeniably the most urgent issue to be resolved at this time. Any number of individuals are prepared to assert that they are bad, good, or neither of these things. What are needed are objective assessments, based on research, of the family circumstances in which children are being raised in the 1980s. Some of the sorts of studies needed were listed toward the end of section 10.2. Appropriately publicised, such studies will permit adults in New Zealand to make decisions regarding their personal lives better informed of the possible advantages and disadvantages for their

children, and better prepared to help children cope with problems they may face. They will also assist the State and other welfare agencies in New Zealand to identify areas of need within the family system, to understand those needs, and to devise policies which will meet needs to the maximum possible extent.

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APPENDIX 1

ESTIMATION OF ANNUAL MID-YEAR DISTRIBUTIONS OF UNMARRIED FEMALES AGED 15-44 BY FIVE-YEAR AGE GROUPS

In order to calculate several of the indices used in the discussion of ex-nuptial fertility and nonmarital pregnancy trends in Chapters 2 and 3 it was necessary to estimate the mid-year distributions by five-year age groups of unmarried females aged 15-44 for the requisite years. Annual estimates for the period 1913-80 were required for the non-Maori population, and annual estimates for the period 1962-80 for the Maori and total populations.

The initial step was to obtain mid-year distributions of the non-Maori, Maori, and total female populations aged 15-44 by five-year age groups for the periods in question. Annual 'mean' population estimates by sex, single years of age, and ethnic origin were available for the period 1937-80 from the Department of Statistics. These were prepared by adjusting census distributions for subsequent vital events and net external migration. Inspection of the data revealed certain irregularities, and adjustments were made so as to eliminate these (see Appendix 4). The required distributions for the Maori and total female populations, and for the non-Maori female population for the period 1937-80, were taken from these adjusted data.

Also available from the Department of Statistics were annual estimates by sex and single years of age of the non-Maori population

as at 31st December for the period 1921-80. From these data, once again following some adjustment (Appendix 4), the required non-Maori distributions for the period 1922-36 were obtained. Using a conventional lexis grid approach it can be shown that:

$$P(m)(y) = 0.5[[P(y-1) + 0.5p(x-1,y-1) - 0.5p(x+4,y-1)] + [P(y) + 0.5p(x+5,y) - 0.5(p(x,y))]] \dots\dots(1)$$

where $P(m)(y)$ is the population aged x to $x+4$ at mid-year in year y .

$P(y)$ is the population aged x to $x+4$ as at 31st December in year y .

$p(x,y)$ is the population aged x as at 31st December in year y .

Distributions for the period 1913-20 were obtained from 1911, 1916, and 1921 census data by a process of linear interpolation. The general approach was, again with the aid of lexis diagrams, to trace the cohort aged x to $x+4$ at mid-year in year y backward and forward to the census dates immediately preceding and following that point in time. The sizes of the cohort at these two dates were then determined, assuming where necessary that individuals enumerated in a single-year age category were evenly distributed through that category by exact age. Linear interpolation was then used to estimate the size of the cohort at mid-year in year y . A similar method was followed to obtain the required distribution for 1921, except that the interpolation utilised 1921 census data and the Department of Statistics' estimates as at 31st December of that year. A more refined approach would have adjusted census distributions for subsequent mortality and net external migration, but the necessary migration data were not available.

Having obtained the desired mid-year distributions of the non-Maori, Maori, and total female populations aged 15-44 by five-year age groups the second step was to estimate for each distribution the proportion of females not currently married in each age group. These proportions were first calculated for all census dates between 1911 and 1976 for the non-Maori population and for those between 1961 and 1976 for the Maori and total populations. Annual mid-year age-specific proportions of females not currently married were then estimated intercensally by linear interpolation for the periods 1913-25 and 1951-75 for the non-Maori population, and for the period 1962-75 for the Maori and total populations. Proportions for all three populations for the period 1976-80 were estimated by linear extrapolation of the 1971-76 intercensal trends.

For two reasons it was felt inappropriate to rely on intercensal linear interpolation in estimating proportions of non-Maori females not currently married over the period 1926-50. First, this interval embraced two abnormally long intercensal periods (1926-36 and 1936-45). But more importantly, the Depression and World War 2 introduced such turbulence into patterns of marriage and divorce as to render assumptions of linear change highly suspect. Accordingly recourse was made to annual estimates of the age and marital status distribution of the non-Maori female population as at 31st December prepared by Jain (1973) for the period 1921-67.

Working from a 1921 base population constructed partly from vital data and partly from 1921 census data, Jain derived his estimates for subsequent years on the basis of recorded vital events and net external migration. Whereas censuses since 1926 have recognised the

marital status categories 'married', 'never married', 'widowed', 'divorced', and 'legally separated', Jain's data recognise only the first four of these. Nevertheless, the pattern of change apparent in age-specific proportions of females not currently married computed from these data was deemed to be of value, because it reflected short-term changes in patterns of marriage and divorce.

Age-specific proportions of non-Maori females never married, widowed, or divorced were first estimated for the dates of the 1926, 1936, 1945, and 1951 censuses, and for 30th June in each of the years 1926-50, by linear interpolation between Jain's proportions as at 31st December in the year in question and the preceding year. The mid-year estimates thus derived were expressed in the form:

$$E(m)(y) = E(1) + p[E(2) - E(1)] \dots\dots(2)$$

where $E(m)(y)$ is the mid-year estimate for age group x to $x+4$ in the year y derived from Jain's data.

$E(1)$, $E(2)$ are the Jain estimates for age group x to $x+4$ at the census dates defining the intercensal period in which 30th June, year y lies.

p is the proportion of the net intercensal increment $[E(1) - E(2)]$ which must be added to $E(1)$ to obtain $E(m)$.

Equation (2) was solved for p , and then the mid-year estimates finally adopted were calculated by substitution in the equation:

$$E'(m)(y) = E'(1) + p[E'(2) - E'(1)] \dots\dots(3)$$

where $E'(m)(y)$ is the final mid-year estimate for age group x to

$x+4$ in year y .

$E'(1)$, $E'(2)$ are the proportions of non-Maori females aged x to $x+4$ who were never married, widowed, divorced, or legally separated at the census dates defining the intercensal period in which 30th June, year y lies.

The procedure just described yielded plausible results for most age groups over most of the three intercensal periods to which it was applied. Difficulties arose with one age group/intercensal period combination because the direction of the net intercensal change in the proportion not currently married obtained from census data was reversed for estimates derived from Jain's data. In this case (age group 30-34 for the intercensal period 1926-36) a more ad hoc procedure was followed. This sought to allow the pattern of change apparent in the Jain estimates expression whilst maintaining the level and direction of net intercensal change indicated by census data.

Having by now derived mid-year distributions by five-year age groups of the non-Maori, Maori, and total female populations aged 15-44 for the required periods, and having estimated the corresponding age-specific proportions not currently married, simple multiplication yielded the desired mid-year distributions of unmarried females by age.

As a postscript to this appendix, three further points should be noted. First, because of the disruptive effect of World War 1 a case could be made against the assumption of linear change in age-specific proportions not currently married over the intercensal periods 1911-16 and 1916-21. As Jain's data begin at 1921 the procedure followed for the period 1926-51 could not be used. Neither was it possible, for

reasons of data availability, to backdate Jain's series to take in the period in question. However, whatever errors may have been introduced by the assumption of linear change, their impact on various measures of ex-nuptial pregnancy and childbearing reported in Chapter 2 is likely to have been minor.

Second, the intercensal period 1921-26 incorporates an extension of the definition of the 'unmarried' population with the recognition for the first time at the 1926 census of the marital status category 'legally separated'. It would have been possible to maintain the original definition (never married plus widowed plus divorced persons) right through, and to argue that anyone who is legally separated is also still legally married. Provided data are available, however, it is desirable to define even informally separated women as part of the population at risk of ex-nuptial conception and childbearing (Berkov and Sklar, 1975). The relatively minor inconsistency introduced into the historical series at a time when the switch in definitions could only be described as of no consequence was thus considered preferable to accepting a narrowly defined risk population during the more recent period of substantial change in nonmarital sexual behaviour.

Finally, although ex-nuptial fertility data refined by age of mother are not available before 1913, total non-Maori ex-nuptial live births are available from 1873. It was thus possible to calculate illegitimacy rates for the period 1873-1912 (see Table 2.1 and Figure 2.2), but in order to do so annual mid-year estimates of the number of unmarried non-Maori females aged 15-44 were required. These were derived following the same methodology as was used to estimate the mid-year distributions by five-year age groups for the period 1913-20

(see above), data from the ten censuses conducted between 1871 and 1916 forming the basic input.

APPENDIX 2

SUPPLEMENTARY TABLES

Table A2.1

AGE-SPECIFIC BRIDAL PREGNANCY RATIOS: NON-MAORI POPULATION 1913-1970

1 Year	Age of Bride					2 40-44
	16-19	20-24	25-29	30-34	35-39	
1913	50.8	25.7	15.1	9.9	8.5	3.8
1914	46.9	23.3	13.3	9.5	7.7	5.6
1915	39.7	19.4	10.9	8.5	6.1	3.8
1916	43.7	21.6	12.1	10.1	7.2	2.6
1917	45.9	25.2	13.4	9.3	8.5	2.9
1918	48.0	23.5	13.1	9.1	5.6	2.9
1919	44.8	21.5	11.1	6.8	5.2	3.0
1920	42.9	21.3	11.3	7.3	5.7	3.5
1921	45.2	22.6	12.7	10.2	8.6	4.1
1922	51.0	24.2	12.8	9.7	7.5	4.2
1923	48.7	23.3	12.3	8.8	6.9	3.6
1924	47.1	23.0	12.4	10.4	8.0	2.9
1925	51.6	22.8	12.4	9.7	8.2	2.3
1926	52.7	22.6	11.6	9.3	7.5	2.2
1927	53.7	23.8	11.6	9.6	5.5	3.4
1928	50.7	23.0	11.2	9.4	6.8	3.1
1929	51.9	22.6	10.9	9.6	7.5	3.2
1930	53.0	22.6	11.1	10.1	7.5	3.1
1931	54.1	25.0	13.2	10.9	7.8	3.0
1932	54.2	24.3	12.4	9.3	8.4	2.1
1933	48.4	23.9	10.6	8.2	6.6	1.2
1934	50.1	21.5	9.4	8.1	3.7	1.7
1935	48.6	19.3	9.5	6.7	4.1	3.4
1936	46.7	17.1	8.7	7.7	5.1	1.9
1937	43.8	17.2	7.8	8.5	4.8	2.2
1938	45.5	15.7	7.7	6.1	4.2	2.1
1939	40.7	13.9	7.0	5.8	5.2	2.7
1940	34.7	12.2	6.8	5.9	3.9	3.0
1941	38.5	13.2	8.1	6.0	4.4	5.0
1942	35.5	12.9	7.4	5.5	3.8	4.3
1943	37.0	13.6	7.2	6.3	4.8	3.8
1944	35.9	12.9	7.2	7.9	4.8	2.7
1945	34.3	13.1	7.2	6.1	3.6	2.0
1946	31.3	12.0	7.5	6.2	4.8	3.1
1947	34.7	13.1	8.9	7.5	5.6	3.7
1948	34.7	12.6	9.2	7.4	5.5	2.7
1949	35.5	12.1	8.7	7.6	5.4	2.4
1950	34.4	12.2	8.6	8.5	5.8	3.5
1951	34.9	12.2	8.9	8.5	6.9	3.2
1952	34.7	13.1	9.2	8.6	7.6	2.6
1953	35.9	12.8	9.1	9.2	7.5	2.6
1954	37.9	13.3	10.0	9.4	7.3	2.3
1955	37.8	13.1	10.4	9.2	6.8	2.5
1956	35.9	13.8	10.7	9.8	7.8	2.3
1957	38.4	14.2	11.2	9.7	7.5	2.8
1958	39.1	14.4	10.7	10.2	7.9	2.2
1959	40.5	15.0	11.5	9.4	6.3	2.4
1960	41.1	15.4	11.9	9.7	7.7	3.2
1961	41.0	16.1	12.8	10.3	9.0	1.6
1962	44.7	17.1	11.5	11.0	7.3	3.1
1963	44.9	17.5	13.1	12.6	8.6	3.1
1964	45.1	17.4	12.8	10.8	10.0	2.4
1965	44.7	16.5	12.9	9.9	8.2	2.4
1966	43.4	16.7	11.9	10.3	7.0	3.4
1967	43.1	16.3	11.4	10.1	7.1	1.7
1968	42.4	16.0	11.5	11.0	6.1	2.6
1969	40.9	14.9	11.5	10.7	7.0	2.9
1970	39.8	14.8	12.2	10.0	9.1	2.0

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-70; unpublished data supplied by the Department of Statistics.

- 1 Calculations for the periods 1941-42 and 1961-64 are affected by the need to estimate the distributions by age of mother of live nuptial confinements occurring within marriage durations 0-7 months for the years 1942 and 1962-64 (see Appendix 3).
- 2 Ratios for this age group are without exception based on fewer than twenty bridal pregnancies.

Table A2.2

AGE-SPECIFIC PREMARITAL CONCEPTION RATIOS: NON-MAORI

Year	POPULATION 1913-1971					
	16-19	20-24	Age at Confinement		35-39	40-44
			25-29	30-34		
1913	65.6	28.4	10.5	4.6	2.9	1.8
1914	68.8	32.7	16.0	10.5	11.1	11.2
1915	67.6	31.5	13.1	8.4	10.0	18.8
1916	66.4	27.3	11.2	9.1	6.9	8.9
1917	59.4	27.3	11.1	7.6	10.4	7.8
1918	68.6	31.9	12.6	8.5	6.7	5.8
1919	64.7	30.9	13.7	7.5	8.9	9.6
1920	68.6	31.3	13.5	8.4	6.1	10.1
1921	70.6	30.5	12.8	8.5	10.6	9.9
1922	70.6	31.1	12.6	8.9	9.8	11.7
1923	74.4	33.1	13.4	9.0	8.7	11.5
1924	71.5	34.9	12.9	8.8	10.8	8.6
1925	73.4	32.6	13.5	10.2	10.3	10.0
1926	77.2	34.4	12.4	8.2	10.1	7.2
1927	77.7	35.8	12.5	9.2	7.9	12.0
1928	75.7	34.2	12.6	8.4	7.1	10.9
1929	77.0	34.5	12.4	8.8	11.1	10.0
1930	76.7	35.3	11.5	9.3	10.2	6.6
1931	74.5	34.5	12.4	9.6	9.0	10.1
1932	77.3	36.4	13.0	8.4	10.7	5.3
1933	76.3	37.4	12.6	7.7	10.4	5.3
1934	70.6	37.2	12.1	8.7	6.3	2.5
1935	76.4	34.0	12.0	7.4	5.4	10.8
1936	74.4	33.1	11.6	7.0	7.7	5.6
1937	71.4	30.8	10.2	9.4	8.1	8.6
1938	73.7	28.9	8.9	6.8	7.1	8.3
1939	71.9	25.8	8.7	5.0	7.6	8.1
1940	68.1	23.5	7.5	6.4	6.7	11.5
1941	59.5	17.7	6.2	4.4	4.7	13.3
1942	60.7	18.1	6.7	4.4	4.5	11.1
1943	61.9	18.6	7.4	4.7	4.4	8.7
1944	62.3	20.5	8.0	6.6	6.4	7.8
1945	61.3	19.1	6.8	6.3	3.7	3.4
1946	59.7	20.1	7.1	5.8	4.8	6.7
1947	59.9	19.0	7.7	5.4	6.2	13.8
1948	64.2	17.4	6.9	6.5	7.1	8.1
1949	61.9	17.6	7.4	6.4	7.2	9.7
1950	63.0	17.3	7.2	7.2	6.1	9.1
1951	62.8	17.5	6.6	7.0	9.7	11.8
1952	63.6	17.3	7.5	7.6	7.6	11.1
1953	64.8	17.6	7.3	7.5	11.4	6.9
1954	64.8	17.4	7.9	8.8	8.5	10.4
1955	68.1	18.5	7.9	8.8	9.0	7.5
1956	65.6	18.1	7.5	7.3	9.9	6.3
1957	66.1	17.9	8.2	9.0	9.4	10.4
1958	68.0	18.8	7.4	8.1	8.3	9.2
1959	71.7	18.9	7.4	8.1	9.6	6.3
1960	70.1	19.9	8.7	7.5	8.2	12.3
1961	72.6	20.9	8.9	8.0	11.6	8.3
1962	72.9	21.8	8.4	9.4	10.1	8.1
1963	74.5	23.2	8.7	10.7	9.4	13.4
1964	76.7	23.8	9.5	10.6	15.7	13.0
1965	78.4	24.7	10.3	9.0	12.1	5.9
1966	78.8	25.1	8.2	9.7	9.9	19.5
1967	79.6	25.8	7.8	7.7	14.8	11.0
1968	80.2	25.8	7.9	9.9	9.5	10.2
1969	81.9	24.0	7.0	11.1	13.3	16.5
1970	80.9	22.4	7.6	8.3	11.9	9.8
1971	80.0	23.0	8.9	9.9	12.6	14.9

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-66; unpublished data supplied by the Department of Statistics.

- 1 The premarital conception ratio indicates the percentage of live nuptial first confinements which occurred at marriage durations 0-7 months.
- 2 Calculations for 1942 and 1962-64 are affected by the need to estimate the distributions by age of mother of live nuptial confinements occurring within marriage durations 0-7 months for those years (see Appendix 3).
- 3 Ratios for this age group are without exception based on fewer than twenty nuptial confinements within marriage durations 0-7 months.

Table A2.3

AGE-SPECIFIC EX-NUPTIAL FERTILITY RATES: NON-MAORI POPULATION 1913-1979

1 Year	Age at Confinement					2 40-44
	15-19	20-24	25-29	30-34	35-39	
1913	6.9	13.1	11.5	10.8	7.6	2.8
1914	8.0	14.1	12.2	10.1	9.1	3.7
1915	6.9	12.8	11.1	9.0	7.1	2.5
1916	6.0	13.4	11.5	9.7	6.3	3.9
1917	5.9	12.8	11.3	8.6	8.5	3.8
1918	5.4	14.0	11.5	9.6	7.3	4.0
1919	4.8	14.1	10.4	8.7	7.7	4.5
1920	6.5	15.8	13.9	12.5	7.5	4.4
1921	5.6	12.6	14.0	11.2	7.4	2.8
1922	5.6	12.2	12.4	10.6	7.7	2.2
1923	5.7	11.9	13.4	10.3	7.8	3.2
1924	5.4	12.8	12.8	12.0	8.7	4.1
1925	5.3	13.0	12.2	12.2	9.0	2.8
1926	6.4	12.6	15.6	10.7	8.2	3.6
1927	6.0	11.9	12.1	11.9	8.7	3.3
1928	5.4	11.3	14.1	11.0	8.8	3.9
1929	5.2	10.8	12.8	10.9	7.5	3.5
1930	5.1	11.5	12.2	11.2	8.0	3.8
1931	5.5	10.2	11.9	9.4	7.8	2.6
1932	5.3	9.6	9.5	10.6	7.1	3.0
1933	4.3	8.4	8.5	10.7	7.0	2.6
1934	4.8	8.6	8.8	9.4	6.2	2.9
1935	4.1	8.0	8.1	7.6	5.7	2.0
1936	4.0	9.3	8.3	7.6	6.6	2.7
1937	4.5	9.5	9.7	7.7	8.2	3.5
1938	4.7	9.0	9.6	8.5	6.9	2.9
1939	4.3	10.3	8.1	8.2	7.9	2.7
1940	5.2	11.2	10.9	10.6	8.1	2.7
1941	4.6	12.6	11.8	10.6	7.1	2.4
1942	4.7	13.4	11.9	10.7	6.9	2.9
1943	5.0	14.7	12.2	11.3	6.7	3.6
1944	7.3	19.7	18.5	13.3	9.5	2.1
1945	6.1	16.7	19.4	13.3	9.1	3.5
1946	5.5	16.6	22.8	15.2	9.5	4.1
1947	5.7	17.3	23.1	13.9	8.3	3.8
1948	6.0	16.1	22.6	17.5	9.5	3.9
1949	6.3	17.4	20.5	17.3	10.5	4.4
1950	6.6	19.3	22.6	18.2	12.5	3.2
1951	7.3	21.0	28.5	21.2	12.0	4.4
1952	8.4	23.8	32.0	22.2	12.7	3.5
1953	7.4	22.3	29.6	26.0	13.8	4.0
1954	7.0	25.7	32.6	27.0	13.7	4.6
1955	7.9	27.1	37.9	30.0	15.6	5.5
1956	8.1	28.3	39.9	31.5	17.9	4.1
1957	8.9	31.2	43.1	33.7	21.7	4.9
1958	9.9	30.8	47.2	37.8	22.2	4.1
1959	10.3	30.8	49.0	42.1	24.3	4.5
1960	11.9	32.6	47.7	40.2	21.8	5.5
1961	13.5	34.8	53.8	48.8	25.8	7.6
1962	14.9	40.9	52.8	48.1	27.4	5.7
1963	16.6	42.2	55.4	46.7	28.7	5.9
1964	18.3	45.1	57.5	42.4	27.3	5.5
1965	19.9	46.0	53.5	46.0	23.8	7.5
1966	21.4	47.6	51.3	40.3	22.9	5.2
1967	23.8	52.9	54.0	37.9	21.5	8.2
1968	24.7	53.4	54.8	42.2	23.0	6.9
1969	23.7	50.5	58.3	37.7	24.4	5.6
1970	24.2	51.4	55.3	40.8	18.4	5.5
1971	25.4	54.2	63.1	43.1	20.5	6.0
1972	27.4	53.8	60.6	41.9	23.5	6.2
1973	26.9	48.4	54.9	39.9	23.9	4.9
1974	26.7	47.9	53.8	38.4	19.1	5.7
1975	24.7	43.9	54.7	37.2	18.9	5.5
1976	23.7	44.5	50.9	35.2	18.5	4.6
1977	24.4	46.9	57.7	35.9	17.7	5.2
1978	23.2	45.8	57.2	35.6	16.4	4.6
1979	22.2	53.3	68.8	40.5	20.6	4.6

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-66; unpublished data supplied by the Department of Statistics.

1 Calculations for 1942 and 1962-64 are affected by the need to estimate the distributions by age of mother of live ex-nuptial confinements for those years (see Appendix 3).

2 Rates for this age group are in several instances based on fewer than thirty live ex-nuptial confinements.

Table A2.4

AGE-SPECIFIC EX-NUPTIAL CONCEPTION RATES: NON-MAORI POPULATION 1913-1970

Year	Age at Conception					
	15-19	20-24	25-29	30-34	35-39	40-44
1913	20.9	39.2	28.7	17.9	12.7	4.1
1914	20.0	36.3	26.8	15.4	11.4	3.5
1915	17.7	34.8	24.7	15.9	9.7	3.4
1916	15.9	32.3	22.5	14.5	12.0	3.6
1917	14.7	30.8	20.7	13.4	10.4	3.8
1918	13.7	31.1	19.9	12.9	9.3	4.5
1919	17.1	41.7	29.0	17.6	9.8	4.6
1920	17.6	42.3	32.1	18.6	11.0	3.8
1921	17.4	38.9	28.6	17.1	11.4	3.2
1922	17.6	38.0	27.0	16.8	10.4	3.6
1923	17.8	38.2	26.8	17.9	11.0	4.2
1924	18.1	37.5	26.7	19.6	11.6	3.3
1925	19.8	38.3	27.7	18.1	10.9	3.3
1926	20.0	38.5	26.5	18.3	10.1	3.3
1927	19.1	36.5	26.1	16.9	10.2	3.7
1928	18.7	35.2	26.0	16.5	10.1	3.7
1929	18.6	36.0	25.6	16.3	10.9	3.3
1930	18.4	35.0	24.7	15.6	9.9	3.0
1931	18.2	32.8	22.5	15.7	9.0	2.8
1932	16.7	31.7	20.3	14.9	9.1	2.5
1933	16.7	30.9	19.4	14.0	7.7	2.6
1934	15.8	28.8	19.3	12.1	6.7	2.4
1935	16.4	29.0	20.0	11.9	7.5	2.6
1936	16.9	30.0	20.7	14.5	9.4	3.1
1937	18.0	31.1	19.8	14.4	8.9	2.9
1938	18.4	31.8	19.6	12.9	9.5	2.9
1939	19.7	34.5	21.3	15.6	9.8	3.0
1940	17.2	34.2	21.9	15.2	9.2	3.0
1941	15.6	33.1	21.3	14.1	8.7	3.1
1942	14.6	31.0	19.8	13.8	8.2	3.3
1943	17.2	34.9	24.0	16.3	10.3	2.9
1944	17.4	34.4	26.8	17.2	10.6	2.8
1945	18.2	38.4	32.2	19.9	11.0	3.9
1946	20.7	44.3	38.2	21.2	12.2	4.0
1947	22.0	42.4	38.4	23.7	12.1	3.8
1948	22.6	41.6	37.5	23.6	13.4	4.1
1949	24.3	42.9	36.1	25.0	14.1	3.7
1950	25.4	45.9	38.1	27.8	14.9	4.5
1951	26.7	49.9	45.5	28.0	15.1	4.2
1952	26.6	51.7	45.4	31.2	16.9	3.9
1953	27.3	54.3	47.3	34.1	17.9	3.8
1954	29.5	59.5	53.3	36.8	18.1	4.6
1955	30.3	62.0	57.1	36.8	19.8	3.9
1956	30.8	65.7	61.0	41.6	22.4	4.7
1957	33.7	67.7	63.7	45.3	22.9	4.7
1958	36.1	69.1	65.9	49.3	24.6	4.4
1959	38.0	70.5	67.1	47.1	24.5	5.0
1960	41.9	74.3	73.6	52.2	27.9	6.1
1961	44.9	81.9	74.1	56.4	30.3	4.9
1962	47.2	84.7	74.1	56.1	30.0	5.4
1963	48.9	85.7	74.6	52.9	30.9	5.5
1964	51.0	85.9	74.6	52.5	28.1	5.9
1965	54.7	86.0	69.8	48.4	26.0	5.8
1966	58.5	87.5	69.4	45.4	25.3	6.8
1967	59.5	89.6	70.2	47.6	24.6	6.7
1968	58.6	87.7	69.8	47.4	26.3	5.8
1969	59.0	83.9	69.5	46.6	22.3	5.1
1970	60.5	88.5	78.9	50.6	21.9	5.3

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-66; unpublished data supplied by the Department of Statistics.

1 Calculations for 1942 and 1962-64 are affected by the need to estimate the distributions by age of mother of live ex-nuptial confinements and live nuptial confinements occurring within marriage durations 0-7 months for those years (see Appendix 3).

Table A2.5

1

MAORI MARRIAGES BY AGE OF BRIDE 1961 AND 1971

Age	1961	1971	1961 (after Jain)
16	62	90	25
17	118	201	62
18	167	270	76
19	170	256	84
20	165	218	77
21	166	192	80
22	93	111	43
23	71	69	38
24	38	57	26
25	58	45	19
26	22	26	16
27	29	21	8
28	28	18	6
29	19	18	9
30	21	15	7
31	13	13	6
32	14	12	6
33	16	11	4
34	8	10	4
35-39	49	41	14
40-44	34	31	11
45-49	20	21	9
50+	41	37	11

Source: New Zealand Marriage Register 1961 and 1971; New Zealand Vital Statistics 1961; Jain (1973).

- 1 Maori marriages are defined as those where either both parties appeared from their own or their parents' names to be at least part Maori, or the parents of either the bride or groom appeared from their names to both be of Maori extraction.

Table A2.6

SYNTHETIC COHORT PROBABILITIES OF MARRYING FOR THE FIRST TIME PRIOR
TO CONCEIVING A FIRST CHILD (1000q^w(x)) 1913-1976

Year	Age									Age								
	16	17	18	19	20	21	22	23	24	16	17	18	19	20	21	22	23	24
	Non-Maori									Total								
1913	3	7	17	28	38	88	84	97	111									
1914	3	9	20	31	39	97	95	113	128									
1915	3	8	19	30	41	96	89	104	114									
1916	2	6	15	23	33	75	66	68	71									
1917	2	4	12	20	26	62	53	58	54									
1918	1	5	13	25	30	74	71	84	81									
1919	2	4	17	30	41	98	102	126	142									
1920	2	7	19	32	47	110	110	132	150									
1921	1	6	15	30	40	96	90	106	118									
1922	1	5	14	29	36	90	85	103	112									
1923	1	6	16	29	38	93	92	109	121									
1924	2	7	17	28	41	97	95	110	124									
1925	2	7	15	25	40	99	93	114	136									
1926	1	8	15	25	40	95	96	108	125									
1927	2	7	16	27	39	89	96	105	109									
1928	2	7	16	28	40	87	94	110	118									
1929	3	7	16	24	39	92	95	109	121									
1930	3	5	15	23	37	85	85	96	104									
1931	2	6	15	22	35	73	77	89	88									
1932	2	6	16	24	34	74	76	90	95									
1933	2	6	17	25	34	79	78	95	107									
1934	2	7	16	26	42	88	87	105	120									
1935	3	7	17	30	47	101	105	125	148									
1936	3	7	20	37	55	112	126	146	167									
1937	2	8	22	39	61	126	135	161	180									
1938	2	10	23	46	69	149	165	194	231									
1939	2	10	28	58	84	165	198	229	273									
1940	2	9	27	53	79	143	170	187	206									
1941	1	8	21	41	58	112	126	136	139									
1942	2	7	21	40	55	102	111	121	125									
1943	2	7	20	41	59	109	112	121	129									
1944	2	9	25	47	73	132	141	150	165									
1945	3	11	30	64	97	186	211	249	303									
1946	3	13	35	74	113	224	264	307	419									
1947	3	14	37	73	115	217	238	261	305									
1948	3	13	38	74	115	216	233	255	282									
1949	3	13	39	75	116	215	227	246	262									
1950	3	13	42	86	131	244	249	267	293									
1951	4	13	44	87	132	248	258	259	287									
1952	3	13	44	89	129	238	256	265	287									
1953	4	13	40	93	142	249	266	296	322									
1954	4	13	42	95	152	271	287	308	367									
1955	3	16	48	100	158	276	297	303	370									
1956	3	17	49	103	160	270	287	288	329									
1957	3	14	48	104	165	274	291	277	318									
1958	3	12	43	108	171	273	285	261	290									
1959	3	14	42	101	174	270	277	249	278									
1960	5	15	48	103	175	288	282	254	281									
1961	5	18	51	108	176	282	283	239	244									
1962	4	20	48	100	174	266	264	217	217	3	19	47	96	164	248	242	194	186
1963	3	18	47	104	164	268	261	216	226	3	18	46	99	155	251	240	193	196
1964	4	16	47	107	170	261	266	221	245	4	17	46	101	160	244	244	198	212
1965	5	17	48	111	178	266	267	235	271	4	17	46	105	168	247	243	208	230
1966	5	18	52	114	178	261	263	214	244	4	18	50	107	168	243	240	190	210
1967	4	16	56	120	184	253	259	200	202	4	17	54	112	172	235	235	177	175
1968	4	19	56	128	192	265	257	210	202	5	19	54	120	180	244	233	185	173
1969	5	21	60	136	206	277	275	221	229	5	22	59	126	190	254	248	196	196
1970										5	26	65	132	204	256	251	198	213
1971										6	27	73	137	214	241	232	185	193
1972										8	26	76	138	201	213	189	159	154
1973										7	24	74	135	183	185	157	128	121
1974										7	23	67	122	161	159	134	108	94
1975										6	21	59	110	145	142	127	100	83
1976										4	16	52	97	130	129	114	93	74

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Table A2.7

PROBABILITIES OF MARRYING FOR THE FIRST TIME PRIOR TO CONCEIVING A
FIRST CHILD (1000 q"(x)): 1899-1960 FEMALE BIRTH COHORTS

Birth Cohort	Age									Age								
	16	17	18	19	20	21	22	23	24	16	17	18	19	20	21	22	23	24
	Non-Maori									Total								
1899	3	6	12	25	40	106	89	104	119									
1900	2	4	13	30	47	96	86	107	120									
1901	2	5	17	32	40	91	92	107	131									
1902	1	4	19	30	36	92	93	111	124									
1903	1	7	15	29	38	96	91	107	109									
1904	2	6	14	29	40	98	96	107	119									
1905	1	5	16	28	40	95	96	110	121									
1906	1	6	17	25	40	89	94	109	109									
1907	2	7	15	25	39	87	95	98	95									
1908	2	7	15	27	40	92	87	95	102									
1909	2	8	16	28	39	86	80	94	111									
1910	1	7	16	24	37	74	77	95	117									
1911	2	7	16	23	35	75	78	103	132									
1912	2	7	15	22	34	79	86	117	141									
1913	3	5	15	24	34	88	101	132	149									
1914	3	6	17	25	42	100	119	145	177									
1915	2	6	17	26	47	109	125	164	192									
1916	2	6	16	29	54	122	150	187	187									
1917	3	7	17	36	60	143	178	184	168									
1918	3	7	20	39	67	155	169	157	156									
1919	3	7	22	46	82	144	139	141	151									
1920	3	8	23	57	80	121	123	133	162									
1921	2	10	28	53	60	107	116	143	192									
1922	2	10	27	41	56	110	135	186	213									
1923	2	9	21	40	59	129	175	204	194									
1924	2	8	21	41	72	170	211	205	194									
1925	1	7	20	47	93	202	210	212	207									
1926	2	7	25	63	108	204	209	219	216									
1927	2	9	30	73	112	207	218	223	217									
1928	2	11	35	72	114	218	222	219	227									
1929	3	13	37	75	116	230	235	240	246									
1930	3	14	39	80	127	240	247	266	276									
1931	3	13	41	86	130	236	247	259	270									
1932	3	12	42	86	137	237	251	244	243									
1933	3	13	44	88	139	257	266	253	257									
1934	3	13	44	92	148	263	265	247	245									
1935	4	13	40	94	153	256	263	230	233									
1936	3	13	42	99	156	262	263	229	225									
1937	4	13	47	102	162	265	263	229	202									
1938	4	16	49	104	169	264	255	215	197									
1939	3	17	48	108	174	279	260	218	222									
1940	3	14	43	100	168	260	242	207	217									
1941	3	12	41	99	164	249	238	209	225									
1942	3	14	47	105	170	267	264	237	247									
1943	3	15	50	99	161	255	246	205	189									
1944	5	18	48	104	169	258	249	198	186									
1945	5	19	47	106	174	252	247	202	189									
1946	4	18	46	108	172	242	231	191		3	18	45	101	160	222	207	167	154
1947	3	16	47	112	180	254	240			3	16	45	104	168	234	217	170	167
1948	4	17	52	119	189	261				4	17	49	112	177	239	218	175	171
1949	5	18	56	128	201					4	18	54	120	185	239	218	174	165
1950	5	16	56	134						4	17	54	124	196	232	200	153	143
1951	4	19	60							4	19	58	129	209	218	183	145	135
1952	4	21								5	22	64	136	205	200	170	140	126
1953	5									5	26	73	141	194	185	168	135	
1954										5	27	76	139	176	168	151		
1955										6	26	75	128	160	153			
1956										8	25	69	116	143				
1957										7	24	60	102					
1958										7	21	53						
1959										6	16							
1960										4								

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics

Table A2.8

SYNTHETIC COHORT PREMARITAL CONCEPTIONS (PER 1000 WOMEN ATTAINING EXACT
AGE 11) LEADING TO EX-NUPTIAL FIRST CONFINEMENTS (d(x)) 1913-1976

Year	Age											Age										
	14	15	16	17	18	19	20	21	22	23	24	14	15	16	17	18	19	20	21	22	23	24
	Non-Maori											Total										
1913	2	4	7	11	13	12	10	8	6	5	4											
1914	1	2	6	9	11	12	9	8	6	5	3											
1915	1	1	5	9	11	12	10	8	6	4	3											
1916	1	2	4	9	11	12	10	7	7	4	3											
1917	1	2	4	8	9	10	10	8	7	5	4											
1918	1	2	5	7	10	11	11	9	7	5	3											
1919	1	2	5	8	12	12	11	9	7	5	4											
1920	1	2	5	7	11	10	9	8	6	5	4											
1921	1	2	5	7	10	10	9	7	6	5	4											
1922	1	3	5	7	9	10	9	7	6	5	4											
1923	1	2	5	7	10	11	9	7	6	5	3											
1924	1	2	5	8	10	11	9	7	6	4	4											
1925	1	2	5	9	11	10	9	8	6	4	3											
1926	1	2	5	8	10	9	8	7	6	5	3											
1927	1	2	5	8	9	9	8	7	5	4	3											
1928	1	2	5	7	8	9	7	7	5	4	3											
1929	1	3	5	7	8	9	8	7	6	4	3											
1930	1	3	5	7	9	8	7	6	5	4	3											
1931	1	2	6	8	8	8	7	6	4	3	2											
1932	1	2	4	6	8	7	6	6	4	3	2											
1933	1	2	4	6	8	7	6	6	4	3	2											
1934	1	2	3	5	7	7	6	6	4	3	2											
1935	1	2	4	6	7	7	6	6	4	4	3											
1936	1	2	4	6	7	7	6	6	4	3	3											
1937	1	2	4	6	7	8	6	5	4	3	2											
1938	1	2	3	6	8	7	6	5	5	4	2											
1939	1	2	4	6	8	7	7	5	5	4	3											
1940	1	2	4	6	8	7	7	6	5	4	3											
1941	1	2	4	6	8	9	8	7	5	4	3											
1942	1	2	4	8	10	10	9	9	7	5	4											
1943	1	2	6	9	12	12	11	10	9	7	5											
1944	1	2	5	8	10	12	10	8	8	6	5											
1945	1	2	5	8	9	10	9	9	7	6	5											
1946	1	3	4	8	9	10	9	8	7	5	4											
1947	1	2	5	8	10	10	8	7	6	5	3											
1948	1	2	6	8	10	11	9	7	6	5	3											
1949	1	3	6	9	11	12	10	8	6	5	3											
1950	1	3	7	10	12	12	10	9	7	5	4											
1951	1	3	7	11	13	13	11	9	7	5	4											
1952	1	3	6	10	12	12	10	9	7	5	4											
1953	1	3	6	10	12	13	11	9	7	5	4											
1954	1	4	7	10	13	13	12	9	7	5	4											
1955	1	3	8	11	13	14	12	9	7	6	4											
1956	2	3	8	12	14	15	12	9	8	6	4											
1957	2	5	9	12	14	13	12	10	7	6	4											
1958	2	5	10	13	15	14	11	9	7	6	4											
1959	2	6	12	16	16	15	12	10	7	5	4											
1960	3	7	14	19	19	16	13	11	8	6	4											
1961	3	8	15	21	22	19	14	11	9	6	4											
1962	3	9	16	22	23	21	16	12	9	6	4	4	10	18	26	28	26	20	15	11	9	6
1963	3	10	18	24	24	22	17	13	8	6	5	4	12	20	28	28	26	21	16	11	8	6
1964	3	11	18	24	26	22	17	13	9	6	4	4	12	21	28	31	27	21	16	11	8	6
1965	4	12	20	25	28	23	17	13	9	6	4	5	13	23	29	32	28	21	16	11	8	5
1966	5	13	23	28	29	24	17	13	10	7	4	5	15	26	33	34	29	20	15	12	9	5
1967	5	13	24	29	28	23	17	12	10	7	5	5	14	27	34	35	28	20	14	12	8	6
1968	5	13	24	29	27	22	16	12	8	7	5	5	15	26	34	33	27	19	14	10	8	5
1969	5	14	24	29	28	23	16	12	8	6	4	6	15	27	34	34	28	20	14	10	7	5
1970												7	17	29	35	34	28	20	15	10	7	5
1971												7	19	31	36	35	27	18	14	10	7	4
1972												8	20	32	34	32	25	16	12	9	7	4
1973												8	21	31	34	31	24	16	11	8	6	4
1974												7	20	30	32	30	23	15	11	7	5	4
1975												7	19	30	32	29	23	15	11	8	5	4
1976												7	19	29	33	31	24	16	11	8	6	4

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Table A2.9

SYNTHETIC COHORT PREMARITAL CONCEPTIONS (PER 1000 WOMEN ATTAINING EXACT
AGE 11) LEADING TO NUPTIAL FIRST CONFINEMENTS (d'(x)) 1913-1976

Year	Age										Age									
	15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20	21	22	23	24
	Non-Maori										Total									
1913	1	4	12	19	22	23	21	19	16	14										
1914	1	4	10	18	20	22	20	17	15	11										
1915	1	4	9	15	17	20	19	16	14	11										
1916	1	3	9	12	16	19	18	12	11	9										
1917	1	3	8	12	14	17	16	13	10	8										
1918	1	3	8	14	17	19	20	16	12	10										
1919	1	3	10	17	22	27	27	24	17	13										
1920	1	4	10	18	22	28	25	20	17	13										
1921	1	5	11	18	21	26	23	18	15	12										
1922	1	4	11	18	22	26	23	18	15	12										
1923	1	4	11	18	23	26	23	19	14	11										
1924	1	5	12	19	22	25	23	19	14	11										
1925	1	6	13	21	23	25	24	20	16	11										
1926	1	6	13	21	23	26	23	19	16	12										
1927	1	5	13	21	22	25	22	18	14	11										
1928	1	6	13	20	23	25	22	18	15	11										
1929	2	6	12	19	23	25	23	18	15	11										
1930	2	6	12	19	21	23	22	17	15	10										
1931	1	6	12	18	21	22	20	17	15	11										
1932	1	5	11	18	21	23	20	17	14	10										
1933	1	5	10	17	21	22	21	17	12	10										
1934	1	5	10	18	20	20	19	17	12	9										
1935	1	5	12	18	22	21	19	16	13	9										
1936	1	5	12	19	22	22	20	16	13	10										
1937	1	6	13	21	23	23	20	16	12	10										
1938	1	6	14	22	24	22	19	16	12	9										
1939	1	5	13	20	24	23	18	15	11	9										
1940	1	4	10	17	18	20	16	12	9	7										
1941	1	4	9	14	16	17	14	10	8	7										
1942	1	4	9	13	15	15	13	10	7	6										
1943	1	4	9	15	16	16	15	11	9	6										
1944	1	4	9	16	18	18	16	14	9	7										
1945	1	4	12	20	23	25	21	17	12	9										
1946	1	5	13	24	26	26	23	18	13	9										
1947	1	6	15	24	25	23	20	16	11	7										
1948	2	7	16	24	24	22	18	15	11	8										
1949	2	7	17	26	26	24	18	13	9	7										
1950	2	8	18	25	27	26	19	14	9	6										
1951	2	9	19	25	28	26	20	14	11	8										
1952	2	10	20	26	29	25	21	15	10	7										
1953	2	11	22	29	30	28	21	15	11	8										
1954	2	11	23	32	32	30	23	15	11	8										
1955	2	11	23	33	33	29	23	15	10	7										
1956	3	11	23	33	34	29	22	15	11	8										
1957	4	12	26	36	36	31	23	15	11	7										
1958	4	13	26	36	38	31	24	16	10	7										
1959	3	14	29	36	38	32	23	16	10	7										
1960	4	16	32	42	39	33	24	16	11	7										
1961	4	17	34	42	43	35	25	16	11	8										
1962	5	17	34	44	42	35	25	17	11	8	6	18	37	46	44	37	26	17	12	8
1963	5	18	33	42	41	34	26	17	11	7	6	19	35	44	43	35	27	18	11	8
1964	5	18	35	43	40	33	24	17	11	8	5	20	37	45	42	34	25	18	12	8
1965	6	21	37	45	40	33	23	16	10	7	6	22	39	48	42	34	24	16	11	8
1966	5	21	37	45	41	31	22	15	9	6	6	22	39	47	43	33	23	16	10	7
1967	5	21	38	44	40	31	20	14	10	7	6	22	40	46	41	32	22	15	10	7
1968	6	22	38	44	39	29	20	13	9	6	6	22	40	46	41	30	21	14	10	7
1969	6	22	39	43	38	29	20	13	8	6	7	23	40	46	41	30	21	14	9	7
1970											8	24	40	45	39	30	21	15	10	7
1971											7	23	36	40	34	25	17	12	9	6
1972											7	20	30	32	27	19	14	9	7	5
1973											5	17	26	26	22	16	11	8	7	5
1974											4	12	20	21	18	13	10	7	6	5
1975											3	9	15	18	16	11	9	6	6	4
1976											2	7	13	16	14	11	9	6	5	4

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Table A2.10

SYNTHETIC COHORT FIRST MARRIAGES OF WOMEN (PER 1000 ATTAINING EXACT
AGE 11) WHO HAD NOT CONCEIVED A FIRST CHILD (d"(x)) 1913-1976

Year	Age								Age									
	16	17	18	19	20	21	22	23	24	16	17	18	19	20	21	22	23	24
	Non-Maori								Total									
1913	2	7	16	26	32	68	57	58	58									
1914	3	9	19	28	33	76	64	67	65									
1915	3	8	18	27	35	76	61	63	60									
1916	2	6	15	21	29	62	48	45	43									
1917	2	4	11	19	23	52	40	41	35									
1918	1	5	12	23	27	61	52	56	48									
1919	2	4	16	28	35	77	68	72	67									
1920	2	7	19	30	40	85	73	74	70									
1921	2	6	14	28	35	76	61	64	61									
1922	1	5	13	27	31	72	59	63	59									
1923	1	6	16	27	33	73	63	65	62									
1924	2	7	16	26	35	76	64	65	63									
1925	2	7	15	23	34	77	62	66	68									
1926	1	8	15	22	34	75	65	64	64									
1927	2	7	15	25	33	70	66	63	56									
1928	2	7	15	26	35	69	65	66	61									
1929	3	7	15	22	34	73	66	66	62									
1930	3	5	14	21	32	68	60	60	57									
1931	2	5	14	20	31	59	56	58	50									
1932	2	6	16	22	29	60	55	59	55									
1933	2	6	16	23	30	64	57	61	61									
1934	2	7	15	24	36	72	62	67	66									
1935	3	7	17	27	41	80	73	75	75									
1936	3	7	19	33	47	87	83	82	77									
1937	2	8	21	35	51	96	86	86	78									
1938	2	10	22	42	57	111	100	95	87									
1939	2	10	26	52	69	118	114	102	89									
1940	2	9	26	48	66	106	105	93	80									
1941	1	7	20	37	50	88	85	78	67									
1942	2	7	20	37	47	80	76	71	63									
1943	2	7	19	37	50	84	74	69	63									
1944	2	9	24	43	61	99	88	77	69									
1945	3	11	29	57	78	129	113	99	85									
1946	3	13	33	65	89	148	127	101	88									
1947	3	13	35	64	89	143	116	91	74									
1948	3	13	37	66	90	140	110	87	66									
1949	3	11	39	70	91	145	111	85	63									
1950	3	13	39	74	97	149	109	82	62									
1951	4	12	41	74	97	150	110	76	58									
1952	3	13	41	76	95	144	111	79	59									
1953	4	13	37	79	103	146	109	82	58									
1954	4	13	39	80	109	153	109	77	57									
1955	3	15	44	83	111	152	109	71	55									
1956	3	16	45	85	111	146	104	68	50									
1957	3	14	44	86	113	145	102	63	47									
1958	3	12	39	89	117	143	99	59	44									
1959	3	14	38	82	117	138	95	56	42									
1960	5	14	42	80	113	140	88	51	37									
1961	5	17	45	83	109	131	84	45	31									
1962	4	18	42	77	108	123	80	43	30	3	18	40	71	99	111	72	38	26
1963	3	17	41	79	101	125	79	43	31	3	17	39	74	93	113	71	38	27
1964	4	15	40	81	104	120	80	43	33	4	15	39	75	95	108	72	38	29
1965	4	16	41	82	106	117	76	43	34	4	16	39	76	97	105	68	38	29
1966	5	17	44	83	103	112	74	39	31	4	17	42	76	94	101	66	35	27
1967	4	15	47	87	106	107	73	37	26	4	15	45	79	96	96	65	33	23
1968	4	17	47	93	110	110	70	38	26	5	18	45	85	99	99	63	34	23
1969	5	20	50	97	114	110	70	36	26	5	20	48	88	102	98	63	33	23
1970										4	23	53	90	107	94	59	30	22
1971										6	24	59	93	112	89	58	31	24
1972										7	24	62	96	109	85	54	34	26
1973										7	22	61	95	104	80	52	33	26
1974										7	22	57	90	98	76	51	34	25
1975										6	19	50	84	93	74	54	36	26
1976										4	15	45	76	87	71	53	37	26

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Table A2.11

PREMARITAL CONCEPTIONS (PER 1000 WOMEN ATTAINING EXACT AGE 11) LEADING TO
EX-NUPTIAL FIRST CONFINEMENTS (d(x)): 1899-1962 FEMALE BIRTH COHORTS

Birth Cohort	Age										Age											
	14	15	16	17	18	19	20	21	22	23	24	14	15	16	17	18	19	20	21	22	23	24
	Non-Maori										Total											
1899	2	2	5	9	9	11	11	8	6	5	3											
1900	1	1	4	8	10	12	9	7	6	5	4											
1901	1	2	4	7	12	10	9	7	6	4	3											
1902	1	2	5	8	11	10	9	7	6	4	3											
1903	1	2	5	7	10	10	9	7	6	5	3											
1904	1	2	5	7	9	11	9	8	6	4	3											
1905	1	2	5	7	10	11	9	7	5	4	3											
1906	1	2	5	7	10	10	8	7	5	4	3											
1907	1	3	5	8	11	9	8	7	6	4	2											
1908	1	2	5	9	10	9	7	7	5	3	2											
1909	1	2	5	8	9	9	8	6	4	3	2											
1910	1	2	5	8	8	9	7	6	4	3	2											
1911	1	2	5	7	8	8	7	6	4	3	3											
1912	1	2	5	7	9	8	6	6	4	4	3											
1913	1	2	5	7	8	7	6	6	4	3	2											
1914	1	3	5	6	8	7	6	6	4	3	2											
1915	1	3	4	6	8	7	6	6	4	4	3											
1916	1	2	4	6	7	7	6	5	5	4	3											
1917	1	2	4	5	7	7	6	5	5	4	3											
1918	1	2	3	6	7	8	6	5	5	4	4											
1919	1	2	4	6	7	7	7	6	5	5	5											
1920	1	2	4	6	8	7	7	7	7	7	5											
1921	1	2	4	6	8	7	8	9	9	6	4											
1922	1	2	3	6	8	9	9	10	8	6	4											
1923	1	2	4	6	8	10	11	8	7	5	3											
1924	1	2	4	6	10	12	10	9	7	5	3											
1925	1	2	4	8	12	12	9	8	6	5	3											
1926	1	2	4	9	10	10	9	7	6	5	4											
1927	1	2	6	8	9	10	8	7	6	5	4											
1928	1	2	5	8	9	10	9	8	7	5	4											
1929	1	2	5	8	10	11	10	9	7	5	4											
1930	1	2	4	8	10	12	10	9	7	5	4											
1931	1	3	5	8	11	12	11	9	7	5	4											
1932	1	2	6	9	12	13	10	9	7	6	4											
1933	1	2	6	10	13	12	11	9	7	6	4											
1934	1	3	7	11	12	13	12	9	8	6	4											
1935	1	3	7	10	12	13	12	9	7	6	4											
1936	1	3	6	10	13	14	12	10	7	5	4											
1937	1	3	6	10	13	15	12	9	7	6	4											
1938	1	3	7	11	14	13	11	10	8	6	4											
1939	1	4	8	12	14	14	12	11	9	6	5											
1940	1	3	8	12	15	15	13	11	9	6	4											
1941	1	3	9	13	16	16	14	12	8	6	4											
1942	2	5	10	16	19	19	16	13	9	6	4											
1943	2	5	12	19	22	21	17	13	9	7	5											
1944	2	6	14	21	23	22	17	13	10	7	5											
1945	2	7	15	22	24	22	17	13	10	7	4											
1946	3	8	16	24	26	23	17	12	8	6		4	10	18	27	30	27	20	14	10	7	4
1947	3	9	18	24	28	24	17	12	8			4	10	20	28	32	28	20	14	10	7	4
1948	3	10	18	25	29	23	16	12				4	12	21	29	34	28	19	14	10	7	4
1949	3	11	20	28	28	22	16					4	12	23	33	35	27	20	15	10	7	4
1950	3	12	23	29	27	23						4	13	26	34	33	28	20	14	9	6	4
1951	4	13	24	29	28							5	15	27	34	34	28	18	12	8	5	4
1952	5	13	24	29								5	14	26	34	34	27	16	11	7	5	4
1953	5	13	24									5	15	27	35	35	25	16	11	8	6	
1954	5	14										5	15	29	36	32	24	15	11	8		
1955	5											6	17	31	34	31	23	15	11			
1956												7	19	32	34	30	23	16				
1957												7	20	31	32	29	24					
1958												8	21	30	32	31						
1959												8	20	30	33							
1960												7	19	29								
1961												7	19									
1962												7										

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Table A2.12

PREMARITAL CONCEPTIONS (PER 1000 WOMEN ATTAINING EXACT AGE 11) LEADING TO
 NUPTIAL FIRST CONFINEMENTS (d'(x)): 1899-1961 FEMALE BIRTH COHORTS

Birth Cohort	Age										Age									
	15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20	21	22	23	24
	Non-Maori										Total									
1899	1	4	9	12	17	27	25	18	15	11										
1900	1	3	8	14	22	28	23	18	14	11										
1901	1	3	8	17	22	26	23	19	14	11										
1902	1	3	10	18	21	26	23	19	16	12										
1903	1	3	10	18	22	26	23	20	14	11										
1904	1	4	11	18	23	25	24	19	14	11										
1905	1	5	11	18	22	25	23	18	15	11										
1906	1	4	11	19	23	26	22	18	15	10										
1907	1	4	12	21	23	25	22	18	15	11										
1908	1	5	13	21	22	25	23	17	15	10										
1909	1	6	13	21	23	25	22	17	14	10										
1910	1	6	13	20	23	23	20	17	12	9										
1911	1	5	13	19	21	22	20	17	12	9										
1912	1	6	12	19	21	23	21	17	13	10										
1913	1	6	12	18	21	22	19	16	13	10										
1914	1	6	12	18	21	20	19	16	12	9										
1915	2	6	11	17	20	21	20	16	12	9										
1916	1	5	10	18	22	22	20	16	11	7										
1917	1	5	10	18	22	23	19	15	9	7										
1918	1	5	12	19	23	22	18	12	8	6										
1919	1	5	12	21	24	23	16	10	7	6										
1920	1	5	13	22	24	20	14	10	9	7										
1921	1	6	14	20	18	17	13	11	9	9										
1922	1	6	13	17	16	15	15	14	12	9										
1923	1	5	10	14	15	16	16	17	13	7										
1924	1	4	9	13	16	18	21	18	11	8										
1925	1	4	9	15	18	25	23	16	11	7										
1926	1	4	9	16	23	26	20	15	9	6										
1927	1	4	9	20	26	23	18	13	9	8										
1928	1	4	12	24	25	22	18	14	11	7										
1929	1	4	13	24	24	24	19	14	10	8										
1930	1	5	15	24	26	26	20	15	11	8										
1931	1	6	16	26	27	26	21	15	11	7										
1932	1	7	17	25	28	25	21	15	10	8										
1933	2	7	18	25	29	28	23	15	11	7										
1934	2	8	19	26	30	30	23	15	11	7										
1935	2	9	20	29	32	29	22	15	10	7										
1936	2	10	22	32	33	29	23	16	10	7										
1937	2	11	23	33	34	31	24	16	11	8										
1938	2	11	23	33	36	31	23	16	11	8										
1939	2	11	23	36	38	32	24	16	11	7										
1940	2	11	26	36	38	33	25	17	11	8										
1941	3	12	26	36	39	35	25	17	11	7										
1942	4	13	29	42	43	35	26	17	10	6										
1943	4	14	32	42	42	34	24	16	9	7										
1944	3	16	34	44	41	33	23	15	10	6										
1945	4	17	34	42	40	33	22	14	9	6										
1946	4	17	33	43	40	31	20	13	8		6	18	34	44	41	32	21	14	9	7
1947	5	18	35	45	41	31	20	13			6	19	37	47	42	32	21	13	10	6
1948	5	18	37	45	40	29	20				6	20	39	47	41	30	21	15	9	5
1949	5	21	37	44	39	29					5	22	39	46	41	30	21	12	7	5
1950	6	21	38	44	38						6	22	40	46	41	30	17	9	7	5
1951	5	21	38	43							6	22	40	46	39	25	14	8	6	4
1952	5	22	39								6	22	40	45	34	19	11	7	6	4
1953	6	22									6	23	40	40	27	16	10	6	5	
1954	6										7	24	36	32	22	13	9	6		
1955											8	23	30	26	18	11	9			
1956											7	20	26	21	16	11				
1957											7	17	20	18	14					
1958											5	12	15	16						
1959											4	9	13							
1960											3	7								
1961											2									

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78;
 unpublished data supplied by the Department of Statistics.

Table A2.13

FIRST MARRIAGES OF WOMEN (PER 1000 ATTAINING EXACT AGE 11) WHO HAD NOT
 CONCEIVED A FIRST CHILD (d"(x)): 1899-1960 FEMALE BIRTH COHORTS

Birth Cohort	Non-Maori									Total								
	16	17	18	19	Age 20	21	22	23	24	16	17	18	19	Age 20	21	22	23	24
1899	3	6	11	23	35	85	61	63	62									
1900	2	4	12	28	40	76	59	65	63									
1901	2	5	16	30	35	72	63	65	68									
1902	1	4	19	28	31	73	64	67	64									
1903	1	7	14	27	33	76	63	64	56									
1904	2	6	13	27	35	78	65	63	61									
1905	1	5	16	26	34	75	66	66	62									
1906	1	6	16	23	34	70	65	65	56									
1907	2	7	15	22	33	68	66	59	50									
1908	2	7	15	25	35	72	59	57	54									
1909	2	8	15	26	34	68	55	58	60									
1910	1	7	15	22	32	59	55	60	65									
1911	2	7	15	21	31	60	56	66	74									
1912	2	7	15	20	29	64	62	74	77									
1913	3	5	14	22	30	71	72	82	78									
1914	3	5	16	23	36	80	83	86	87									
1915	2	6	16	24	41	87	86	95	90									
1916	2	6	15	27	47	96	101	103	81									
1917	3	7	17	33	51	111	114	93	67									
1918	3	7	19	35	57	119	105	78	64									
1919	3	7	21	42	69	106	85	72	64									
1920	3	8	22	52	66	88	76	70	71									
1921	2	10	26	48	50	80	75	79	88									
1922	2	10	26	37	47	85	89	102	91									
1923	2	9	20	37	50	100	114	105	76									
1924	2	7	20	37	62	130	128	93	67									
1925	1	7	19	43	78	148	116	88	64									
1926	2	7	24	57	89	143	110	87	64									
1927	2	9	29	65	90	141	112	85	61									
1928	2	11	33	64	90	146	110	81	62									
1929	3	13	35	66	91	151	112	83	61									
1930	3	13	37	70	98	152	112	85	61									
1931	3	13	39	75	98	145	110	81	58									
1932	3	11	39	74	95	147	111	76	53									
1933	3	13	42	76	103	155	110	71	50									
1934	3	12	41	79	109	154	105	67	46									
1935	4	13	37	80	111	148	104	62	45									
1936	3	13	39	83	111	148	101	59	41									
1937	4	13	44	85	114	145	97	57	35									
1938	4	15	45	86	118	142	92	53	35									
1939	3	16	44	89	119	145	89	50	36									
1940	3	14	39	83	116	138	86	51	39									
1941	3	12	38	82	113	132	86	52	41									
1942	3	14	43	84	111	131	85	50	36									
1943	3	14	45	78	104	125	81	45	30									
1944	5	17	42	80	106	122	78	42	28									
1945	5	18	41	82	109	117	77	43	29									
1946	4	17	41	83	106	113	74	43		3	17	39	76	97	102	66	39	27
1947	3	15	41	84	109	114	73			3	15	39	77	99	103	66	36	27
1948	4	16	45	89	112	114				4	16	42	81	102	102	63	35	26
1949	4	17	48	94	116					4	17	45	86	104	97	60	33	24
1950	5	15	47	97						4	15	45	88	108	92	54	31	22
1951	4	17	50							4	18	48	91	114	85	51	30	23
1952	4	20								5	20	53	94	111	79	50	32	23
1953	5									5	24	60	97	104	74	51	32	
1954										4	25	62	96	97	71	50		
1955										6	24	61	90	91	70			
1956										7	22	57	83	85				
1957										7	22	50	75					
1958										7	19	45						
1959										6	14							
1960										4								

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Table A2.14

SYNTHETIC COHORT CUMULATIVE FIRST MARRIAGES (PER 1000) OF WOMEN WHO
HAD NOT CONCEIVED A FIRST CHILD ($\Sigma d''(x)$) 1913-1976

Year	Age										Age							
	16	17	18	19	20	21	22	23	24	16	17	18	19	20	21	22	23	24
	Non-Maori										Total							
1913	3	10	26	51	83	152	209	267	324									
1914	3	12	31	59	92	167	231	298	363									
1915	3	11	29	56	91	168	229	292	352									
1916	2	8	23	44	73	135	183	228	271									
1917	2	6	17	36	59	111	151	192	227									
1918	1	6	18	41	67	128	180	235	283									
1919	2	6	22	49	85	161	230	301	369									
1920	2	9	27	57	97	182	255	328	398									
1921	2	7	21	49	84	160	221	285	346									
1922	1	6	19	46	77	149	208	272	331									
1923	1	8	23	50	83	157	220	285	347									
1924	2	9	25	50	85	161	226	290	353									
1925	2	9	23	46	81	158	220	287	354									
1926	1	9	24	46	80	155	220	284	348									
1927	2	9	24	49	82	153	219	282	338									
1928	2	9	24	50	84	153	218	284	345									
1929	3	10	25	47	81	153	219	285	347									
1930	3	8	23	44	76	144	204	264	320									
1931	2	7	21	42	72	132	187	245	295									
1932	2	8	23	45	75	135	190	249	304									
1933	2	9	25	48	78	142	199	259	320									
1934	2	9	24	48	85	156	218	285	350									
1935	3	9	26	53	94	174	247	321	396									
1936	3	10	29	63	109	196	280	361	438									
1937	2	11	32	67	119	215	301	387	464									
1938	2	12	35	76	133	244	344	439	526									
1939	2	12	39	91	159	278	392	493	583									
1940	2	11	37	85	151	257	362	455	535									
1941	1	9	29	66	116	204	289	368	435									
1942	2	9	28	65	112	193	268	340	403									
1943	2	9	28	65	115	199	273	342	404									
1944	2	11	34	77	139	238	326	403	472									
1945	3	13	42	99	178	307	420	519	604									
1946	3	16	49	114	203	351	478	579	666									
1947	3	17	51	115	205	347	463	555	629									
1948	3	16	53	118	208	348	458	545	611									
1949	3	14	53	123	213	358	469	554	617									
1950	3	16	55	129	227	376	485	566	628									
1951	4	16	57	131	229	379	488	565	623									
1952	3	16	57	132	227	371	482	561	620									
1953	4	17	54	133	236	382	491	573	632									
1954	4	17	56	135	244	397	507	583	641									
1955	3	18	62	145	256	408	517	589	643									
1956	3	19	65	149	260	406	510	577	627									
1957	3	16	60	146	258	404	506	569	616									
1958	3	15	54	143	259	402	501	560	603									
1959	3	17	55	137	254	393	487	543	585									
1960	5	19	61	142	255	395	483	534	571									
1961	5	22	67	150	259	390	473	518	549									
1962	4	22	64	140	249	371	452	495	524	3	21	61	132	231	343	414	452	478
1963	3	20	61	140	242	367	446	489	520	3	20	59	133	226	339	410	448	476
1964	4	20	60	140	244	364	444	488	521	4	19	58	133	228	336	408	446	474
1965	4	20	61	143	249	366	443	486	520	4	20	58	134	231	336	404	442	472
1966	5	21	66	149	252	364	437	476	508	4	21	63	138	233	333	399	434	461
1967	4	19	66	153	259	366	439	476	502	4	19	64	143	239	335	401	434	457
1968	4	21	69	161	271	381	451	490	515	5	22	67	152	251	350	413	447	470
1969	5	24	75	172	286	396	466	502	527	5	25	73	161	263	361	424	456	480
1970										4	28	81	171	277	371	430	461	483
1971										6	30	89	182	294	382	440	471	495
1972										7	31	93	188	297	382	437	471	497
1973										7	29	90	185	289	369	421	454	480
1974										7	28	85	175	273	349	400	435	460
1975										6	25	75	159	252	325	379	415	441
1976										4	19	64	139	226	297	350	387	412

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Table A2.15

CUMULATIVE FIRST MARRIAGES (PER 1000) OF WOMEN WHO HAD NOT CONCEIVED

A FIRST CHILD ($\Sigma d''(x)$): 1899-1960 FEMALE BIRTH COHORTS

Birth Cohort	Age									Age								
	16	17	18	19	20	21	22	23	24	16	17	18	19	20	21	22	23	24
	Non-Maori									Total								
1899	3	8	20	42	78	163	224	287	349									
1900	2	6	19	46	86	162	221	286	348									
1901	2	6	22	52	87	159	222	287	354									
1902	1	5	24	51	83	156	220	287	351									
1903	1	8	22	49	82	158	221	285	341									
1904	2	8	21	48	83	160	225	289	349									
1905	1	6	22	48	82	157	223	288	351									
1906	1	8	24	47	81	151	216	281	338									
1907	2	8	23	45	79	147	213	272	322									
1908	2	9	23	48	83	155	215	272	326									
1909	2	10	25	51	84	152	207	265	325									
1910	1	8	23	45	77	137	191	252	317									
1911	2	9	24	45	76	136	192	258	332									
1912	2	9	24	44	73	137	199	273	350									
1913	3	8	22	44	74	145	218	299	377									
1914	3	8	24	47	83	163	247	333	420									
1915	2	8	23	47	88	175	261	356	446									
1916	2	8	24	51	97	194	294	397	478									
1917	3	10	26	60	111	222	336	430	497									
1918	3	9	28	64	121	239	344	423	486									
1919	3	10	31	73	141	248	333	404	468									
1920	3	11	33	85	151	239	315	385	457									
1921	2	12	39	87	136	217	292	371	459									
1922	2	13	38	76	123	208	297	399	491									
1923	2	11	31	68	118	219	333	438	514									
1924	2	10	29	67	128	258	386	479	546									
1925	1	8	27	71	149	297	413	501	565									
1926	2	9	33	90	178	321	431	518	582									
1927	2	10	39	105	194	335	447	532	594									
1928	2	12	46	109	199	345	455	536	598									
1929	3	16	51	117	208	358	471	553	614									
1930	3	16	53	123	221	373	485	571	631									
1931	3	16	55	129	228	373	483	564	622									
1932	3	15	54	128	224	370	481	557	610									
1933	3	15	57	132	236	390	501	572	622									
1934	3	15	56	136	244	398	504	570	616									
1935	4	16	54	134	245	392	497	559	604									
1936	3	16	55	138	250	397	498	557	599									
1937	4	17	61	146	260	405	502	559	594									
1938	4	19	64	150	268	410	502	554	589									
1939	3	20	63	152	271	416	505	555	590									
1940	3	17	56	139	255	393	479	530	568									
1941	3	15	53	134	248	379	465	517	557									
1942	3	17	59	143	155	386	471	521	557									
1943	3	18	63	140	244	369	449	495	525									
1944	5	22	65	145	251	373	451	493	521									
1945	5	24	64	146	255	372	449	492	521									
1946	4	21	61	144	250	363	437	480		3	20	59	135	231	333	399	438	465
1947	3	19	60	144	253	367	439			3	18	57	134	233	336	402	438	465
1948	4	20	65	154	266	379				4	20	62	143	244	346	409	444	470
1949	4	21	69	163	279					4	21	66	151	255	352	412	446	470
1950	5	20	67	165						4	20	65	153	261	353	407	438	460
1951	4	21	72							4	22	70	161	275	359	410	440	463
1952	4	24								5	25	78	172	283	361	411	443	466
1953	5									5	29	88	185	289	363	415	447	
1954										4	29	91	187	284	355	406		
1955										6	30	91	181	272	342			
1956										7	30	87	170	255				
1957										7	28	78	154					
1958										7	26	71						
1959										6	20							
1960										4								

Source: Statistics of the Dominion of New Zealand 1913-20; New Zealand Vital Statistics 1921-78; unpublished data supplied by the Department of Statistics.

Table A2.16

FINAL ADOPTION ORDERS MADE IN RESPECT OF EX-NUPTIAL CHILDREN BY
 1
 RELATIONSHIP TO CHILD OF ADOPTIVE PARENTS 1963-1978

Year	Strangers		Parent + Spouse		2 Relationship to Child of Adoptive Parents Relatives or Friends		3 Total	
	Number	Percent	Number	Percent	Number	Percent	Number	Percent
1963	1627	87.3	133	7.1	103	5.5	1863	99.9
1964	1837	86.6	141	6.6	144	6.8	2122	100.0
1965	2090	86.1	185	7.6	152	6.3	2427	100.0
1966	2142	86.5	152	6.1	182	7.4	2476	100.0
1967	2335	87.3	174	6.5	166	6.2	2675	100.0
1968	2564	84.7	211	7.0	252	8.3	3027	100.0
1969	2441	82.0	268	9.0	267	9.0	2976	100.0
1970	2246	79.3	317	11.2	270	9.5	2833	100.0
1971	2120	79.3	326	12.2	227	8.5	2673	100.0
1972	2088	77.1	372	13.7	248	9.2	2708	100.0
1973	1953	76.6	366	14.4	231	9.1	2550	100.1
1974	1766	73.8	437	18.3	189	7.9	2392	100.0
1975	1522	72.3	381	18.1	201	9.6	2104	100.0
1976	1276	67.1	414	21.8	212	11.1	1902	100.0
1977	1004	65.2	338	22.0	197	12.8	1539	100.0
1978	1018	66.7	311	20.4	197	12.9	1526	100.0

Source: Unpublished data supplied by the Department of Social Welfare.

- 1 Table relates only to adoptions coming to the attention of the Child Welfare Division of the Department of Education and later the Department of Social Welfare.
- 2 Data from which this table was compiled distinguish between 'relatives' and 'close friends or longstanding foster parents' as placement categories from 1969 onward. These two have been combined into the 'relatives or friends' category here, although adoptions by longstanding foster parents may previously have been included in the 'strangers' category. If so, the sequence of figures shown for 'relatives or friends' suggests that the number of cases involved was small.
- 3 Totals show slight discrepancies with supposedly equivalent figures shown in column (2) of Table 5.2. The reason for these is unclear, but they are of no consequence.

Table A2.17

PERCENTAGES OF ALL PERSONS AND PERSONS CURRENTLY IN A UNION COHABITING
INFORMALLY BY AGE AND SEX: SELECTED COUNTRIES OF WESTERN EUROPE

Country	Year	Age Group	Males		Females	
			All Persons	Persons in a Union	All Persons	Persons in a Union
Denmark	1975	18-19			23	77
		20-24			29	43
		25-29			10	11
Finland	1978	15-24			8	33
		25-44			6	8
		45-64			2	3
France	1977	18-19	1	25	4	22
		20-21	10	42	14	31
		22-23	17	39	12	20
		24-25	10	17	12	10
		26-27	10	13	12	15
		28-29	5	6	7	8
Norway	1977	18-19			6	40
		20-24			12	21
		25-29			5	5
		30-34			2	3
		35-39			2	3
		40-44			1	2
Sweden	1975	18-19	3	92	16	87
		20-24	18	71	29	57
		25-29	22	35	17	23
		30-34		14		10
		35-39		8		6
		40-44		5		4

Sources: Denmark - Ussing (1976) cited by Festy (1978); Finland - survey conducted by the Central Statistical Office of Finland and reported by Trost (1979); France - survey of 2700 18-29 year-olds reported on by Roussel (1978) and Roussel and Bourguignon (1978); Norway - the Norwegian round of the World Fertility Survey reported on by Brunborg (1978); Sweden - 1975 Swedish census as reported by Festy (1978) and Trost (1979).

Table A2.18

1, 2

SELECTED MEASURES OF THE INCIDENCE OF DIVORCE 1886-1980

Year	Decrees		Divorces per 100 Marriages	Divorces per 10000 Mean Population	Divorces per 10000 Married or Legally Separated Females	Year	Decrees		Divorces per 100 Marriages	Divorces per 10000 Mean Population	Divorces per 10000 Married or Legally Separated Females
	Nisi	Absolute					Nisi	Absolute			
1886	24		0.7	0.4	2.8	1936	933	849	5.9	5.4	26.5
1887	16		0.4	0.3	1.8	1937	1008	917	6.1	5.8	28.0
1888	32		0.9	0.5	3.6	1938	1063	1050	6.6	6.5	31.5
1889	17		0.5	0.3	1.9	1939	1092	1032	5.8	6.3	30.3
1890	21		0.6	0.3	2.3	1940	1042	1059	5.9	6.5	30.5
1891	20		0.5	0.3	2.2	1941	996	956	6.9	5.9	27.0
1892	18		0.4	0.3	1.9	1942	988	962	7.5	5.9	26.6
1893	25		0.6	0.4	2.6	1943	1398	1100	9.2	6.7	29.8
1894	20		0.5	0.3	2.0	1944	1821	1630	11.9	9.8	43.4
1895	18		0.4	0.3	1.8	1945	1915	1725	10.3	10.2	45.0
1896	36		0.7	0.5	3.5	1946	2137	2133	10.1	12.1	54.4
1897	33		0.7	0.5	3.1	1947	2051	2117	11.1	11.8	52.7
1898	32		0.6	0.4	2.9	1948	1974	1853	10.4	10.1	45.0
1899	46		0.8	0.6	4.1	1949	1824	1892	10.9	10.1	44.9
1900	85		1.5	1.1	7.3	1950	1707	1633	9.6	8.6	37.9
1901	102		1.7	1.3	8.6	1951	1666	1582	9.4	8.1	35.9
1902	91		1.4	1.1	7.4	1952	1727	1684	9.9	8.4	37.4
1903	128		1.9	1.6	10.0	1953	1643	1540	8.9	7.5	33.4
1904	101		1.4	1.2	7.6	1954	1479	1536	8.8	7.3	32.6
1905	115		1.6	1.3	8.3	1955	1379	1472	8.3	6.9	30.6
1906	131		1.7	1.5	9.1	1956	1568	1449	8.3	6.6	29.5
1907	149		1.8	1.6	10.0	1957	1719	1400	8.0	6.3	27.9
1908	172		2.1	1.8	11.1	1958	1805	1751	9.6	7.7	34.2
1909	165		2.0	1.7	10.2	1959	1648	1639	9.0	7.0	31.5
1910	160		1.9	1.6	9.6	1960	1627	1648	8.7	6.9	31.3
1911	162		1.8	1.6	9.4	1961	1824	1733	8.9	7.1	32.4
1912	226		2.4	2.2	12.6	1962	1790	1755	9.0	7.1	32.1
1913	226		2.5	2.1	12.1	1963	1842	1905	9.6	7.5	34.1
1914	235		2.5	2.2	12.2	1964	1916	1894	9.1	7.3	33.2
1915	224	174	1.7	1.6	8.8	1965	2050	1814	8.4	6.9	31.2
1916	247	198	2.4	1.8	9.8	1966	2097	2064	9.0	7.7	34.8
1917	221	219	3.3	2.0	10.8	1967	2263	2047	8.7	7.5	33.7
1918	279	199	3.1	1.8	9.8	1968	2381	2172	9.0	7.9	35.2
1919	479	336	3.4	2.9	15.9	1969	3496	2996	12.0	10.8	47.7
1920	574	469	3.8	3.9	21.1	1970	3298	3136	12.1	11.1	49.0
1921	660	511	4.7	4.0	22.5	1971	3522	3347	12.3	11.7	51.2
1922	543	522	5.3	4.0	22.3	1972	3387	3471	12.9	11.8	52.1
1923	603	522	5.0	3.9	21.8	1973	3950	3616	13.8	12.1	53.0
1924	651	526	5.0	3.9	21.4	1974	4629	4457	17.5	14.6	63.6
1925	605	612	5.7	4.4	24.1	1975	5398	4761	19.4	15.4	66.3
1926	624	614	5.6	4.3	22.8	1976	5615	5401	22.4	17.3	74.0
1927	629	540	5.0	3.8	19.6	1977	5488	5381	23.9	17.2	73.1
1928	653	572	5.2	3.9	20.4	1978	6014	5772	25.5	18.5	77.7
1929	718	635	5.6	4.3	22.2	1979	6270	6101	27.3	19.5	81.9
1930	724	620	5.4	4.2	21.3	1980	6515	6493	28.3	20.7	87.0
1931	683	591	5.8	3.9	19.8						
1932	653	612	5.8	4.0	20.2						
1933	683	648	5.9	4.2	21.1						
1934	762	683	5.8	4.4	21.9						
1935	742	653	5.1	4.2	20.7						

Source: Statistics of the Colony of New Zealand 1886-1906; Statistics of the Dominion of New Zealand 1907-20; New Zealand Justice Statistics and New Zealand Vital Statistics 1921-80; 1886-1976 censuses; unpublished data supplied by the Department of Statistics.

- All calculations until 1914 take 'divorces' to be 'decrees nisi'. Subsequent calculations take 'divorces' to be 'decrees absolute'.
- Divorces per 10000 of mean population and per 10000 married or legally separated females are calculated to a non-Maori population base until 1920, and to a total population base thereafter.

Table A2.19

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE
1
DURATIONS: 1939-1973 MARRIAGE COHORTS

Marriage Cohort	Exact Duration of Marriage in Years						
	5	10	15	20	25	30	35
1939	7.9 (2.9)	43.8 (6.7)	65.5 (8.2)	78.7 (9.0)	93.0 (9.8)	103.1 (10.2)	112.7 (10.2)
1940	6.6 (2.6)	49.5 (7.1)	72.7 (8.5)	86.0 (9.3)	97.0 (9.9)	106.7 (10.4)	115.6 (10.2)
1941	14.5 (4.6)	48.4 (8.1)	70.9 (9.8)	85.0 (10.7)	101.6 (11.6)	116.8 (12.5)	128.0 (12.0)
1942	23.5 (5.8)	60.3 (9.3)	81.3 (10.8)	93.2 (11.5)	108.0 (12.4)	115.9 (12.9)	124.5 (12.8)
1943	20.8 (5.7)	63.6 (9.9)	89.0 (11.6)	104.4 (12.6)	121.0 (13.7)	130.2 (13.8)	141.8 (13.6)
1944	16.9 (4.8)	48.0 (8.1)	65.6 (9.4)	83.5 (10.5)	99.3 (11.5)	115.1 (12.2)	
1945	18.0 (4.5)	51.8 (7.5)	75.2 (9.0)	93.2 (10.2)	112.0 (11.1)	127.6 (11.7)	
1946	10.4 (3.0)	41.0 (5.9)	59.7 (7.2)	78.5 (8.2)	96.2 (9.1)	113.5 (10.0)	
1947	9.5 (3.0)	36.0 (5.9)	59.9 (7.6)	72.2 (8.3)	90.0 (9.2)	107.4 (10.1)	
1948	10.4 (3.3)	36.3 (6.1)	60.6 (7.9)	79.4 (9.1)	99.7 (10.1)	116.6 (11.0)	
1949	8.6 (3.1)	31.4 (5.8)	54.2 (7.6)	69.4 (8.5)	90.2 (9.8)		
1950	10.2 (3.3)	40.6 (6.6)	60.5 (8.1)	82.2 (9.4)	109.4 (10.9)		
1951	7.7 (2.9)	32.2 (5.9)	52.6 (7.5)	70.1 (8.7)	91.6 (9.9)		
1952	10.0 (3.3)	36.9 (6.3)	51.9 (7.4)	74.7 (9.0)	99.6 (10.4)		
1953	7.5 (2.9)	31.4 (5.8)	58.1 (7.9)	83.0 (9.4)	112.6 (10.9)		
1954	6.6 (2.6)	29.6 (5.6)	49.0 (7.1)	72.1 (8.8)			
1955	8.1 (3.0)	36.2 (6.1)	61.3 (8.0)	87.4 (9.6)			
1956	7.1 (2.8)	32.5 (5.9)	54.8 (7.6)	84.1 (9.3)			
1957	8.2 (3.0)	34.6 (6.0)	66.4 (8.3)	98.2 (10.2)			
1958	7.6 (2.8)	38.5 (6.2)	64.5 (8.0)	103.8 (9.8)			
1959	5.7 (2.4)	32.5 (5.7)	67.4 (8.2)				
1960	6.9 (2.6)	39.9 (6.2)	73.2 (8.4)				
1961	6.9 (2.6)	41.4 (6.3)	87.8 (9.0)				
1962	9.2 (3.0)	49.8 (6.9)	100.4 (9.6)				
1963	8.1 (2.8)	50.4 (6.8)	102.7 (9.5)				
1964	9.4 (2.9)	53.3 (6.9)					
1965	9.9 (2.9)	59.9 (7.1)					
1966	13.7 (3.4)	70.6 (7.5)					
1967	14.2 (3.3)	73.4 (7.5)					
1968	20.6 (4.0)	74.0 (8.1)					
1969	20.8 (3.9)						
1970	17.1 (3.5)						
1971	19.1 (3.6)						
1972	21.6 (3.8)						
1973	19.0 (3.6)						

Source: Divorce file sample; New Zealand Vital Statistics 1939-73.

1 The figure given in parenthesis below each divorce rate is the 95 percent confidence interval half-width for that rate. Note also that divorce rates take into account only New Zealand dissolutions of marriages celebrated in New Zealand.

Table A2.20

CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE

DURATIONS: 1925-1976 MARRIAGE COHORTS

Marriage Cohort	Exact Duration of Marriage in Years							
	5	10	15	20	25	30	35	40
1925	7.3	27.2	47.5	64.1	78.5	86.3	90.9	93.6
1926	7.8	27.3	49.8	67.2	81.6	89.5	94.6	97.1
1927	6.5	26.0	48.3	67.9	81.9	90.2	95.4	98.1
1928	9.4	30.4	52.5	73.8	86.9	94.9	100.1	102.9
1929	7.1	30.0	51.1	74.1	86.1	94.3	99.7	102.9
1930	6.3	30.2	52.2	74.8	86.3	95.0	99.9	103.7
1931	6.8	32.6	55.8	78.0	90.2	100.6	106.5	111.4
1932	8.4	33.7	59.8	80.2	92.1	102.7	109.1	114.1
1933	7.4	31.2	60.0	78.4	90.1	100.5	107.4	112.9
1934	8.7	31.3	61.1	78.6	91.0	101.7	109.1	114.4
1935	8.2	31.5	60.3	77.0	88.9	99.8	107.6	112.6
1936	7.3	31.0	59.4	75.2	87.1	97.2	104.8	108.9
1937	8.6	38.5	64.5	80.7	92.6	103.5	110.6	114.6
1938	8.8	41.5	66.2	80.9	93.2	104.1	110.8	114.6
1939	6.2	47.8	71.7	86.5	99.2	108.6	114.8	118.6
1940	11.9	54.0	79.3	94.1	107.4	117.1	123.3	127.8
1941	18.5	60.9	84.0	99.2	113.5	127.0	135.4	141.3
1942	23.2	61.3	84.6	101.3	117.1	131.9	141.6	
1943	25.5	60.5	83.5	101.4	117.5	135.0	146.3	
1944	21.9	54.6	77.9	95.6	112.2	129.8	141.8	
1945	20.7	50.7	73.2	91.7	109.2	125.6	136.7	
1946	16.4	45.2	68.0	86.9	105.3	119.1	131.4	
1947	17.2	45.5	69.0	88.0	108.2	124.7		
1948	17.7	44.9	69.6	88.5	109.6	128.3		
1949	15.0	42.1	66.6	85.2	107.3	128.9		
1950	12.4	39.7	64.1	84.4	107.3	128.6		
1951	9.8	37.3	61.3	83.4	107.3	132.0		
1952	8.4	35.7	59.5	82.9	108.4			
1953	6.8	33.9	57.8	82.4	109.6			
1954	6.4	32.6	55.9	81.8	112.5			
1955	6.3	32.2	57.0	83.5	115.4			
1956	6.7	34.2	60.9	89.7	125.4			
1957	6.2	43.1	62.6	95.7				
1958	7.8	36.6	67.9	105.4				
1959	7.0	34.8	70.5	111.0				
1960	7.0	38.8	77.2	12.3				
1961	6.7	40.9	83.0	128.3				
1962	7.0	46.9	92.0					
1963	6.2	47.3	98.0					
1964	8.5	54.8	108.1					
1965	11.5	63.2	118.4					
1966	12.9	64.0	122.2					
1967	13.8	72.5						
1968	15.9	73.4						
1969	16.7	80.7						
1970	16.6	83.3						
1971	19.5	91.1						
1972	22.4							
1973	17.9							
1974	17.5							
1975	17.3							
1976	17.1							

Table A2.21

UNSTANDARDISED AND AGE-STANDARDISED REMARRIAGE RATES FOR
 1
 DIVORCEES BY SEX 1945-1980

Year	Remarriage Rate 1		Standardised Remarriage Rate 1		Remarriage Rate 2	
	Male	Female	Male	Female	Male	Female
1945	195	163	167	117	159	165
1946	229	219	191	152	185	207
1947	230	212	191	151	176	190
1948	228	202	188	149	171	175
1949	214	193	184	142	158	164
1950	193	167	168	126	142	142
1951	179	159	158	123	131	135
1952	170	159	154	127	122	132
1953	165	146	149	120	116	119
1954	165	150	153	129	115	121
1955	149	143	143	128	103	115
1956	152	137	148	129	105	110
1957	144	134	139	130	99	107
1958	160	143	158	141	110	113
1959	150	144	150	146	102	112
1960	146	138	147	143	98	107
1961	141	127	144	131	93	97
1962	144	130	146	137	94	98
1963	145	126	147	132	93	94
1964	150	131	153	139	95	97
1965	152	121	155	128	95	89
1966	145	123	147	128	90	90
1967	145	110	146	111	90	83
1968	145	113	145	113	91	88
1969	173	122	172	118	108	95
1970	178	129	175	122	110	100
1971	191	132	186	122	117	101
1972	186	134	176	119	115	104
1973	194	134	178	115	122	104
1974	202	134	180	111	127	104
1975	194	136	168	110	121	104
1976	208	143	177	113	128	107
1977	207	136	176	106	125	99
1978	205	140	172	107	123	100
1979	208	138	174	104		
1980	208	140	175	102		

Source: New Zealand Vital Statistics 1945-80; unpublished data supplied by the Department of Statistics; Jain (1972).

- 1 Rates are expressed per 1000 of mean divorced population. Remarriage rate 1 is computed using risk populations derived from census data and remarriage rate 2 using risk populations derived from the 1921 census and subsequent vital events. Note that the latter series extends only to 1978 because required external migration data for 1979-80 were not to hand.

Table A2.22

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS
 1
 BY RELATIVE AGE OF BRIDE AND GROOM: 1939-40 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	More Than 5 Years Younger	4-5 Years Younger	2-3 Years Younger	Relative Age of Groom		4-5 Years Older	6-10 Years Older	More Than 10 Years Older
				Within 1 Year of Same Age	2-3 Years Older			
Exact Marriage Duration								
5 years								
1939-40	0.0 (3)	0.0 (0)	11.1 (7.3,5)	5.8 (2.7,10)	6.5 (3.2,9)	7.0 (3.6,8)	10.6 (4.1,14)	9.1 (4)
1941-44	21.9 (14.3,5)	7.7 (2)	17.2 (7.5,11)	18.7 (4.0,47)	19.2 (4.5,39)	19.8 (5.0,33)	18.0 (4.5,34)	31.4 (9.9,21)
1945-48	10.2 (3)	13.7 (9.0,5)	17.1 (6.4,15)	12.4 (2.7,45)	10.1 (2.7,30)	8.5 (2.9,19)	13.3 (3.2,36)	14.0 (5.5,14)
1949-53	7.8 (3)	12.0 (7.8,5)	8.3 (4.3,8)	7.8 (2.0,32)	7.0 (2.1,25)	9.6 (2.8,26)	8.7 (2.5,26)	13.3 (5.4,13)
1954-58	12.4 (8.1,5)	10.4 (4)	3.4 (3)	6.5 (1.8,27)	5.4 (1.7,21)	10.6 (2.7,32)	8.4 (2.4,26)	10.3 (5.0,9)
1959-63	11.8 (4)	6.0 (2)	5.0 (4)	6.9 (1.8,33)	5.3 (1.6,25)	9.3 (2.5,30)	6.0 (2.1,18)	14.2 (5.8,13)
1964-68	16.5 (10.8,5)	9.1 (3)	13.0 (5.7,11)	14.7 (2.3,90)	14.3 (2.2,88)	12.7 (2.7,47)	14.2 (3.2,43)	12.0 (5.3,11)
1969-73	14.8 (9.7,5)	25.5 (11.7,10)	16.1 (5.7,17)	18.5 (2.2,145)	18.1 (2.3,133)	21.9 (3.4,87)	23.3 (4.1,68)	27.3 (7.9,25)
10 years								
1939-40	46.0 (25.0,7)	32.8 (19.4,6)	39.9 (13.6,18)	43.6 (7.2,75)	56.8 (9.2,78)	48.9 (9.4,56)	48.5 (8.7,64)	50.2 (15.3,22)
1941-44	61.3 (23.4,14)	61.6 (22.0,16)	43.8 (11.9,28)	63.1 (7.1,159)	58.2 (7.7,118)	47.5 (7.7,79)	50.3 (7.4,95)	71.9 (14.7,48)
1945-48	47.8 (18.3,14)	49.4 (16.7,18)	35.2 (9.1,31)	45.9 (5.1,166)	43.1 (5.5,128)	35.6 (5.8,80)	41.5 (5.6,112)	43.1 (9.5,43)
1949-53	39.2 (14.6,15)	38.4 (13.9,16)	34.4 (8.7,33)	34.6 (4.2,143)	34.0 (4.5,122)	32.1 (5.0,87)	32.2 (4.8,96)	52.1 (10.5,51)
1954-58	42.2 (14.7,17)	31.2 (13.0,12)	20.4 (7.0,18)	35.5 (4.2,147)	28.5 (3.9,112)	37.4 (5.1,113)	40.2 (5.2,124)	41.0 (9.8,36)
1959-63	59.1 (18.9,20)	38.9 (15.6,13)	36.2 (9.7,29)	44.3 (4.4,211)	41.5 (4.3,194)	45.0 (5.4,145)	40.4 (5.3,122)	58.9 (11.4,54)
1964-68	92.6 (24.5,28)	73.2 (21.2,24)	60.1 (12.0,51)	69.1 (4.8,423)	70.5 (4.8,433)	64.7 (5.9,240)	70.1 (6.8,212)	55.8 (11.2,51)
15 years								
1939-40	85.4 (33.3,13)	60.1 (25.8,11)	48.8 (14.9,22)	70.9 (9.1,122)	77.9 (10.6,107)	77.7 (11.6,89)	62.9 (9.8,83)	86.7 (19.8,38)
1941-44	83.2 (26.9,19)	84.7 (25.4,22)	61.0 (13.9,39)	87.7 (8.3,221)	80.4 (8.9,163)	69.2 (9.2,115)	67.8 (8.5,128)	104.8 (17.4,70)
1945-48	88.7 (24.4,26)	68.6 (19.5,25)	61.4 (11.9,54)	70.5 (6.3,255)	61.9 (6.5,184)	61.0 (7.4,137)	64.5 (7.0,174)	63.1 (11.3,63)
1949-53	57.5 (17.5,22)	67.1 (18.0,28)	55.2 (10.8,53)	58.1 (5.4,240)	51.5 (5.4,185)	52.5 (6.3,142)	57.3 (6.3,171)	73.6 (12.3,72)
1954-58	79.4 (19.8,32)	54.5 (17.0,21)	44.2 (10.2,39)	61.9 (5.5,256)	53.3 (5.3,209)	61.9 (6.5,187)	66.7 (6.6,206)	64.9 (12.2,57)
1959-63	109.3 (25.0,37)	92.8 (23.4,31)	75.0 (13.7,60)	88.9 (6.1,423)	89.1 (6.1,417)	89.7 (7.4,289)	85.7 (7.5,259)	113.4 (15.4,104)
20 years								
1939-40	124.8 (39.4,19)	71.0 (27.9,13)	64.3 (17.0,29)	83.1 (9.8,143)	90.2 (11.4,124)	95.1 (12.7,109)	75.0 (10.7,99)	100.4 (21.1,44)
1941-44	100.7 (29.3,23)	100.1 (27.4,26)	82.9 (16.0,53)	104.4 (9.0,263)	94.6 (9.6,192)	81.8 (9.9,136)	82.7 (9.3,156)	119.8 (18.5,80)
1945-48	112.6 (27.2,33)	87.9 (21.8,32)	75.0 (13.1,66)	82.7 (6.7,299)	78.7 (7.3,234)	82.8 (8.6,186)	85.6 (7.9,231)	88.2 (13.2,88)
1949-53	78.5 (20.2,30)	93.5 (21.0,39)	78.1 (12.7,75)	81.6 (6.3,337)	74.4 (6.4,267)	74.3 (7.4,201)	74.1 (7.1,221)	92.0 (13.6,90)
1954-58	109.2 (22.9,44)	93.5 (21.8,36)	69.2 (12.6,61)	92.3 (6.6,382)	83.1 (6.5,326)	96.4 (7.9,291)	98.2 (7.9,303)	107.1 (15.4,94)
25 years								
1939-40	138.0 (41.1,21)	76.5 (28.9,14)	82.0 (19.0,37)	93.5 (10.3,161)	106.2 (12.2,146)	107.4 (13.5,123)	87.9 (11.5,116)	116.4 (22.5,51)
1941-44	122.6 (31.9,28)	107.8 (28.3,28)	97.0 (17.2,62)	120.3 (9.5,303)	117.3 (10.5,238)	95.6 (10.6,159)	98.5 (10.1,186)	136.3 (19.5,91)
1945-48	119.5 (27.9,35)	115.3 (24.6,42)	95.5 (14.6,84)	104.3 (7.5,377)	96.2 (8.0,286)	103.3 (9.4,232)	107.1 (8.8,289)	101.2 (14.0,101)
1949-53	102.0 (22.8,39)	124.7 (23.8,52)	103.1 (14.4,99)	106.8 (7.1,441)	104.2 (7.5,374)	101.2 (8.5,274)	99.5 (8.1,297)	108.3 (14.6,106)
30 years								
1939-40	151.1 (42.7,23)	76.5 (28.9,14)	84.3 (19.3,38)	110.4 (11.1,190)	120.1 (12.9,165)	114.4 (13.8,131)	95.5 (11.9,126)	120.9 (22.9,53)
1941-44	135.7 (33.3,31)	123.2 (30.0,32)	115.8 (18.6,74)	134.2 (10.0,338)	128.7 (10.9,261)	110.1 (11.3,183)	109.1 (10.6,206)	143.8 (20.0,96)
1945-48	129.6 (28.9,38)	142.8 (27.0,52)	102.3 (15.0,90)	124.7 (8.1,451)	114.4 (8.6,340)	124.2 (10.2,279)	121.9 (9.3,329)	117.2 (15.0,117)

Source: Divorce file sample; New Zealand Vital Statistics 1939-73.

1 Note that this table covers only marriages where both bride and groom were aged under fifty years.

Table A2.23

ESTIMATED PERCENTAGES OF DIVORCES DISSOLVING 1945-63 MARRIAGES WITHIN
FIFTEEN YEARS WHICH SATISFIED SELECTED CONDITIONS BY TYPE
OF MARRIAGE CEREMONY

Condition, and Age of Bride or Groom	Type of Marriage Ceremony						Total	
	Civil		Church		Religious Non-church			
	%	N	%	N	%	N	%	N
Bride Pregnant								
16-19	51.1	417	42.7	1029	44.8	125	42.9	1154
20-24	29.6	446	15.7	1359	27.7	94	16.5	1453
25-29	14.5	200	5.9	287	8.0	25	6.1	312
Bride Divorced								
20-29	22.4	647	3.9	1646	16.8	119	4.8	1765
30-39	68.0	200	45.2	146	53.6	28	46.6	174
40-49	68.6	102	39.3	56	53.8	13	42.0	69
All ages	26.3	1403	5.6	2908	14.7	293	6.4	3201
Groom Divorced								
30-39	39.0	300	22.7	344	46.3	41	25.2	385
40-49	51.1	135	50.6	77	47.1	17	50.0	94
50-59	35.6	45	22.6	31	50.0	4	25.7	35
All ages	18.5	1403	5.6	2912	11.6	293	6.2	3205
Groom from Elley-Irving Socio-economic Group 5 or 6								
16-19	65.2	112	51.7	211	64.9	37	53.6	248
20-24	53.7	484	36.0	1523	65.0	120	38.1	1643
25-29	48.7	300	33.6	699	53.8	65	35.3	764
30-39	42.3	298	23.6	343	61.0	41	27.6	384
All ages	49.5	1403	34.9	2902	57.2	292	36.9	3194

Source: Divorce file sample.

1 Socio-economic groups 5 and 6 are the two lowest on Elley and Irving's (1976) six-group scale.

Table A2.24

1

ESTIMATED CUMULATIVE DIVORCE RATES TO SELECTED EXACT MARRIAGE DURATIONS BY RELATIVE BIRTHPLACE OF BRIDE
AND GROOM: 1949-53 TO 1969-73 MARRIAGE COHORTS

Marriage Cohort	Birthplace of Groom, then Bride											
	New Zealand		England + Wales		England + Wales		Eastern Europe		Eastern Europe		Pacific New Zealand	
	England + Wales	New Zealand	England + Wales	New Zealand	England + Wales	New Zealand	England + Wales	New Zealand	England + Wales	New Zealand	England + Wales	Pacific New Zealand
1949-53	8.7 (1.2,115)	0.0 (0)	13.5 (5.9,11)	11.7 (3)	21.6 (1)	19.0 (1)	8.3 (2)	0.0 (0)	30.5 (2)	13.8 (1)		
1954-58	6.0 (1.0,80)	(7.5,5)	17.1 (6.4,15)	12.6 (4)	15.2 (1)	0.0 (0)	11.6 (2)	0.0 (0)	32.8 (3)	7.0 (1)		
1959-63	6.5 (1.0,96)	(7.2,7)	9.5 (4.6,9)	0.0 (0)	31.1 (1)	33.1 (1)	13.5 (2)	23.0 (1)	0.0 (0)	0.0 (0)		
1964-68	13.3 (1.3,224)	(5.0,8)	14.2 (5.0,17)	16.1 (10.5,5)	33.1 (2)	0.0 (0)	25.9 (4)	0.0 (0)	13.0 (2)	8.6 (3)		
1969-73	19.0 (1.4,379)	(7.3,19)	24.2 (6.1,33)	8.1 (2)								
	Exact Marriage Duration											
	5 years											
1949-53	34.2 (2.3,451)	47.0 (16.4,17)	51.4 (11.4,42)	42.7 (18.5,11)	150.9 (77.3,7)	95.1 (59.5,5)	33.0 (16.9,8)	3.5 (1)	61.0 (4)	27.5 (2)		
1954-58	30.7 (2.2,411)	31.9 (12.3,14)	65.1 (12.3,57)	34.7 (15.1,11)	75.8 (47.9,5)	27.6 (1)	40.6 (22.1,7)	0.0 (0)	120.4 (50.1,11)	21.1 (3)		
1959-63	40.4 (2.4,593)	44.5 (13.1,24)	66.6 (11.9,53)	41.6 (17.3,12)	77.6 (49.0,5)	66.2 (2)	87.8 (34.2,13)	23.0 (1)	42.4 (27.3,5)	29.0 (15.9,7)		
1964-68	65.6 (2.8,1100)	65.7 (12.6,55)	87.7 (12.0,105)	80.7 (22.8,25)								
	15 years											
1949-53	55.4 (2.9,731)	69.1 (19.6,25)	72.2 (13.3,59)	62.2 (22.2,16)	172.4 (81.6,8)	114.1 (64.5,6)	70.2 (24.2,17)	7.1 (2)	122.0 (59.5,8)	41.3 (3)		
1954-58	56.5 (2.9,757)	47.9 (15.0,21)	92.5 (14.4,81)	47.4 (17.6,15)	121.2 (59.1,8)	27.6 (1)	69.5 (28.5,12)	28.5 (3)	164.1 (57.0,15)	28.1 (4)		
1959-63	85.1 (3.4,1249)	81.6 (17.3,44)	130.1 (16.1,123)	76.3 (23.0,22)								
	20 years											
1949-53	76.8 (3.4,1014)	77.4 (20.7,28)	96.6 (15.2,79)	77.7 (24.6,20)	258.6 (94.6,12)	114.1 (64.5,6)	111.5 (29.8,27)	17.7 (11.5,5)	213.4 (74.4,14)	41.3 (3)		
1954-58	87.3 (3.6,1170)	68.4 (17.7,30)	130.1 (16.7,114)	53.7 (18.6,17)								
1949-53	101.9 (3.8,1345)	85.7 (21.7,31)	128.4 (17.2,105)	97.1 (27.2,25)								

Source: Divorce file sample; New Zealand Vital Statistics 1949-73.

- 1 Risk populations for birthplace combinations involving the Netherlands, Eastern Europe, and the Pacific not available for 1949-53.
2 Includes Czechoslovakia, Hungary, Latvia, Poland, Rumania, and Yugoslavia.
3 Includes Cook Islands, Western Samoa, and Tonga.

Table A2.25

ESTIMATED DIVORCE RATES BY AGE OF WIFE AT DIVORCE
¹
 AND NUMBER OF NUPTIAL ISSUE 1976

Age of Wife	Number of Nuptial Issue					
	0	1	2	3	4	5+
20-24	8.1 (53)	7.2 (32)	2.2 (8)	- (0)	- (0)	- (0)
25-29	30.2 (109)	15.0 (63)	8.5 (68)	6.1 (23)	5.3 (6)	- (0)
30-39	33.9 (72)	18.1 (47)	12.0 (125)	8.6 (83)	7.0 (36)	5.5 (21)
40-49	12.1 (19)	10.7 (19)	7.9 (47)	6.7 (46)	7.0 (36)	4.7 (28)
50+	5.4 (27)	2.8 (15)	2.2 (25)	3.1 (29)	2.4 (15)	2.4 (18)
All Ages	14.3 (282)	9.2 (178)	7.0 (274)	5.9 (181)	5.2 (93)	3.7 (67)

Source: 1976 cross-sectional divorce file sample;
 1976 census.

¹ Rates are expressed per 1000 married women and numbers of divorces on which they are based are given in parenthesis.

APPENDIX 3

ESTIMATION OF EX-NUPTIAL CONFINEMENTS BY AGE OF MOTHER AND
NUPTIAL FIRST CONFINEMENTS BY AGE OF MOTHER AND MARRIAGE
DURATION: NON-MAORI POPULATION 1942 AND 1962-64, AND
MAORI POPULATION 1962-64

Because of the Second World War, tabulations of ex-nuptial confinements by age of mother in single years and nuptial first confinements occurring within one year of marriage by age of mother in single years and marriage duration in months were never produced for the non-Maori population for the year 1942. Similarly these tabulations were not produced separately for the non-Maori and Maori populations for the first three years following the change in birth registration procedure which in 1962 allowed the legitimacy of Maori births to be ascertained for the first time. This appendix describes the estimation procedures used to fill these gaps.

1942 Non-Maori Estimates

Ex-nuptial Confinements by Age of Mother

The number of non-Maori ex-nuptial live births registered in 1942 was known. This figure was deflated on the assumption that the incidence of multiple births it included was the mean of the 1941 and 1943 incidences. An estimate of 1330 live ex-nuptial confinements resulted, and these were distributed to single-year age-of-mother

categories on the assumption that the mean of the proportionate distributions for 1941 and 1943 applied.

Nuptial First Confinements by Age of Mother and Duration of Marriage

The estimation procedure used here comprised four steps. First, the total number of nuptial first confinements was estimated. The total number of nuptial births was deflated for multiple cases assuming the mean of the 1941 and 1943 incidences of multiple births. The mean of the 1941 and 1943 proportions of first nuptial confinements among all live nuptial confinements was then applied to this estimate. Second, the estimate of 11552 live nuptial first confinements obtained was distributed to single-year age-of-mother categories by assuming the mean of the 1941 and 1943 proportionate distributions. Third, the resulting estimates by age of mother were split into those occurring within the first year of marriage and those occurring at later marriage durations by assuming the means of the 1941 and 1943 proportionate splits. Finally, the estimated numbers of first nuptial confinements occurring within marriage durations 0-11 months were distributed to single-month duration categories by assuming the mean of the 1941 and 1943 distributional patterns for each maternal age.

1962-64 Non-Maori and Maori Estimates

Ex-nuptial Confinements by Age of Mother

The general strategy adopted was to derive non-Maori estimates first, and then obtain the required Maori estimates as residuals by

subtraction from known total population figures. The approach tried first involved interpolating linearly between the means of known non-Maori age-specific ex-nuptial confinement rates for the years 1960 and 1961, and 1965 and 1966. The interpolated rates were then applied to 1962, 1963, and 1964 risk populations to obtain estimated confinements by age of mother. However, the Maori estimates produced as a residual of this approach were unrealistic. Experiments with various deviations from linear interpolation failed to satisfactorily remedy the problem, and the approach was abandoned.

Instead, total population ex-nuptial confinement rates by age of mother were calculated for the years 1962-66. For each age of mother, ratios of the 1962, 1963, and 1964 rates to the mean of the rates for 1965 and 1966 were computed. These ratios were then applied to the means of the 1965 and 1966 non-Maori rates to yield estimates of the 1962, 1963, and 1964 non-Maori rates, the assumption being that ratios for the non-Maori population would approximate those for the total population given that non-Maoris accounted for about ninety percent of the total risk population in any age group. Estimates of non-Maori ex-nuptial confinements by age of mother were then derived by applying the rates obtained to the appropriate risk populations. Maori estimates found subsequently by subtraction from total population figures appeared to be 'reasonable', and so these results were accepted.

Nuptial First Confinements by Age of Mother and Duration of Marriage

Attention was first focused on confinements within marriage durations 0-7 months, which by arbitrary definition share with

ex-nuptial confinements the characteristic of nonmarital conception. Following the experience with estimating ex-nuptial confinements by age of mother, notions of employing as a basis for estimation simple linear interpolation between the means for 1960 and 1961, and 1965 and 1966 of the ratio of nuptial confinements within 0-7 months of marriage to ex-nuptial confinements were set aside. Instead, the means by age of mother of this ratio for 1965 and 1966 were first calculated for the total population, followed by the total population ratios by age of mother for each of the years 1962-64. For each age of mother the ratios for 1962-64 were then divided by the 1965-66 mean ratio, and the resulting values multiplied by the 1965-66 mean ratio for the non-Maori population. This process yielded estimates of the non-Maori ratios of nuptial confinements within 0-7 months of marriage to ex-nuptial confinements by age of mother for the years 1962, 1963, and 1964. These ratios were then used in conjunction with the previously estimated distributions by age of mother of ex-nuptial confinements to compute estimates of the numbers of non-Maori confinements within marriage durations 0-7 months by age of mother. In turn, these were distributed to single-month duration categories on the assumption that the distributional pattern followed by the total population for a given age-of-mother category in a given year applied also to the non-Maori population.

There was no necessity to estimate the numbers of live first nuptial confinements occurring at marriage durations 8-11 months. However, in order to bring the 1962-64 data sets into line with those for earlier and later years estimates were made. For each age of mother the mean annual proportion of all live first nuptial confinements at marriage durations greater than seven months which

were non-Maori confinements was calculated for the period 1965-66. Assuming that these proportions applied throughout 1962-64, estimated numbers of live non-Maori first nuptial confinements at marriage durations greater than seven months were derived for those years from total population figures. The ratios of live nuptial first confinements at marriage durations eight, nine, ten, and eleven months to those at marriage durations greater than seven months were then computed by age of mother for the total population in 1962, 1963, and 1964. Finally, these ratios were applied to the non-Maori estimates of live nuptial first confinements at marriage durations greater than seven months to determine the number of non-Maori confinements occurring in each single-month duration category.

Having by now obtained the required non-Maori distributions of live nuptial first confinements occurring within the first year of marriage by single-year ages of mother and marriage duration, matching Maori distributions were again generated by subtraction from total population distributions.

In conclusion, a comment on the general strategy of calculating estimates for the Maori population residually is in order. Initially this strategy seemed preferable because the availability of non-Maori data for years either side of the period 1962-64 offered the prospect of using interpolative estimation procedures. Probably because of the rapidity of change in patterns of ex-nuptial fertility and nonmarital pregnancy in the early 1960s, this type of procedure proved unsatisfactory. The type of approach ultimately taken would have allowed independent derivation of Maori estimates followed by residual derivation of non-Maori ones. However, the classificatory detail of

the data on which independent Maori estimates would have been based implied small cell frequencies and distributional patterns which showed considerable instability from year to year. Moreover, while it could reasonably be assumed at various points that ratios and distributional patterns for the non-Maori population approximated those for the total population, this sort of assumption would have been suspect if made in respect of the Maori population. Accordingly the decision to obtain Maori estimates residually was reaffirmed. It means, of course, that indices based on these estimates must be interpreted with special caution.

APPENDIX 4

ADJUSTMENT OF FEMALE SINGLE-YEAR AGE DISTRIBUTIONS

Estimated annual single-year age distributions for the female population aged 11-49 years were obtained from the Department of Statistics as follows:

1. Unrevised estimates as at 31st December for the non-Maori population for the years 1921-36.
2. Revised estimates as at 31st December for the non-Maori, Maori, and total populations for the years 1936-80.
3. Revised mean estimates for the non-Maori, Maori, and total populations for the years 1937-80.

All series of estimates were derived by adopting the preceding census distribution as base and adjusting forward for external migration and mortality. The 'revision' to which post-1936 estimates were subjected consisted of adjusting intercensal total populations by sex in the light of the following census return, then redistributing these adjusted totals to age groups in the same proportions as previously.

The distributions of interest, given the available vital registration data bearing on ex-nuptial fertility and nonmarital pregnancy, were non-Maori 'mean' and 'as at' distributions for the periods 1937-80 and 1921-71 respectively, total population 'mean' and 'as at' distributions since 1962, Maori 'mean' distributions since 1962, and Maori 'as at' distributions for 1962-71. Detailed scrutiny

of these distributions by examining, first, annual patterns of the difference between the estimated populations aged x and $x+1$ years, and second, annual patterns of change in the sizes of individual birth cohorts revealed three major flaws which required some adjustment. First, most base distributions showed evidence of age heaping. Second, marked discontinuities were apparent at times when individual birth cohorts were followed across junctions marking the replacement of one base distribution by another. And third, there was evidence in these discontinuities that recent censuses have significantly underenumerated age groups which are of critical importance in a study of ex-nuptial fertility and nonmarital pregnancy.

In the case of the non-Maori population this last phenomenon appeared to have developed over the 1961, 1966, 1971, and 1976 censuses. It emerged as a particularly serious problem, however, in respect of the Maori population. Pool (1964, 1977) reports a tendency for Maoris to be underenumerated at ages 15-24, and the analysis presented here suggests that over the period for which Maori female age distributions are required about ten percent of those aged 10-14 at one census may not have been counted at the next when aged 15-19. Indeed it suggests that there may have been substantial underenumeration of Maori females throughout the peak reproductive ages.

It is conceivable that category jumping from the Maori to the non-Maori population between censuses partly accounts for Maori underenumeration. There is really no way of determining the extent of this phenomenon, or even of determining whether its net effect is to reduce the size of the Maori population. But regardless, it is

entirely plausible that proportionately more adolescent and young adult Maoris than non-Maoris should be missed by the census. They probably leave home earlier, often to live in situations in which responsibility for furnishing census returns for a household is difficult to assign or not willingly accepted. The mobility of Maori youth is undoubtedly another factor (Pool, 1964, 1977). Then again, lower educational levels in conjunction with a general unfamiliarity with, suspicion of, and indifference to Pakeha (European) bureaucracy almost certainly leads to a higher incidence of active avoidance of the census. For the purposes of the present study, therefore, Maori female age distributions supplied by the Department of Statistics were adjusted on the assumption that irregularities occurring with the adoption of new base distributions were entirely attributable to different levels of completeness of enumeration at different ages.

Adjustments for Age Heaping

Age heaping was generally more obvious in the earlier non-Maori base distributions (i.e. those derived from the 1921-45 censuses) and the Maori base distributions. For more recent non-Maori distributions it seemed largely confined to the older reproductive ages, although heaping at younger ages may have been obscured by irregularities which were to be expected in view of New Zealand's turbulent fertility and external migration history since 1930. Various adjustment techniques were experimented with, bearing in mind that the objective was to smooth obvious age heapings without obliterating those irregularities for which legitimate demographic explanations could be advanced.

It was finally decided to resort to moving averages. The 1921, 1926, 1936, and 1945 non-Maori 'as at', and the 1937, 1945, and 1946 non-Maori 'mean' distributions were adjusted in their entirety by calculating three-year moving averages, as were all Maori base distributions. [1] As to the remaining non-Maori distributions, the 1951 and 1956 'as at', and the 1951, 1952, 1956, and 1957 'mean' distributions were deemed not to need smoothing, while the 1962, 1963, 1965, and 1966 'mean' distributions were smoothed at ages above thirty by calculating three-year moving averages. [2] The 1971 and 1972, and 1975 and 1976 'mean' distributions were similarly smoothed at ages greater than thirty-five and forty respectively. In all cases, estimates for subsequent years until a new base was adopted were revised by applying the original annual birth cohort increments due to external migration and mortality to the smoothed base distribution. No total population distributions were independently smoothed, adjusted total population distributions being obtained as the sums of adjusted non-Maori and Maori distributions.

[1] In the case of 'mean' distributions, discontinuities associated with the adoption of a new census distribution as base were spread across two adjacent years. Hence, adjustments described in this appendix were made to both years' data. Here, for example, both the 1945 and 1946 non-Maori 'mean' distributions were smoothed, as were the 1962 and 1963, 1965 and 1966, 1971 and 1972, and 1975 and 1976 Maori 'mean' distributions.

[2] Although 1961 and 1966 were the census years, 1962 and 1965 were the years for which returns from these censuses were used to establish new base distributions. Similarly, the 1976 census returns were used to establish a new base for deriving 1975 estimates. Note also that as adjustments for age heaping were made only at older ages within the reproductive span after 1945, 'as at' distributions did not need to be altered. This was because these distributions were required only in connection with the multiple decrement analysis reported in Chapter 4, which does not extend to older reproductive ages.

In making the adjustments just described it was necessary to take into account the possibility that the vital data subsequently to be related to the adjusted age distributions exhibited similar patterns of age heaping. No clear pattern was detectable over any significant period, although the concentration of ex-nuptial and premaritally conceived nuptial confinements within a relatively narrow age-of-mother range, and the small numbers of cases involved at many ages over much of the period under review largely predetermined that this would be so. It was thus decided not to tamper with the vital data.

Adjustments for Underenumeration

Underenumeration of older teenagers and young adults by recent censuses was attested to by substantial decreases in the sizes of individual birth cohorts between the year immediately preceding adoption of a new base distribution and the year of its adoption; decreases which could not be reconciled with recorded net external migration and mortality. It seemed vital to make some allowance for this phenomenon for three reasons. First, nonmarital conceptions are numerically concentrated in the 15-24 age group. Second, the period since 1960 has embraced radical change in nonmarital sexual behaviour. And third, the fact that underenumeration was more pronounced among the Maori than among the non-Maori population required that corrective action be taken so as not to overstate ethnic differences in ex-nuptial fertility and premarital pregnancy.

Adjustment of 'As At' Distributions

Adjustment was deemed necessary in the cases of the 1962, 1965, 1971, and 1975 distributions for the non-Maori population, and the 1961, 1966, 1971, and 1975 distributions for the Maori population. The general strategy followed was to correct these base distributions, then make matching adjustments by birth cohort over the subsequent period during which they were in use. In this way original intercensal patterns of change in the sizes of individual cohorts were preserved. The adjustment method assumed complete enumeration of single-year age groups in the range $14-n$ to 14 years in any base distribution, where n is the number of annual age distributions derived from that base subsequent to the year of its adoption. Thus, for the 1962 non-Maori base distribution, $n=2$ (since it was replaced by a new base in 1965), and for both 1965 base distributions, $n=5$ (since they were replaced in 1971). It will be appreciated that the birth cohorts aged between $14-n$ and 14 as at 31st December in year y , the year of adoption of a base distribution, will be aged between 14 and $14+n$ as at 31st December in year $y+n$, the year prior to the adoption of a new base distribution, and between 15 and $15+n$ as at 31st December the following year. The nature of the Department of Statistics' age distributions is that birth cohorts are adjusted annually for the net effect of external migration and mortality between year y and year $y+n$. If, then, y' is the year in which the base distribution adopted in year y is replaced, $P(x,y')$, the expected number of females aged x as at 31st December of that year is given, for values of x between 15 and $15+n$, by:

$$P(x,y') = P(x-1,y'-1) + M(x,y') \dots\dots(1)$$

where $M(x,y')$ is the net increment from external migration and mortality to the female birth cohort aged x as at 31st December in year y' over the preceding twelve months.

$P(x,y')$ may then be compared with the equivalent value in the year y' base distribution, the difference between the two indicating the extent to which the birth cohort aged x is underenumerated in the year y' base distribution.

Of course, having corrected single-year age groups in the range 15 to $15+n$ for underenumeration in the year y' base distribution it becomes possible to adjust a larger number of age groups when that distribution in turn gives way to the year y'' base distribution (after having been used to derive n' annual age distributions between years y' and y''). Adjustments made to ages in the range 15 to $15+n$ in the year y' base distribution are made also to the same birth cohorts for subsequent years up to and including year $y'+n'$. Then, writing y'' for y' , equation (1) may be applied in respect of values of x lying in the range 15 to $15+n'+n+1$. This process clearly may be extended, with adjustments possible for a larger number of single-year age groups as each new base distribution is adopted.

The quantity $M(x,y')$ in equation (1) was estimated from unpublished annual external migration statistics and published annual mortality statistics by sex, single years of age, and ethnic origin. Using a conventional lexis grid approach it can be shown that:

$$M(x,y') = 0.5[N(x-1,y') + N(x,y')] - 0.5[D(x-1,y') + D(x,y')] \dots\dots(2)$$

where $N(x,y')$ is the net intake of female migrants aged x during calendar year y' .

$D(x,y')$ is the number of female deaths at age x during calendar year y' .

Adjustments made using the method just described are summarised in Table A4.1. Since the multiple decrement analysis for which 'as at' age distributions were required (Chapter 4) does not extend to older ages, only adjustments made in the range 15-24 years are shown. In order that all ages in this range could be covered at all dates it was necessary to begin by making adjustments to the 1956 non-Maori and Maori base distributions. These adjustments were exceedingly small in the case of the non-Maori distribution, and were discarded once their minimal impact on the 1962 adjustments had been incorporated. They were larger in the case of the Maori distribution, but here 1956 data were of no interest in themselves because of the non-availability of Maori vital registration data at that date.

It will be noted that at some points Table A4.1 gives negative figures in parenthesis. These negative adjustments were not in fact made to the relevant base distributions. Rather, where the observed value of $P(x,y')$ was greater than the expected value derived from equation (1), it was retained. Discontinuity resulting from this practice was then smoothed by the method described in the final section of this appendix.

Adjustment of 'Mean' Distributions

Once again, adjustments were made in the wake of each of the 1961-76 censuses. It was over this period that underenumeration of teenagers and young adults seemed to have developed so far as non-Maoris were concerned, while earlier data again were not required

Table A4.1

ADJUSTMENTS FOR UNDERENUMERATION MADE TO NON-MAORI AND MAORI

FEMALE 'AS AT' BASE AGE DISTRIBUTIONS

Age	1961/1962 ¹		1965		1971		1975	
	Original Cohort Size	Adjustment	Original Cohort Size	Adjustment	Original Cohort Size	Adjustment	Original Cohort Size	Adjustment
Non-Maori								
15	22170	(-14)	22000	34	24850	(-70)	27440	318
16	20850	(-2)	21820	118	24290	198	26490	504
17	18180	78	22080	201	23360	361	25830	507
18	16760	145	22150	199	22580	444	25230	463
19	15820	102	20980	87	22330	338	24580	516
20	15530	24	18510	(-69)	21890	256	24400	243
21	16780	4	17100	(-16)	21510	6	23690	291
22	16040	6	16090	(-59)	21010	(-2)	23200	170
23	14660	32	15990	(-409)	21170	(-234)	23060	(-184)
24	14110	(-12)	17190	(-155)	21500	(-202)	22660	17
Maori								
15	1837	4	2173	147	2983	39	3673	143
16	1663	76	2013	213	2723	125	3420	213
17	1533	124	1883	234	2463	222	3213	239
18	1493	119	1790	196	2287	244	3043	262
19	1500	94	1713	142	2180	225	2890	214
20	1530	58	1633	101	2117	184	2687	199
21	1513	53	1550	92	2043	150	2520	176
22	1457	70	1487	96	1940	157	2373	180
23	1383	80	1457	110	1827	151	2270	164
24	1353	69	1483	76	1730	126	2193	130

Source: Unpublished data supplied by the Department of Statistics; New Zealand Vital Statistics various annual volumes.

¹ Non-Maori figures relate to 1962, and Maori figures to 1961.

for Maoris. As already indicated (footnote 1), discontinuities consequent on the switch from one base distribution to another were spread over two adjacent years in 'mean' age estimates. Thus, eight sets of adjustments were necessary for each sub-population, the years in question being 1962 and 1963, 1965 and 1966, 1971 and 1972, and 1975 and 1976.

The procedure followed in adjusting the 1962, 1965, 1971, and 1975 distributions was patterned on that used to adjust 'as at' base distributions. Each pair of years was treated as though the first was transitional between the discarding of one base distribution and the full adoption of another. In making adjustments for transitional years, a modified version of equation (1) was used. Suppose that a new base distribution is established in year y (with year $y-1$ being a transitional year), and that n annual age distributions are subsequently derived from this base up to and including year $y'-2$, where year $y'-1$ is the next transitional year. Then, following the same principles as before, and assuming that the 'mean' female population aged x in a given year is equivalent to the mid-year female population aged x , $P(x,y'-1)$, the expected number of females aged x at mid-year in year $y'-1$ is given, for values of x in the range 15 to $15+n$ by:

$$P(x,y'-1) = P(x-1,y'-2) + M(x,y'-1) \dots\dots(3)$$

where $M(x,y'-1)$ is the net increment from external migration and mortality to the female birth cohort aged x at mid-year in year $y'-1$ over the preceding twelve months.

$P(x,y'-1)$ may then be compared with the equivalent value in the year $y'-1$ transitional distribution, with the difference between the two indicating, as before, the extent of underenumeration of the birth cohort aged x at mid-year in year $y'-1$. As before, an equation for $M(x,y'-1)$ may be derived using a lexis grid approach as follows:

$$M(x,y'-1) = [0.125[N(x,y'-2) + N(x-1,y'-1)]] + 0.375[N(x-1,y'-2) +$$

$$N(x, y'-1)] - [0.125[D(x, y'-2) + D(x-1, y'-1)] + 0.375[D(x-1, y'-2) + D(x, y'-1)]] \dots\dots(4)$$

Carrying the process a stage further, if the next transitional year is denoted by $y''-1$, equation (3) may be used again, only with y'' written for y' . By this time, however, adjustments will have been made to the year y' base distribution by the method shortly to be described. These adjustments will have been made for single-year age groups in the range 15 to $15+n+1$ years. These age groups may thus also be regarded as fully enumerated in the year y' base distribution, and matching adjustments will have been made by birth cohort to distributions for subsequent years up to and including year $y''-2$. These preliminaries having been completed, values of $P(x, y''-1)$ may be calculated from an appropriately amended equation (3) for values of x in the range 15 to $15+n'+n+2$, where n' is the n -value for the period of currency of the year y' base distribution. Again, as each new base distribution is adopted it becomes possible to adjust for a larger number of single-year age groups.

Turning to the adjustment of the 1963, 1966, 1972, and 1976 'mean' distributions, using the same notation as above the expected number of females aged x at mid-year in year y' is given, for values of x in the range 15 to $15+n+1$, by:

$$P(x, y') = P(x-2, y'-2) + M(x-1, y'-1) + M(x, y') \dots\dots(5)$$

All terms in this equation have meanings equivalent to those of comparable terms in equation (3). Furthermore, $M(x-1, y'-1)$ and $M(x, y')$ may be evaluated by writing, respectively, $x-1$ for x and $y'+1$ for y' in equation (4).

Comparison of $P(x, y')$ with the equivalent recorded value for the year y' indicates the extent of underenumeration of the birth cohort aged x in the year y' base distribution. Extension of the method to the year y'' base distribution requires that y'' be written for y' in equation (5), with that equation then being evaluated for values of x in the range 15 to $15+n'+n+3$.

Adjustments made to the non-Maori and Maori 'mean' distributions identified above using this methodology are detailed in Table A4.2. Non-Maori distributions were again adjusted only within the age range 15-24 years. These were the ages at which the development of a consistent pattern of underenumeration was evident, whereas at older ages results tended to become erratic. Moreover, given the vital rates to be calculated using the adjusted data, it was at ages below twenty-five that it was most important to correct for underenumeration. Possibly because they are less affected by simplifying assumptions made in taking external migration into account, and also because underenumeration may be more general throughout the reproductive ages, Maori results were less erratic at older ages. It was therefore decided to adjust as many single-year age groups in the range 15-44 years as available data permitted at each of the census dates in question. As is apparent from Table A4.2, certain of the older age groups within this range could not be adjusted at some dates. However, this is a relatively inconsequential problem given the magnitudes of adjustments made at slightly younger ages and the concentration of nonmarital conceptions and ex-nuptial confinements at younger reproductive ages.

Table A4.2

ADJUSTMENTS FOR UNDERENUMERATION MADE TO NON-MAORI AND MAORI FEMALE

'MEAN' TRANSITIONAL AND BASE AGE DISTRIBUTIONS

Age	1962-63				1965-66				1971-72				1975-76			
	Original Cohort		Adjustments		Original Cohort		Adjustments		Original Cohort		Adjustments		Original Cohort		Adjustments	
	Sizes	Sizes	1962	1963	Sizes	Sizes	1965	1966	Sizes	Sizes	1971	1972	Sizes	Sizes	1975	1976
Non-Maori																
15	21440	22160	1	(-73)	21930	22110	35	141	24590	25040	(-72)	78	26980	27620	213	248
16	19510	21490	(-5)	23	22000	21870	106	128	23960	24480	68	82	26180	26720	290	541
17	17470	19470	36	37	22110	21880	120	214	23140	23710	168	290	25500	25950	300	548
18	16230	17450	92	123	21480	22050	162	257	22550	22870	238	436	24900	25280	310	541
19	15580	16300	47	149	19600	21620	81	250	22180	22360	81	450	24370	24590	361	519
20	16110	15650	41	60	17680	19870	59	(-44)	21710	22010	219	236	23870	24150	295	388
21	16330	16100	(-24)	74	16460	17830	89	(-81)	21270	21530	131	245	23060	23590	496	213
22	15210	16400	37	(-27)	15790	16620	(-2)	(-19)	20820	21100	219	133	22640	22980	312	328
23	14220	15440	7	81	16440	16070	(-156)	(-205)	20950	21020	131	2	22460	22650	(-35)	122
24	13700	14500	(-2)	(-12)	16800	16630	(-38)	(-218)	20770	21340	219	(-57)	22290	22470	148	(-156)
Maori																
15	1913	2060	2	(-29)	2200	2260	74	96	2910	3120	32	(-22)	3660	3820	51	67
16	1750	1917	37	(-5)	2067	2090	106	183	2700	2870	78	71	3440	3543	89	155
17	1600	1753	64	30	1937	1940	125	227	2500	2607	125	165	3260	3310	109	199
18	1513	1600	61	63	1813	1827	86	226	2350	2390	128	226	3047	3120	121	242
19	1497	1513	46	58	1687	1740	88	140	2217	2250	113	224	2830	2953	125	199
20	1517	1493	13	43	1580	1660	69	102	2097	2167	163	155	2590	2777	179	155
21	1523	1510	40	13	1513	1577	43	64	1973	2097	197	150	2420	2597	183	159
22	1487	1517	77	39	1487	1507	24	31	1850	2010	199	153	2297	2447	176	148
23	1420	1480	92	76	1487	1463	23	32	1747	1903	174	145	2217	2323	113	142
24	1370	1417	69	91	1497	1463	36	36	1667	1797	97	124	2143	2230	106	87
25	1340	1367	70	65	1467	1477	90	50	1593	1703	90	64	2053	2150	122	83
26	1307	1340	45	67	1410	1453	98	101	1507	1610	69	71	1950	2060	122	114
27	1260	1303	(-11)	43	1357	1396	61	107	1437	1517	47	54	1847	1960	116	115
28	1230	1257	(-14)	(-12)	1340	1353	52	60	1413	1463	20	22	1760	1860	27	97
29	1213	1227	48	(-16)	1310	1340	31	43	1437	1460	13	(-28)	1670	1777	47	2
30	1200	1213	41	46	1240	1286	16	50	1457	1487	17	(-40)	1557	1667	65	58
31	1147	1200	102	40	1190	1197	34	57	1407	1483	92	(-13)	1490	1547	28	80
32	1067	1147	124	99	1167	1140	88	78	1340	1423	97	70	1470	1470	23	52
33	987	1067	18	120	1170	1133	75	117	1280	1340	82	94	1503	1457	1	36
34	937	987	9	14	1133	1153	97	86	1277	1287	55	72	1497	1483	5	10
35	917	937	(-5)	4	1063	1127	118	96	1220	1280	73	52	1447	1483	69	(-1)
36	887	913	(-15)	(-6)	983	1057	14	121	1177	1267	20	22	1357	1437	99	68
37	833	880	(-1)	(-12)	947	990	(-9)	6	1123	1223	61	(-32)	1333	1383	22	68
38	783	827	(-4)	2	923	947	(-11)	(-15)	1123	1173	77	7	1323	1357	7	(-9)
39	760	780	(-18)	(-7)	900	937	(-6)	(-28)	1117	1143	73	48	1310	1340	2	(-14)
40	747	760	(-26)	(-26)	817	890	4	(-3)	1097	1140	79	42	1210	1270	29	35
41	703	743	*	(-26)	773	817	(-7)	0	1007	1100	120	69	1157	1173	34	60
42	647	700	*	*	733	750	13	13	940	1020	(-3)	102	1130	1127	60	50
43	607	643	*	*	717	707	20	36	833	937	46	(-4)	1137	1107	54	68
44	587	603	*	*	670	687	*	46	870	873	37	2	1087	1100	77	85

Source: Unpublished data supplied by the Department of Statistics; New Zealand Vital Statistics various annual volumes.

* Adjustment not able to be calculated.

As in Table A4.1, so in Table A4.2 negative values are given in parenthesis. These negative adjustments were not actually made to transitional or base distributions. Rather recorded values in those distributions were retained, and resulting discontinuity was smoothed by the method about to be outlined.

Smoothing Across Junctions Marking Adoption of New Base Distributions

Where adjustments for underenumeration were made to 'as at' or 'mean' base distributions, or 'mean' transitional distributions, discontinuities stemming from the replacement of one base distribution by another were effectively smoothed. However, where the size of a birth cohort was not so adjusted this discontinuity remained. Among other things, it remained for all non-Maori female birth cohorts across junctions associated with the establishment of new base distributions following the 1956 and earlier censuses.

The strategy followed in smoothing remaining discontinuities was to compare the recorded increment to a birth cohort over the year marking the replacement of one 'as at' base distribution by another, one 'mean' base distribution by a transitional distribution, or a transitional 'mean' distribution by a new base distribution with the increment to be expected given recorded external migration and mortality. The 'excess' increment was then distributed linearly down that cohort over the period commencing the year the earlier base distribution was adopted.

Expected cohort increments were calculated in the case of 'as at' distributions using equation (2). Those for the twelve months preceding the dates of transitional 'mean' distributions were obtained

from equation (4), and those for the following twelve months also were derived from this equation, only with $y'+1$ written for y' . Single-year-of-age non-Maori external migration data by sex were not available directly for the years 1945, 1946, 1950, 1951, 1952, and 1955, so for these years estimates prepared by Jain (1973) were used.

In smoothing annual changes in the sizes of birth cohorts in the 'mean' distributions, excess increments between the last distribution established from a given base and the transitional distribution of the following year were distributed first. Subsequently, excess increments between the transitional and new base distributions were distributed.

APPENDIX 5

METHOD USED IN COMPONENT ANALYSIS OF CHANGES IN THE ILLEGITIMACY RATIO

Preparation of Input Data

Described below is a method for decomposing changes in the illegitimacy ratio into four components plus an interaction factor. Various summations involved were carried out by single years of age over the range 11-44 years. Basic data requirements for years marking either the beginning or the end of a period over which change in the illegitimacy ratio was being examined were: age-specific ex-nuptial and nuptial fertility rates, age-specific proportions of females not currently married, and the proportions of females aged 11-44 at each single year of age in that range.

Age-specific proportions of females not currently married were needed not only for themselves, but in order to determine the risk populations for calculating schedules of ex-nuptial and nuptial fertility rates. They were obtained by linear interpolation between proportions calculated for the censuses delimiting the intercensal period within which the mid-point of a given year lay, except that values for 1976 and 1978 were estimated by linear extrapolation of the 1971-76 intercensal trend. The latter course of action seemed reasonable in the light of trends in marriage and divorce discussed in Chapters 6 and 7.

A problem arose with the non-availability for other than the total population of tabulations giving marital status by sex and single years of age at the 1956 and 1961 censuses. Tabulations by five-year age groups for the non-Maori and Maori populations were, however, available. Single-year-of-age data were thus estimated for non-Maori females by distributing five-year age group totals by marital status among constituent single-year age categories in the same proportions as in the total population. This step was justified on the ground that non-Maoris comprise the overwhelming majority of the total population at any age. Maori data for 1961 (they were not required for 1956) were then obtained by subtraction from known total population figures.

Derivation of Equations

Starting point for the component analysis was an equation developed by Kumar (1969) expressing the illegitimacy ratio in terms of four factors: the schedules of age-specific ex-nuptial and nuptial fertility rates, the age structure of the female population of childbearing age, and the schedule of age-specific proportions of females of childbearing age who are not currently married. The equation is:

$$R = \frac{\sum f(x)q(x)i(x)}{\sum f(x)q(x)i(x) + \sum f(x)[1 - q(x)]j(x)} \dots\dots(1)$$

where $f(x)$ is the proportion of all females of childbearing age aged x .

$q(x)$ is the proportion of females aged x who are not currently married.

$i(x)$ is the ex-nuptial fertility rate per unmarried woman for females aged x .

$j(x)$ is the marital fertility rate per unmarried woman for females aged x .

If R is the illegitimacy ratio at time A and R' is the ratio at some later time B , then the difference $R' - R$ may be written in terms of equation (1) as follows:

$$R' - R = \frac{\Sigma f'(x)q'(x)i'(x)}{\Sigma f'(x)q'(x)i'(x) + \Sigma f'(x)[1 - q'(x)]j'(x)} - \frac{\Sigma f(x)q(x)i(x)}{\Sigma f(x)q(x)i(x) + \Sigma f(x)[1 - q(x)]j(x)} \dots\dots(2)$$

Writing $f(x) + \Delta f(x)$ for $f'(x)$, $q(x) + \Delta q(x)$ for $q'(x)$, $i(x) + \Delta i(x)$ for $i'(x)$, and $j(x) + \Delta j(x)$ for $j'(x)$, equation (2) may be expanded such that it has a common denominator which is given by:

$$k = [\Sigma [f(x) + \Delta f(x)][q(x) + \Delta q(x)][i(x) + \Delta i(x)] + \Sigma [f(x) + \Delta f(x)][1 - [q(x) + \Delta q(x)]] [j(x) + \Delta j(x)]] [\Sigma f(x)q(x)i(x) + \Sigma f(x)[1 - q(x)]j(x)] \dots\dots(3)$$

Collecting together $\Delta i(x)$, $\Delta j(x)$, $\Delta q(x)$, and $\Delta f(x)$ terms in the numerator of the expanded equation (2), and dropping all subscripts (x) for the sake of convenience, the quantity $R' - R$ becomes the sum of the following five expressions:

$$\frac{\Sigma f j \Sigma f q \Delta i - \Sigma f q j \Sigma f q \Delta i}{k} \dots\dots(4)$$

$$\frac{\Sigma f q i \Sigma f q \Delta j - \Sigma f q i \Sigma f \Delta j}{k} \dots\dots(5)$$

$$\frac{\Sigma f_j \Sigma f_i \Delta q - \Sigma f_{qj} \Sigma f_i \Delta q + \Sigma f_{qi} \Sigma f_j \Delta q}{k} \dots\dots(6)$$

$$\frac{\Sigma f_j \Sigma q_i \Delta f - \Sigma f_{qj} \Sigma q_i \Delta f - \Sigma f_{qi} \Sigma j \Delta f + \Sigma f_{qi} \Sigma q_j \Delta f}{k} \dots\dots(7)$$

$$\frac{(\Sigma f_j - \Sigma f_{qj})(\Sigma f \Delta q \Delta i + \Sigma q \Delta f \Delta i + \Sigma i \Delta f \Delta q + \Sigma \Delta f \Delta q \Delta i)}{k} -$$

$$\frac{\Sigma f_{qi}(\Sigma \Delta f \Delta j - \Sigma f \Delta q \Delta j - \Sigma q \Delta f \Delta j - \Sigma j \Delta f \Delta q - \Sigma \Delta f \Delta q \Delta j)}{k} \dots\dots(8)$$

Expressions (4)-(7) give respectively the components of change in the illegitimacy ratio which are due to changes in age-specific ex-nuptial fertility rates, in age-specific nuptial fertility rates, in marriage patterns, and in the age structure of the female population of childbearing age. Expression (8) gives the sum of seven interaction factors.

APPENDIX 6

METHOD USED IN COMPONENT ANALYSIS OF CHANGES IN THE
BRIDAL PREGNANCY RATIO

By definition the bridal pregnancy ratio is given by:

$$\text{BPR} = \frac{M(p)}{M(p) + M(np)} \dots\dots(1)$$

where $M(p)$ is the number of marriages where the bride was pregnant.

$M(np)$ is the number of marriages where the bride was of reproductive age (16-44) but was not pregnant.

$M(np)$ may be rewritten in the form:

$$M(np) = \sum R(m,np,x)P(nm,x) \dots\dots(2)$$

where $R(m,np,x)$ is the rate at which unmarried women (i.e. those never married, widowed, or divorced) aged x married non-pregnant (x lies in the range 16-44 years), and is given by:

$$R(m,np,x) = \frac{M(np,x)}{P(nm,x)} \dots\dots(3)$$

$P(nm,x)$ is the mid-year never married, widowed, or divorced female population aged x .

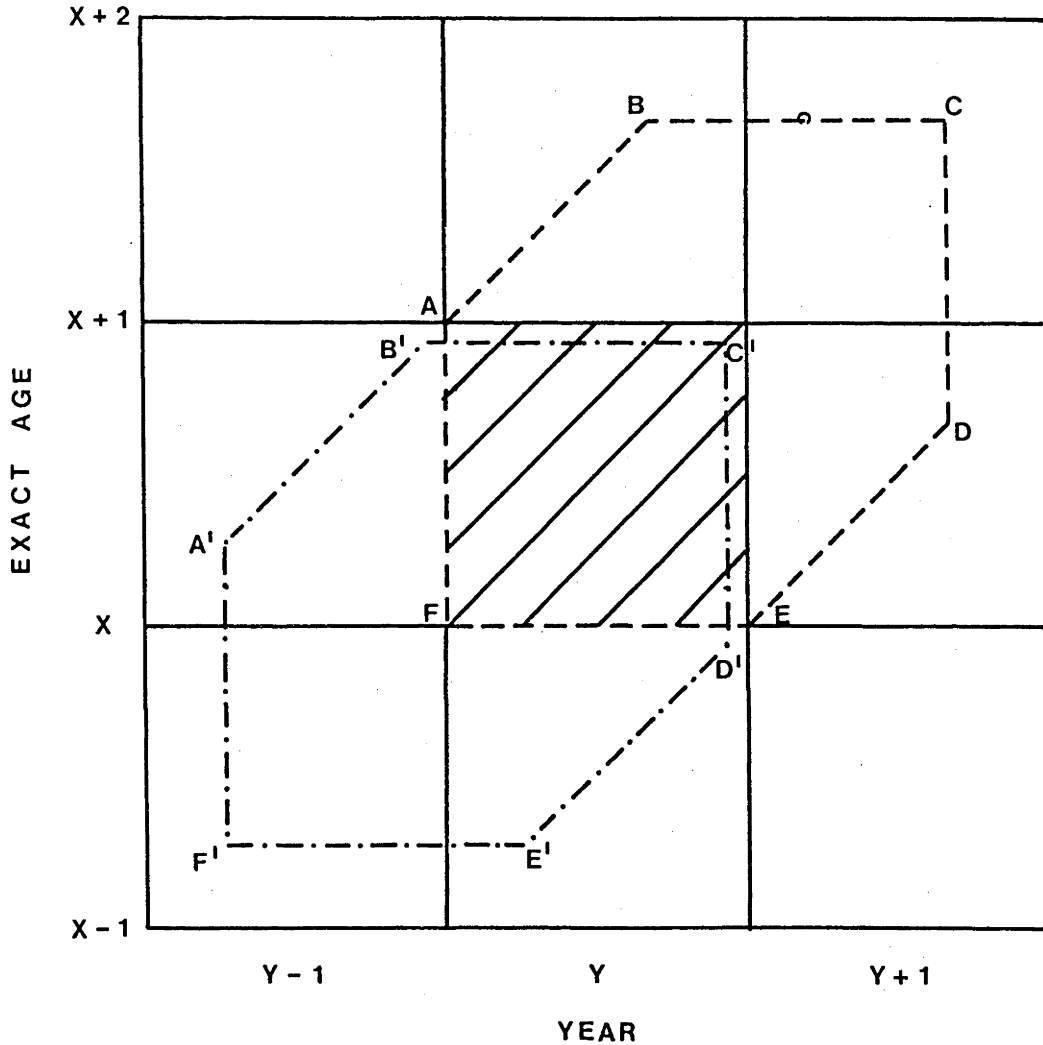
$M(np,x)$ is the number of women marrying non-pregnant at age x .

For the purposes of this thesis, a woman is deemed to have been pregnant at marriage if she experiences a live nuptial confinement at a marriage duration of less than eight months. $M(p,x)$, the number of women marrying when pregnant at age x in a given year, is determined, after the method described by Basavarajappa (1968), from annual data giving live nuptial confinements at marriage durations of less than one year by single-year ages of mother and marriage duration in months. If, in Figure A6.1, the shaded area represents $M(p,x)$ for year y , then the confinements that follow these marriages are distributed by date and exact age of mother within the area ABCDEF, where the point C denotes a woman attaining exact age $x+1$ years, 8 months on 31st August of year $y+1$. This is not to say that all live confinements occurring at marriage durations 0-7 months which are located within the area ABCDEF pertain to the one marriage cohort. If segments of that area are summed it is found to represent the equivalent of two and one-third (2.333) cohorts.

If it is now assumed that all live confinements take place after a gestation period of exactly 38 weeks, or 266 days, then one can say that the ex-nuptial conceptions from which $M(p,x)$ for year y are drawn are distributed by date and exact age of mother at conception within the area A'B'C'D'E'F'. Again, marriages prior to confinement which follow conceptions located within this area do not all occur at age x during year y . Suppose, however, that these conceptions are denoted by $C(ex,x)$, which may be thought of as the number of ex-nuptial conceptions which later terminate in live confinements which have the potential for being followed by marriage prior to confinement at age x during year y . Then summing subareas of area A'B'C'D'E'F' in Figure A6.1, $C(ex,x)$ may be estimated as:

Figure A6.1

LEXIS GRID ILLUSTRATION OF MARRIAGES OF PREGNANT BRIDES AGED X
 DURING YEAR Y AND ASSOCIATED CONCEPTIONS AND CONFINEMENTS



$$C(ex,x) = 0.46170c(ex,x,y-1) + 0.87590c(ex,x,y) + \\
 0.53402c(ex,x-1,y-1) + 0.46170c(ex,x-1,y) \dots\dots(4)$$

where $c(ex,x,y)$ is the number of ex-nuptial conceptions subsequently terminating as live confinements occurring to women aged x at conception during year y , and is derived after the method detailed in Chapter 2 (footnote 9)

for computing the numerator of a single-year-of-age age-specific ex-nuptial conception rate.

It is now possible to define $M(p)$ from equation (1) in terms of $C(ex,x)$ as follows:

$$M(p) = \sum C(ex,x)p(x) \dots\dots(5)$$

where $p(x)$ is the probability that an ex-nuptial conception from $C(ex,x)$ will result in marriage prior to confinement at age x during year y .

Suppose we now define:

$$C'(ex,x) = \frac{C(ex,x)}{2.333} \dots\dots(6)$$

$$p'(x) = 2.333p(x) \dots\dots(7)$$

Then clearly:

$$M(p) = \sum C'(ex,x)p'(x) \dots\dots(8)$$

This equation has the same general form as equation (5), but the two terms on the right hand side now have single-cohort orders of magnitude. $C(ex,x)$ was the equivalent of 2.333 conception cohorts, and consequently $p(x)$ was 2.333 times below single-cohort order of magnitude.

Multiplying the right hand side of equation (8) by $P(nm,x)/P(nm,x)$ we have:

$$M(p) = \sum R(c,ex,x)P(nm,x)p'(x) \dots\dots(9)$$

where $R(c,ex,x)$ is a type of ex-nuptial conception rate of single-cohort order of magnitude whose value is given by:

$$R(c,ex,x) = \frac{C'(ex,x)}{P(nm,x)} \dots\dots(10)$$

Substituting from equations (2) and (9) in equation (1) we have:

$$BPR = \frac{\Sigma R(c,ex,x)P(nm,x)p'(x)}{\Sigma R(c,ex,x)P(nm,x)p'(x) + \Sigma R(m,np,x)P(nm,x)} \dots\dots(11)$$

If we now multiply both numerator and denominator by the reciprocal of $T(nm)$, where $T(nm) = \Sigma P(nm,x)$, we obtain:

$$BPR = \frac{\Sigma R(c,ex,x)f(nm,x)p'(x)}{\Sigma R(c,ex,x)f(nm,x)p'(x) + \Sigma R(m,np,x)f(nm,x)} \dots\dots(12)$$

where $f(nm,x)$ is the proportion of never married, widowed, or divorced women aged 16-44 at mid-year in year y who were at that time aged x years.

Equation (12) expresses the bridal pregnancy ratio in terms of probabilities of marrying non-pregnant, conceiving ex-nuptially, and regularising a premarital conception by marriage prior to confinement, and also in terms of the age structure of the female population at dual risk of ex-nuptial conception and marriage. It is this equation which is used as the basis for the component analysis of changes in the bridal pregnancy ratio.

Let BPR represent the bridal pregnancy ratio at time A, and BPR' the ratio at some later time B. Then, from equation (12), dropping unnecessary subscripts for the sake of simplicity, we have:

$$BPR' - BPR = \frac{\Sigma R'(c)f'p''}{\Sigma R'(c)f'p'' + \Sigma R'(m)f'} - \frac{\Sigma R(c)fp'}{\Sigma R(c)fp' + \Sigma R(m)f} \dots\dots(13)$$

Writing $R(c) + \Delta R(c)$ for $R'(c)$, $f + \Delta f$ for f' , $p' + \Delta p'$ for p'' , and $R(m) + \Delta R(m)$ for $R'(m)$, equation (13) expands to the sum of the following five expressions:

$$\frac{\Sigma R(m)f \Sigma R(c)f \Delta p'}{k} \dots\dots(14)$$

$$\frac{\Sigma R(m)f \Sigma fp' \Delta R(c)}{k} \dots\dots(15)$$

$$- \frac{\Sigma R(c)fp' \Sigma f \Delta R(m)}{k} \dots\dots(16)$$

$$\frac{\Sigma R(m)f \Sigma R(c)p' \Delta f - \Sigma R(c)fp' \Sigma R(m) \Delta f}{k} \dots\dots(17)$$

$$\frac{\Sigma R(m)f \Sigma [R(c) \Delta f \Delta p' + f \Delta R(c) \Delta p' + p' \Delta R(c) \Delta f + \Delta R(c) \Delta f \Delta p']}{k}$$

$$\frac{\Sigma R(c)fp' \Sigma R(m) \Delta f}{k} \dots\dots(18)$$

where k is given by:

$$k = [\Sigma [R(c) + \Delta R(c)][f + \Delta f][p' + \Delta p'] + \Sigma [R(m) + \Delta R(m)][f + \Delta f]] \\ [\Sigma R(c)fp' + \Sigma R(m)f] \dots\dots(19)$$

Expressions (14)-(18) give respectively the contributions to change in the bridal pregnancy ratio of changing probabilities of marrying between conception and confinement, changing ex-nuptial

conception rates, changing rates of marriage when not pregnant, changing age structure within the reproductive age group, and five interaction factors.

APPENDIX 7

METHOD USED IN THE MULTIPLE DECREMENT ANALYSIS OF TRENDS IN PREMARITAL PREGNANCY

Required Input Data

Construction of multiple decrement tables of the type described in Chapter 4 required four sets of input data prepared on a synthetic or a real cohort basis as appropriate.

1. For values of x in the range 11-24 years, the numbers of never married females conceiving between exact ages x and $x+1$, subsequently to be confined for the first time ex-nuptially. [1]
2. For values of x in the range 15-24 years, the numbers of never married females conceiving between exact ages x and $x+1$, subsequently to be confined for the first time nuptially. [2]
3. For values of x in the range 16-24 years, the numbers of never

[1] The lower limit of eleven years was fixed after examination of the raw input data showed this to be the youngest age at which a premarital conception which was carried to term had ever occurred.

[2] The minimum legal age for marriage in New Zealand was set at sixteen by the Statutes Amendment Act 1939, which amended the Marriage Act 1908. The latter had stipulated no minimum age for marriage, but had required parental consent where a party was aged under twenty-one. It follows that since 1939 the youngest age at which a girl could become pregnant, subsequently to marry before confinement, has been fifteen. For the earlier period, official data disclose an average of 2.7 nuptial confinements within marriage durations 0-7 months per year where the mother was aged less than sixteen. These have been treated as if they had occurred at age sixteen.

married females marrying between exact ages x and $x+1$ without ever having experienced a conception that was subsequently carried to term. [3]

4. For values of x in the range 11-24 years, the numbers of females attaining exact age x never married and without having experienced a conception that was subsequently carried to term.

None of these sets of data was available directly. It was therefore necessary to devise estimation procedures.

Derivation of Input Data Set 1

Conceptions at age x to never married women attaining exact age x during year y which resulted in ex-nuptial first confinements were estimated from the sums of annual distributions by single-year ages of mother of live and still ex-nuptial confinements. [4] These needed to be adjusted for confinements which either occurred to ever married women or were second or higher parity confinements. The only relevant data source available was the Department of Social Welfare's survey of

[3] The lower limit of sixteen years was fixed in accordance with the provisions of the Statutes Amendment Act 1939, which were subsequently incorporated into the Marriage Act 1955 (see footnote 2). During 1913-32 an average of 9.0 marriages per year involved brides aged less than sixteen (for some unknown reason no marriages involving such brides were recorded after 1932, despite their not being officially outlawed until 1939). These have been treated as if they occurred at age sixteen.

[4] It was felt technically desirable to include still confinements as sociologically indistinguishable from live confinements. Data giving ex-nuptial still confinements by single-year ages of mother were available for all relevant years except 1942 (for which the required non-Maori data were estimated by averaging 1941 and 1943 figures) and 1962-64 (for which non-Maori data were estimated by splitting known total population figures according to age-specific ratios of non-Maori to total still ex-nuptial confinements calculated for 1965-67).

ex-nuptial births occurring in 1970. Using these data as a guide, various alternative sets of adjustment factors were applied.

Relevant results from the 1970 Ex-nuptial Birth Survey are presented in Table A7.1. These indicate, as expected, that the percentage of first confinements of spinsters among ex-nuptial confinements decreases with increasing age. The decrease is more rapid for total than for non-Maori confinements, which accords with Maori attitudes to consensual marriage. How accurate the individual percentages are is unknown. Suspected bias in the survey away from births to women living in stable de facto unions (Chapter 1) may mean that true percentages in 1970 were lower than those shown. Then again, in a sample of 3665 births there were 390 for which the age or marital status of the mother, or both, was unknown, and an additional 42 for which ethnic status of the birth was not recorded. Finally, even if the figures shown are reasonably accurate for 1970, they most likely have changed over time.

Mindful of these limitations, a series of alternative assumptions was made about how the functions summarised in column (8) of Table A7.1 might have changed through time. In making these assumptions it was desired to obtain several sets of percentages ($p(x)$ values) which followed the same general patterns of decline with increasing age, but between arbitrarily fixed starting and finishing points. Over the age range of interest, $p(x)$ may be considered a proportion in the process of declining monotonically from 1 to 0 with increasing age. Logits therefore provided a reasonable means of achieving the stated objective (Brass, 1975). Resort was had to the relationship:

$$\text{logit } (1 - p'(x)) = A + B \text{ logit } (1 - p(x))$$

Table A7.1

EX-NUPTIAL CONFINEMENTS IN 1970 BY AGE OF MOTHER, ETHNIC STATUS OF BIRTH, PARITY, AND MARITAL STATUS OF MOTHER

1

Age	Parity 1 Confinements		Parity 2+ Confinements		Parity Unknown Confinements		Divorced or Widowed	Married	Marital Status Unknown	Sum (1), (2), (4), and (5)	(1) as Percentage of (7)	
	Never Married (1)	Married (2)	Never Married (2)	Never Married (3)	Never Married (3)	(4)					(5)	(6)
12	-	-	-	-	-	-	-	-	-	-	-	100.0
13	1	-	-	-	-	-	-	-	-	1	7	100.0
14	7	-	-	-	-	-	-	-	-	54	160	100.0
15	54	-	-	-	-	-	-	-	-	282	324	99.4
16	159	1	-	-	-	-	-	-	-	318	293	95.4
17	269	12	-	-	-	-	-	-	-	181	162	90.7
18	294	28	-	-	-	-	-	-	-	122	106	86.5
19	275	37	-	-	-	-	-	-	-	81	23	77.5
20	227	50	-	-	-	-	-	-	-	6	2	63.0
21	114	45	-	-	-	-	-	-	-	5	7	58.6
22	95	42	-	-	-	-	-	-	-	1	1	48.4
23	59	40	-	-	-	-	-	-	-	1	1	42.5
24	45	38	-	-	-	-	-	-	-	6	6	34.6
25	28	24	-	-	-	-	-	-	-	-	-	-
Total												
12	1	-	-	-	-	-	-	-	-	1	3	100.0
13	3	-	-	-	-	-	-	-	-	14	74	100.0
14	14	-	-	-	-	-	-	-	-	196	363	100.0
15	74	-	-	-	-	-	-	-	-	402	403	99.0
16	194	2	-	-	-	-	-	-	-	390	237	89.6
17	342	18	-	-	-	-	-	-	-	220	162	72.8
18	360	39	-	-	-	-	-	-	-	144	120	57.8
19	338	59	-	-	-	-	-	-	-	69	54	52.3
20	284	85	-	-	-	-	-	-	-	37.5	28.3	42.6
21	137	71	-	-	-	-	-	-	-	1	1	37.5
22	115	73	-	-	-	-	-	-	-	6	6	28.3
23	69	61	-	-	-	-	-	-	-	-	-	-
24	54	59	-	-	-	-	-	-	-	-	-	-
25	34	48	-	-	-	-	-	-	-	-	-	-

Source: Department of Social Welfare Ex-nuptial Birth Survey.

1 Only non-Maori and total population data are shown as only they are required for present purposes. Subtraction of the former from the latter yields only approximate Maori data, as total population figures include some cases where the ethnic status of the birth is not known.

The quantities $p(x)$ and $p'(x)$ are proportions corresponding to age x in the known schedule and the schedule being derived respectively. By arbitrarily fixing $p'(17)$ (or $p'(16)$) and $p'(25)$ (it was assumed that $p'(x) = 1.0$ when $x < 17$ (or $x < 16$)) it was possible to solve simultaneous equations for A and B, and thence to derive $p'(x)$ for intermediate values of x .

Using this approach, alternative sets of non-Maori percentages were obtained for $p'(17) = 0.99$ and $p'(25) = 0.50$, $p'(17) = 0.99$ and $p'(25) = 0.60$, and $p'(17) = 0.99$ and $p'(25) = 0.75$. Alternative sets of total population percentages were obtained for $p'(16) = 0.995$ and $p'(25) = 0.400$, and for $p'(16) = 0.985$ and $p'(25) = 0.200$. Annual distributions of non-Maori and total ex-nuptial confinements by age of mother for the periods 1913-71 and 1962-78 respectively were then adjusted to distributions of ex-nuptial first confinements of spinsters under each of the assumptions listed in Table A7.2. These assumptions hardly exhaust all alternatives, but were selected as basic guidelines or because they incorporated plausible general trends.

Non-Maori assumptions 1 and 2 probably yield $p'(x)$ values that are respectively liberal for all years, but more so for later ones, and conservative for most years, but especially for earlier ones. Among characteristics of the period 1913-45 in comparison with that around 1970 were a much later age at marriage, later initiation of premarital sexual activity, stronger cultural disapproval of consensual unions and unmarried mothers, a lower incidence of marriage dissolution, and a lower level of impact of Maori cultural values on non-Maori fertility and marriage patterns through miscegenation.

Table A7.2

ALTERNATIVE ASSUMPTIONS AS TO PROPORTIONS OF EX-NUPTIAL CONFINEMENTS
AT AGES 12-25 WHICH HAVE BEEN FIRST CONFINEMENTS OF SPINSTERS

Non-Maori

ASSUMPTION 1: That all ex-nuptial confinements of women aged 12-25 have always been first confinements of spinsters.

ASSUMPTION 2: That the 1970 survey percentages of ex-nuptial confinements at ages 12-25 which were first confinements of spinsters applied throughout the period 1913-71.

ASSUMPTION 3: That during the period 1913-45 the percentages of ex-nuptial confinements at ages 12-25 which were first confinements of spinsters were such that $p'(17) = 0.99$ and $p'(25) = 0.50$, and that thereafter these percentages decreased at constant compound rates to survey levels in 1970 and 1971.

ASSUMPTION 4: That assumption 3 applied, except that during the period 1913-45 percentages were such that $p'(17) = 0.99$ and $p'(25) = 0.60$.

ASSUMPTION 5: That assumption 3 applied, except that during the period 1913-45 percentages were such that $p'(17) = 0.99$ and $p'(25) = 0.75$.

Total

ASSUMPTION 1: That all ex-nuptial confinements of women aged 12-25 have always been first confinements of spinsters.

ASSUMPTION 2: That the 1970 survey percentages of ex-nuptial confinements at ages 12-25 which were first confinements of spinsters applied throughout the period 1962-78.

ASSUMPTION 3: That the percentages of ex-nuptial confinements at ages 12-25 which were first confinements of spinsters were such that $p'(16) = 0.985$ and $p'(25) = 0.200$ throughout the period 1962-78.

ASSUMPTION 4: That in 1962 the percentages of ex-nuptial confinements at ages 12-25 which were first confinements of spinsters were such that $p'(16) = 0.995$ and $p'(25) = 0.400$, that survey percentages applied in 1970, that in 1978 percentages were such that $p'(16) = 0.985$ and $p'(25) = 0.200$, and that linear decreases took place over the two intervening periods.

ASSUMPTION 5: That assumption 4 applied, except that survey percentages applied throughout the period 1970-78.

ASSUMPTION 6: That assumption 4 applied, except that survey percentages applied throughout the period 1962-70.

These considerations suggest that percentages of ex-nuptial confinements at ages 17-25 which were second or subsequent confinements, confinements of ever married women, or both were lower earlier this century. [5] Non-Maori assumptions 3-5 (Table A7.2) were made with these thoughts in mind. They oversimplify in allowing for no change during 1913-45, but recognise the likelihood that change has occurred mainly since then. By building in compound rates of decline in $p'(x)$ they also allow that it probably accelerated over time.

Total population adjustments had to be made over a shorter period straddling the date of the Ex-nuptial Birth Survey. Assumption 1 is clearly too liberal whilst assumption 2 may approximate reality reasonably well (Table A7.2). Assumption 3 was included in recognition of the possible impact of survey bias away from births to de facto wives. Assumptions 4-6 were then designed to embody three general scenarios of change in the schedule of adjustment percentages. Of the three, assumption 4 is perhaps the most plausible. It incorporates a pattern of change during the 1960s similar to that postulated for non-Maoris. It also recognises the likelihood of continued change in the same direction during the 1970s due to better access to induced abortion, a rising divorce rate, and a diminished concern with formalising marital unions. The first factor could be expected to have affected women unintentionally pregnant for the first time rather more than those consciously building families outside formal marriage, or those chronically incapable of controlling their

[5] Considerations which suggest the reverse include longer exposure to the risk of premarital childbearing and the fact that the minority having this experience may have been particularly deviant, and thus especially prone to repeat it. However, on balance these forces seem unlikely to have cancelled out those operating in the other direction.

ex-nuptial fertility.

Having chosen a schedule of $p'(x)$ values and applied them to ex-nuptial confinements by age of mother to obtain ex-nuptial first confinements of never married mothers by age of mother, several assumptions were made. It was assumed, first, that all ex-nuptial confinements occur after a gestation period of exactly thirty-eight weeks, second, that confinements at age x during year y are distributed evenly through year y and over the age range between exact ages x and $x+1$, and third, that confinements occurring during year y which are not registered until year $y+1$ are balanced by those which occurred during year $y-1$ but were not registered until year y (New Zealand vital statistics are compiled by year of registration). If the parallelogram ABCD in Figure A7.1 represents conceptions occurring at age x to never married women attaining exact age x during year y which resulted in ex-nuptial first confinements, then invoking the first assumption the parallelogram A'B'C'D' represents those confinements. This parallelogram is the sum of the four areas AB'N, ANC'D, MDD', and A'ADM, which occupy the following proportions of the squares of the lexis grid in which they are respectively located:

$$AB'N - 1/2 \times 14/52 \times 14/52 = 0.036$$

$$ANC'D - 14/52 - (1/2 \times 14/52 \times 14/52) = 0.233$$

$$MDD' - 1/2 \times 38/52 \times 38/52 = 0.267$$

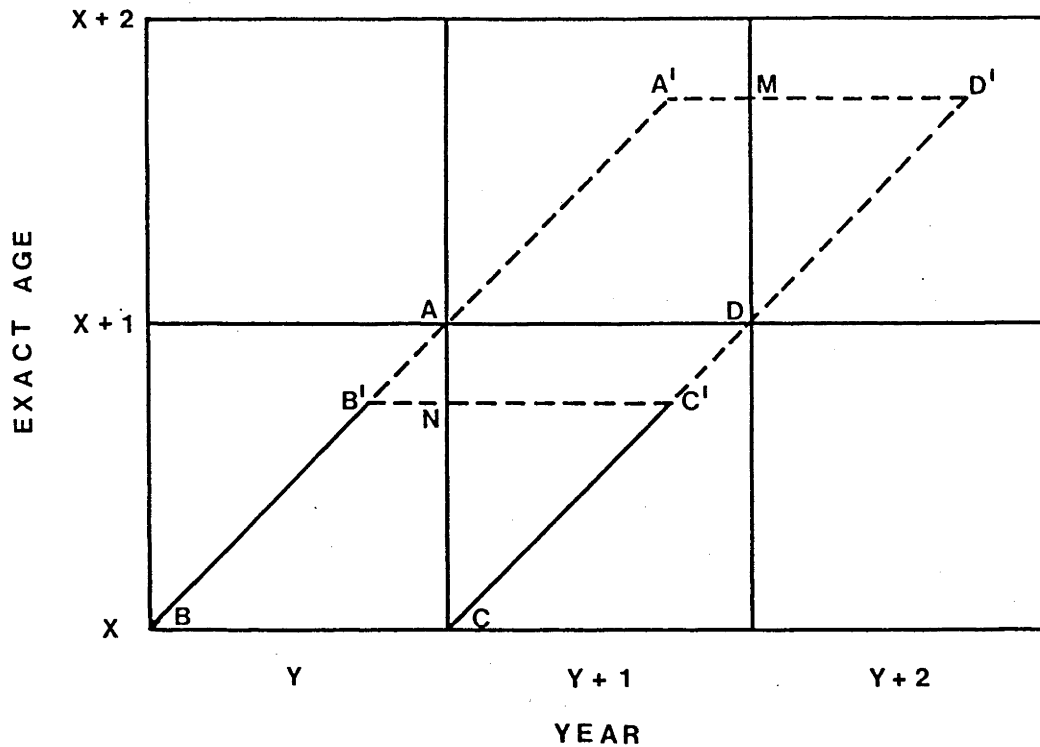
$$A'ADM - 38/52 - (1/2 \times 38/52 \times 38/52) = 0.464$$

Thus, invoking the second assumption, the following equation may be specified:

$$C(\text{ex})(x,y) = 0.036B(\text{ex})(x,y) + 0.233B(\text{ex})(x,y+1) +$$

Figure A7.1

LEXIS GRID ILLUSTRATION OF DERIVATION OF EQUATION (1)



$$0.267B(ex)(x+1,y+2) + 0.464B(ex)(x+1,y+1) \dots\dots(1)$$

where $C(ex)(x,y)$ is the number of conceptions occurring at age x to never married women attaining exact age x during year y which later result in ex-nuptial confinements.

$B(ex)(x,y)$ is the number of ex-nuptial first confinements of never married women aged x during year y .

Derivation of Input Data Set 2

Conceptions occurring at age x to never married women attaining exact age x during year y which resulted in nuptial first confinements were estimated from annual distributions by single-year ages of mother of live nuptial confinements occurring at marriage durations of 0-7

completed months. Distributions were first adjusted upward to include still nuptial confinements occurring at these marriage durations. The basis on which this adjustment was made changed through time in response to changes in the data available. Over the period 1913-25, total stillbirths by age of mother were allocated in proportion to the numbers of live nuptial first confinements at marriage durations 0-7 months among all live confinements at a given age. Thereafter, nuptial stillbirths to women of zero parity by age of mother were allocated in proportion to the numbers of live nuptial first confinements at marriage durations 0-7 months among all live nuptial first confinements. [6] There is an element of double counting in this procedure involving multiple confinements resulting in two or more stillbirths. However, because the adjustment procedure itself is not precise, this risk of double counting, being small, may be ignored.

The three assumptions made in respect of ex-nuptial first confinements were made again. Confinements of women of higher than zero parity or of previously married women were disregarded, since it was assumed that there were none at the ages relevant to this analysis (Chapter 4, section 4.2).

[6] No data were available for 1942, and so the means of 1941 and 1943 figures were used as estimates. Likewise no non-Maori data were available for 1962-71. For the period 1965-71, known total population data were split into non-Maori and Maori components on the assumption that age-specific ratios of still first nuptial confinements to all first nuptial confinements for the two ethnic groups bore the same proportionate relationship to one another as the equivalent ratios for all nuptial confinements. Age-specific ratios of non-Maori to total still first nuptial confinements were then calculated for the period 1965-67, and were used to estimate annual non-Maori distributions of still first nuptial confinements by age for 1962-64 from known total population distributions. From this point the method described in the text was applied.

From this point the logic portrayed in Figure A7.1 was again applied, the parallelogram ABCD this time representing conceptions occurring at age x to never married women attaining exact age x during year y which subsequently resulted in nuptial first confinements, and the parallelogram A'B'C'D' representing those confinements. This permitted the following equation to be specified:

$$C(n)(x,y) = 0.036B(n)(x,y) + 0.233B(n)(x,y+1) + \\ 0.267B(n)(x+1,y+2) + 0.464B(n)(x+1,y+1) \dots\dots(2)$$

where $C(n)(x,y)$ is the number of conceptions occurring at age x to never married women attaining exact age x during year y which later result in nuptial first confinements.

$B(n)(x,y)$ is the number of nuptial first confinements at marriage durations 0-7 months of women aged x during year y.

Derivation of Input Data Set 3

The number of spinsters attaining exact age x during year y who marry at age x without having experienced a conception that was subsequently carried to term may be expressed as follows:

$$M(np)(x,y) = M(t)(x,y) - M(bp)(x,y) - M(ex)(x,y) \dots\dots(3)$$

where $M(np)(x,y)$ is the number of spinsters attaining exact age x during year y who marry at age x without having experienced a conception that was subsequently carried to term.

$M(t)(x,y)$ is the total number of spinsters attaining exact age x during year y who marry at age x.

$M(bp)(x,y)$ is the number of spinsters attaining exact age x during year y who marry at age x while pregnant and subsequently carry the pregnancy to term.

$M(ex)(x,y)$ is the number of spinsters attaining exact age x during year y who marry at age x having previously experienced an ex-nuptial confinement.

On the assumption that marriages of spinsters aged x during year y ($M(x,y)$) are spread evenly through the year and by exact age across the range bounded by exact ages x and $x+1$:

$$M(t)(x,y) = 0.5[M(x,y) + M(x,y+1)] \dots\dots(4)$$

$M(bp)(x,y)$ was estimated from annual data on live nuptial confinements at marriage durations 0-7 months by marriage duration in months and single years of age, adjusted upward to include confinements resulting in stillbirths. This adjustment procedure merely extended that used in deriving the second set of input data, with the estimated numbers of confinements of women aged x at marriage durations 0-7 months which resulted in stillbirths being distributed pro rata to single-month duration of marriage categories. The assumptions were made, first, that nuptial confinements after marriage duration m complete months of women aged x during year y occurred evenly throughout that year and across the age range bounded by exact ages x and $x+1$, and second, that nuptial confinements after marriage duration m complete months took place at exact duration $m+0.5$ months.

Suppose consideration is given first to spinsters who attain exact age x during year y and who marry at age x while pregnant with a child that is then delivered after marriage duration 0 complete

months. In Figure A7.2, these women are represented by the parallelogram ABCD. Under the second of the assumptions just made, they will all be confined exactly 0+0.5 months after marriage, and so their confinements are represented by the parallelogram A'B'C'D'. This parallelogram is the sum of the four areas AB'N, ANC'D, MDD', and A'ADM, which occupy the following proportions of the squares of the lexis grid in which they are respectively located:

$$AB'N - 1/2 \times 23/24 \times 23/24 = 0.459$$

$$ANC'D - 1/2 - (1/2 \times 1/24 \times 1/24) = 0.499$$

$$MDD' - 1/2 \times 1/24 \times 1/24 = 0.001$$

$$A'ADM - 1/24 - (1/2 \times 1/24 \times 1/24) = 0.041$$

Invoking the first of the two assumptions made it follows that:

$$M(bp,0)(x,y) = 0.459B(n,0)(x,y) + 0.499B(n,0)(x,y+1) + \\ 0.001B(n,0)(x+1,y+2) + 0.041B(n,0)(x+1,y+1) \dots(5)$$

where $M(bp,0)(x,y)$ is the number of spinsters attaining exact age x during year y who marry at age x while pregnant with a child that is subsequently delivered after marriage duration 0 months.

$B(n,0)(x,y)$ is the number of nuptial confinements of women aged x occurring at marriage duration 0 complete months during year y .

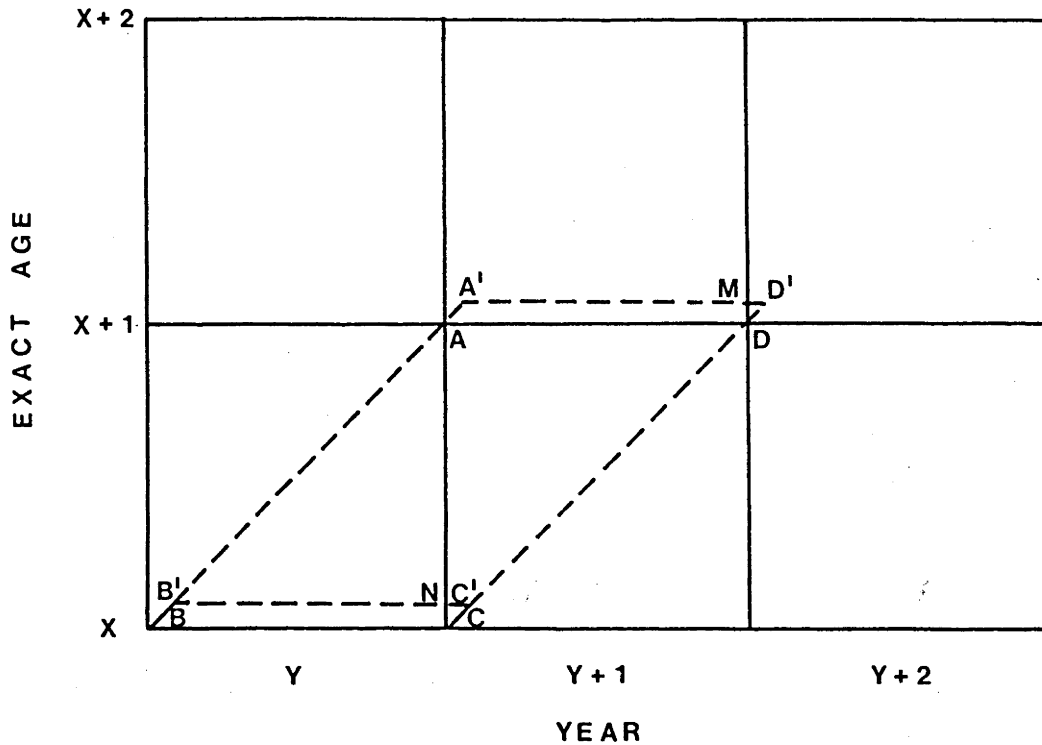
Similarly it can be shown that:

$$M(bp,1)(x,y) = 0.383B(n,1)(x,y) + 0.492B(n,1)(x,y+1) + \\ 0.117B(n,1)(x+1,y+1) + 0.008B(n,1)(x+1,y+2)$$

$$M(bp,2)(x,y) = 0.313B(n,2)(x,y) + 0.478B(n,2)(x,y+1) +$$

Figure A7.2

LEXIS GRID ILLUSTRATION OF DERIVATION OF EQUATION (5)



$$0.187B(n,2)(x+1,y+1) + 0.022B(n,2)(x+1,y+2)$$

$$M(bp,3)(x,y) = 0.251B(n,3)(x,y) + 0.457B(n,3)(x,y+1) + \\ 0.249B(n,3)(x+1,y+1) + 0.043B(n,3)(x+1,y+2)$$

$$M(bp,4)(x,y) = 0.195B(n,4)(x,y) + 0.430B(n,4)(x,y+1) + \\ 0.305B(n,4)(x+1,y+1) + 0.070B(n,4)(x+1,y+2)$$

$$M(bp,5)(x,y) = 0.147B(n,5)(x,y) + 0.395B(n,5)(x,y+1) + \\ 0.353B(n,5)(x+1,y+1) + 0.105B(n,5)(x+1,y+2)$$

$$M(bp,6)(x,y) = 0.105B(n,6)(x,y) + 0.353B(n,6)(x,y+1) + \\ 0.395B(n,6)(x+1,y+1) + 0.147B(n,6)(x+1,y+2)$$

$$M(bp,7)(x,y) = 0.070B(n,7)(x,y) + 0.305B(n,7)(x,y+1) + \\ 0.430B(n,7)(x+1,y+1) + 0.195B(n,7)(x+1,y+2)$$

It then follows that:

$$M(bp)(x,y) = \sum_{d=0}^7 M(bp,d)(x,y) \dots\dots(6) [7]$$

There are no data available from which $M(ex)(x,y)$, the number of spinsters attaining exact age x during year y who marry at age x having previously been confined ex-nuptially, can be estimated directly. One can only make assumptions about the rate at which those who give birth premaritally subsequently marry in comparison to never married, never pregnant (and subsequently confined) females of the same age.

There are reasons why a never married mother might be expected to marry sooner than her never married, never pregnant peer. If maintaining a relationship with the child's father she might find that the reality of parenthood acts as a spur to marriage, or if not and choosing to keep her child she might be particularly keen to find a stepfather for it. Conversely, if deserted by the father of her child and opting to become a solo parent she might become a less attractive marriage proposition. Alternatively, the experience and circumstances of her pregnancy might make her averse to becoming seriously involved with men for a time, or the fact that she has had a child out of wedlock may indicate a preference for consensual marriage.

Against this background it was decided to assume initially that once a spinster has given birth her subsequent probability of marriage

[7] Note that this method implies that some marriages of pregnant brides take place at age fifteen, which is below the minimum legal age for marriage. It has been assumed that all such marriages in fact took place at age sixteen.

at any age x is the same as that for members of the same birth cohort who reach age x never married and without having experienced a pregnancy, other than one terminated by abortion. Adopting this assumption, $M(ex)(x,y)$ is given by:

$$M(ex)(x,y) = \frac{P(ex)(x,y)}{P(ex)(x,y) + P(np)(x,y)} [M(t)(x,y) - M(bp)(x,y)] \dots(7)$$

where $P(ex)(x,y)$ is the number of person-years of exposure to the risk of marriage at age x for women who attain exact age x during year y never married but having given birth to a child, or who attain exact age x during year y never married and are confined ex-nuptially for the first time at age x .

$P(np)(x,y)$ is the number of person-years of exposure to the risk of marriage prior to first conception at age x for women who attain exact age x during year y never married and never having experienced a conception which led to confinement at term.

Adopting alternative assumptions involves altering the coefficients of $P(ex)(x,y)$ and/or $P(np)(x,y)$ in equation (7). Thus, since $M(t)(x,y)$ and $M(bp)(x,y)$ are given by equations (4) and (6), the task remaining is to show how those quantities may be determined.

Given the assumption of zero mortality (Chapter 4, section 4.2), and assuming further that there is no migration of females attaining exact age x in year y at age x , and second, that spinsters attaining exact age x during year y who are confined for the first time ex-nuptially at age x are exposed to the risk of marriage following

confinement for an average of half a year before attaining exact age $x+1$, we have:

$$P(\text{ex})(x,y) = S(\text{ex})(x,y) + 0.5[0.5B(\text{ex})(x,y) + 0.5B(\text{ex})(x,y+1)] \dots\dots(8)$$

where $S(\text{ex})(x,y)$ is the number of women who attain exact age x during year y never married, but having already carried a pregnancy to term.

$B(\text{ex})(x,y)$ has the same meaning as in equation (1).

If it is also assumed that spinsters attaining exact age x during year y who experience ex-nuptially at age x a conception leading to first confinement are exposed to the risk of marriage at age x prior to conception for an average of half a year, we have:

$$P(\text{np})(x,y) = S(\text{np})(x,y) - 0.5[C(\text{ex})(x,y) + C(\text{n})(x,y)] \dots\dots(9)$$

where $S(\text{np})(x,y)$ is the number of women who attain exact age x during year y never married and never having experienced a pregnancy that was, or was in the process of being, carried to term.

$C(\text{ex})(x,y)$ has the same meaning as in equation (1).

$C(\text{n})(x,y)$ has the same meaning as in equation (2).

The zero migration assumption invoked in obtaining equations (8) and (9) is at odds with the earlier assumption (Chapter 4, section 4.2) which recognised a migration factor, but presumed it to be non-selective on criteria of relevance to the present analysis. Equations (8) and (9) may be modified to bring them into line with the latter assumption by multiplying the right-hand sides by:

$$1 + 0.5 \left[\frac{T(x+1,y+1) - T(x,y)}{T(x,y)} \right] \dots\dots(10)$$

where $T(x,y)$ is the total number of women attaining exact age x during year y .

However, no purpose is served by making this modification, since expression (10) cancels as a common factor when substituting in equation (7).

Before equations (8) and (9) can be evaluated, it is necessary to know $S(ex)(x,y)$ and $S(np)(x,y)$. As marriage is not legally possible in New Zealand before the age of sixteen, equation (7) yields non-zero answers only when $x > 15$. Hence, $S(ex)(x,y)$ and $S(np)(x,y)$ need only be evaluated for values of x in the range 16-24. Commencing at the lower end of this range we have:

$$S(ex)(16,y) = T(16,y) \sum_{z=12}^{15} k(z) \dots\dots(11)$$

$$S(np)(16,y) = T(16,y) \left(1 - \sum_{z=11}^{15} j(z) \right) \dots\dots(12)$$

where $k(z)$ is the crude probability of having been confined for the first time when a spinster at age z , so that if a synthetic cohort multiple decrement table is being constructed:

$$k(z) = \frac{0.5[B(ex)(z,y) + B(ex)(z,y+1)]}{T(z,y)} \dots\dots(13)$$

and if a real cohort multiple decrement table is being constructed:

$$k(z) = \frac{0.5[B(ex)(z,y-x+z) + B(ex)(z,y-x+z+1)]}{T(z,y-x+z)} \dots\dots(14)$$

$j(z)$ is the crude probability of having conceived (subsequently to proceed to term) for the first time when a spinster at age z , so that if a synthetic cohort multiple decrement table is being constructed:

$$j(z) = \frac{C(ex)(z,y) + C(n)(z,y)}{T(z,y)} \dots\dots(15)$$

and if a real cohort multiple decrement table is being constructed:

$$j(z) = \frac{C(ex)(z,y-x+z) + C(n)(z,y-x+z)}{T(z,y-x+z)} \dots\dots(16)$$

It will be noted that the initial values assumed by z in the summations which occur in equations (11) and (12) have been determined from published data as the youngest ages at which girls respectively give birth and become pregnant.

When $x > 16$, it becomes necessary to take account of marriage at younger ages in determining $S(ex)(x,y)$ and $S(np)(x,y)$. Effectively we require, in the first instance, the number of women attaining exact age x during year y who have been confined as spinsters, less those who married between confinement and their x th birthdays. In the second instance we require the number of women attaining exact age x during year y never having been pregnant as spinsters (subsequently to proceed to term), less those of them who married prior to their x th birthdays. Following this strategy we have, for $x=17$:

$$S(\text{ex})(17,y) = T(17,y) \sum_{z=12}^{16} k(z) -$$

$$T(17,y)m(16) \left[\sum_{z=12}^{15} k(z) + 0.5k(16) \right] \dots\dots(17)$$

$$S(\text{np})(17,y) = T(17,y) \left[1 - \sum_{z=11}^{16} j(z) \right] -$$

$$T(17,y)n(16) \left[1 - \left[\sum_{z=11}^{15} j(z) + 0.5j(16) \right] \right] \dots\dots(18)$$

where $m(z)$ is the probability of marriage at age z for spinsters who have carried a pregnancy to term, so that if a synthetic cohort multiple decrement table is being constructed:

$$m(z) = \frac{M(\text{ex})(z,y)}{P(\text{ex})(z,y)} \dots\dots(19)$$

and if a real cohort multiple decrement table is being constructed:

$$m(z) = \frac{M(\text{ex})(z,y-x+z)}{P(\text{ex})(z,y-x+z)} \dots\dots(20)$$

$n(z)$ is the probability of marriage at age z for spinsters who have never conceived (subsequently to carry the pregnancy to term), so that if a synthetic cohort multiple decrement table is being constructed:

$$n(z) = \frac{M(\text{np})(z,y)}{P(\text{np})(z,y)} \dots\dots(21)$$

and if a real cohort multiple decrement table is being

constructed:

$$n(z) = \frac{M(np)(z, y-x+z)}{P(np)(z, y-x+z)} \dots\dots(22)$$

It might appear that the $M(ex)$, $M(np)$, $P(ex)$, and $P(np)$ values required to be substituted in equations (19)-(22) are not known. After all, the objective in finding $S(ex)$ and $S(np)$ values is to be able to determine corresponding $P(ex)$ and $P(np)$ values from equations (8) and (9), thence the appropriate $M(ex)$ value from equation (7), and finally the desired $M(np)$ value from equation (3). Inspection of equations (17) and (18) will show, however, that the subscripts of m and n are respectively one less than the subscripts of $S(ex)$ and $S(np)$. As $S(ex)(y,16)$ and $S(np)(y,16)$ may be found from equations (11) and (12) without reference to m or n values, $P(ex)(16,y)$, $P(np)(16,y)$, $M(ex)(16,y)$, and $M(np)(16,y)$ may also be computed. More generally, in calculating $S(ex)(x,y)$ and $S(np)(x,y)$ values, values of $m(z)$ and $n(z)$ are only ever required such that $z < x$. Performance of calculations sequentially for ascending values of x thus ensures that no problem arises.

As x , and therefore the number of younger ages at which marriage may have taken place, increases, equations for $S(ex)(x,y)$ and $S(np)(x,y)$ become more complex. Those for values of x in the range $17 < x < 25$ are now listed, with the following notational conventions being adopted:

1. Only the upper limits of ranges over which the quantities $k(z)$ and $j(z)$ are summed are specified. For all such summations the lower limits are respectively 12 and 11 on all occasions.

2. So as to condense the equations, the following notation is used to indicate the sum of the products of all possible combinations of $m(z)$ or $n(z)$ values taken i at a time for values of z ranging between a and b :

$$\sum_a^b m(z)(i) \text{ or } \sum_a^b n(z)(i)$$

Thus, for example:

$$\sum_{17}^{19} m(z)(2) = m(17)m(18) + m(17)m(19) + m(18)m(19)$$

Equations for $S(\text{ex})(x,y)$:

$$S(\text{ex})(18,y) = T(18,y) \left[\sum_{17}^{15} k(z) - m(16) \left[\sum_{17}^{15} k(z) + 0.5k(16) \right] \left[1 - m(17) \right] - m(17) \left[\sum_{17}^{16} k(z) + 0.5k(17) \right] \right]$$

$$S(\text{ex})(19,y) = T(19,y) \left[\sum_{18}^{15} k(z) - m(16) \left[\sum_{18}^{15} k(z) + 0.5k(16) \right] \right]$$

$$\left[1 - \sum_{17}^{18} m(z) + \sum_{17}^{18} m(z)(2) \right] - m(17) \left[\sum_{17}^{16} k(z) + 0.5k(17) \right] \left[1 - m(18) \right] - m(18) \left[\sum_{17}^{17} k(z) + 0.5k(18) \right]$$

$$S(\text{ex})(20,y) = T(20,y) \left[\sum_{19}^{15} k(z) - m(16) \left[\sum_{19}^{15} k(z) + 0.5k(16) \right] \right]$$

$$\left[1 - \sum_{17}^{19} m(z) + \sum_{17}^{19} m(z)(2) - \sum_{17}^{19} m(z)(3) \right] -$$

$$m(17) \left[\sum_{17}^{16} k(z) + 0.5k(17) \right] \left[1 - \sum_{18}^{19} m(z) + \sum_{18}^{19} m(z)(2) \right] -$$

$$m(18) \left[\sum_{17} k(z) + 0.5k(18) \right] [1 - m(19)] -$$

$$m(19) \left[\sum_{18} k(z) + 0.5k(19) \right]$$

$$S(\text{ex})(21, y) = T(21, y) \left[\sum_{20} k(z) - m(16) \left[\sum_{15} k(z) + 0.5k(16) \right] \right]$$

$$\left[1 - \sum_{17} m(z) + \sum_{17} m(z)(2) - \sum_{17} m(z)(3) + \sum_{17} m(z)(4) \right] -$$

$$m(17) \left[\sum_{16} k(z) + 0.5k(17) \right] \left[1 - \sum_{18} m(z) + \sum_{18} m(z)(2) - \sum_{18} m(z)(3) \right] -$$

$$m(18) \left[\sum_{17} k(z) + 0.5k(18) \right] \left[1 - \sum_{19} m(z) + \sum_{19} m(z)(2) \right] -$$

$$m(19) \left[\sum_{18} k(z) + 0.5k(19) \right] [1 - m(20)] -$$

$$m(20) \left[\sum_{19} k(z) + 0.5k(20) \right]$$

$$S(\text{ex})(22, y) = T(22, y) \left[\sum_{21} k(z) - m(16) \left[\sum_{15} k(z) + 0.5k(16) \right] \right]$$

$$\left[1 - \sum_{17} m(z) + \sum_{17} m(z)(2) - \sum_{17} m(z)(3) + \sum_{17} m(z)(4) - \sum_{17} m(z)(5) \right] -$$

$$m(17) \left[\sum_{16} k(z) + 0.5k(17) \right]$$

$$\left[1 - \sum_{18} m(z) + \sum_{18} m(z)(2) - \sum_{18} m(z)(3) + \sum_{18} m(z)(4) \right] -$$

$$m(18) \left[\sum_{17} k(z) + 0.5k(18) \right] \left[1 - \sum_{19} m(z) + \sum_{19} m(z)(2) - \sum_{19} m(z)(3) \right] -$$

$$m(19) \left[\sum_{18} k(z) + 0.5k(19) \right] \left[1 - \sum_{20} m(z) + \sum_{20} m(z)(2) \right] -$$

$$m(20) \left[\sum k(z) + 0.5k(20) \right] [1 - m(21)] -$$

$$m(21) \left[\sum k(z) + 0.5k(21) \right]$$

$$S(\text{ex})(23, y) = T(23, y) \left[\sum k(z) - m(16) \left[\sum k(z) + 0.5k(16) \right] \left[1 - \sum_{17} m(z) + \sum_{17} m(z)(2) - \sum_{17} m(z)(3) + \sum_{17} m(z)(4) - \sum_{17} m(z)(5) + \sum_{17} m(z)(6) \right] - m(17) \left[\sum k(z) + 0.5k(17) \right] \left[1 - \sum_{18} m(z) + \sum_{18} m(z)(2) - \sum_{18} m(z)(3) + \sum_{18} m(z)(4) - \sum_{18} m(z)(5) \right] - m(18) \left[\sum k(z) + 0.5k(18) \right] \left[1 - \sum_{19} m(z) + \sum_{19} m(z)(2) - \sum_{19} m(z)(3) + \sum_{19} m(z)(4) \right] - m(19) \left[\sum k(z) + 0.5k(19) \right] \left[1 - \sum_{20} m(z) + \sum_{20} m(z)(2) - \sum_{20} m(z)(3) \right] - m(20) \left[\sum k(z) + 0.5k(20) \right] \left[1 - \sum_{21} m(z) + \sum_{21} m(z)(2) \right] - m(21) \left[\sum k(z) + 0.5k(21) \right] \left[1 - m(22) \right] - m(22) \left[\sum k(z) + 0.5k(22) \right] \right]$$

$$S(\text{ex})(24, y) = T(24, y) \left[\sum k(z) - m(16) \left[\sum k(z) + 0.5k(16) \right] \right]$$

$$\left[1 - \sum_{17} m(z) + \sum_{17} m(z)(2) - \sum_{17} m(z)(3) + \sum_{17} m(z)(4) - \sum_{17} m(z)(5) + \sum_{17} m(z)(6) - \sum_{17} m(z)(7) \right] - m(17) \left[\sum k(z) + 0.5k(17) \right]$$

$$\left[\sum k(z) + 0.5k(17) \right]$$

$$\begin{aligned} & \frac{23}{18} [1 - \sum m(z) + \sum m(z)(2) - \sum m(z)(3) + \sum m(z)(4) - \sum m(z)(5) + \\ & \frac{23}{18} \sum m(z)(6)] - m(18) [\sum k(z) + 0.5k(18)] \end{aligned}$$

$$\frac{23}{18} [1 - \sum m(z) + \sum m(z)(2) - \sum m(z)(3) + \sum m(z)(4) - \sum m(z)(5)] -$$

$$\frac{23}{19} [\sum k(z) + 0.5k(19)] [1 - \sum m(z) + \sum m(z)(2) - \sum m(z)(3) + \sum m(z)(4) - \sum m(z)(5)] -$$

$$m(19) [\sum k(z) + 0.5k(19)] [1 - \sum m(z) + \sum m(z)(2) - \sum m(z)(3) + \sum m(z)(4) - \sum m(z)(5)] -$$

$$\frac{23}{20} [1 - \sum m(z) + \sum m(z)(2) - \sum m(z)(3) + \sum m(z)(4) - \sum m(z)(5)] - m(20) [\sum k(z) + 0.5k(20)]$$

$$\frac{23}{21} [1 - \sum m(z) + \sum m(z)(2) - \sum m(z)(3) + \sum m(z)(4) - \sum m(z)(5)] - m(21) [\sum k(z) + 0.5k(21)]$$

$$\frac{23}{22} [1 - \sum m(z) + \sum m(z)(2) - \sum m(z)(3) + \sum m(z)(4) - \sum m(z)(5)] - m(22) [\sum k(z) + 0.5k(22)]$$

$$[1 - m(23)] - m(23) [\sum k(z) + 0.5k(23)]$$

Equations for $S(np)(x,y)$:

These take the same general forms as equations for $S(ex)(x,y)$ just listed. In order to obtain the equation for $S(np)(x,y)$ from the corresponding equation for $S(ex)(x,y)$ it is necessary only to:

1. Write $n(z)$ for each occurrence of $m(z)$.
2. Replace expressions of the format:

$$\sum k(z) \text{ and } [\sum k(z) + 0.5k(a+1)]$$

by expressions of the forms:

$$[1 - \sum j(z)] \text{ and } [1 - [\sum j(z) + 0.5j(a+1)]]$$

The one point which remains to be clarified concerns the calculation of $T(x,y)$ values. These are not available directly, but were estimated from annual single-year age distributions of the female population as at 31st December using the equation:

$$T(x,y) = 0.5[t(x,y) + t(x-1,y-1)] \dots\dots(23)$$

where $t(x,y)$ is the female population aged x at 31st December in year y .

Mechanics of Decrement Analysis and Derivation of Input Data Set 4

The last of the four sets of input data is generated in the course of constructing multiple decrement tables. It derives from a basic input of $t(x,y)$ values from which $T(x,y)$ values are estimated using equation (23). These are then converted to the required risk populations at exact ages x by allowing life table probabilities of experiencing the three decremental events at younger ages to operate on them.

A woman is at risk at age x if, on attaining exact age x , she is a spinster and has not experienced a conception which was followed, or is in the process of being followed, by confinement at term. Let $q(x)$ be the probability that a woman who reaches her x th birthday at risk conceives as a spinster before her $x+1$ th birthday, subsequently to be confined ex-nuptially; let $q'(x)$ be the probability that she conceives as a spinster before her $x+1$ th birthday, subsequently to be confined nuptially; and let $q''(x)$ be the probability that she marries before her $x+1$ th birthday, not having conceived her first child.

The probability $q(x)$ is first capable of assuming a non-zero value when $x=11$, while $q'(x)$ and $q''(x)$ first assume such values when $x=15$ and $x=16$ respectively. For $x=11$ we have:

$$q(11) = \frac{C(ex)(11)}{T(11)} \dots\dots(24)$$

For values of x in the range 12-24 we have (equation (25)):

$$q(x) = \frac{C(ex)(x)}{T(x)[1-[q(11)+q'(11)+q''(11)]] \dots [1-[q(x-1)+q'(x-1)+q''(x-1)]]}$$

For values of x in the range 15-24 we have (equation (26)):

$$q'(x) = \frac{C(n)(x)}{T(x)[1-[q(11)+q'(11)+q''(11)]] \dots [1-[q(x-1)+q'(x-1)+q''(x-1)]]}$$

For values of x in the range 16-24 we have (equation (27)):

$$q''(x) = \frac{M(np)(x)}{T(x)[1-[q(11)+q'(11)+q''(11)]] \dots [1-[q(x-1)+q'(x-1)+q''(x-1)]]}$$

Each of equations (24)-(27) may be applied to the construction of either synthetic or real cohort multiple decrement tables, simply by ensuring that q , q' , and q'' values substituted in their right-hand sides apply to the same year, or the same birth cohort, as appropriate. Other basic life table functions may then be derived as follows:

$$l(x) = l(x-1)[1 - [q(x-1)+q'(x-1)+q''(x-1)]] \dots\dots(28)$$

$$d(x) = l(x)q(x) \dots\dots(29)$$

$$d'(x) = l(x)q'(x) \dots\dots(30)$$

$$d''(x) = l(x)q''(x) \dots\dots(31)$$

APPENDIX 8

ASSESSMENT OF THE IMPACT ON THE MULTIPLE DECREMENT ANALYSIS OF PREMARITAL PREGNANCY TRENDS OF VARYING THE ASSUMPTION REGARDING PROPORTIONS OF EX-NUPTIAL CONFINEMENTS AT AGES TWENTY-FIVE AND UNDER WHICH WERE FIRST CONFINEMENTS OF SPINSTERS

In the assessment which follows, assumptions identified numerically are those listed in Table A7.2 of Appendix 7. They will be referred to here as confinement assumptions.

Varying the confinement assumption produces differences in $q(x)$ values which become larger with increasing age (Table A8.1). Non-Maori values obtained under confinement assumptions 1 and 2 can reasonably be assumed to establish ranges within which true probabilities lie. For the period up to and including World War 2 these ranges are relatively narrow at ages less than twenty years. Values of $q(x)$ obtained under confinement assumption 3 (the one adopted in Chapter 4) are thus unlikely to be seriously in error. At older ages differences increase until, at age twenty-four, moving from the more conservative to the more liberal assumption inflates $q(x)$ by a factor of as much as three. Intuition suggests that if confinement assumption 3 misrepresents reality during this period it does so by being too conservative. Adopting instead confinement assumption 5 has negligible impact up to age twenty-one, and raises $q(x)$ values at ages 22-24 generally by no more than from one to three conceptions per 1000

Table A8.1

VALUES OF $q(x)$, $q'(x)$, AND $q''(x)$ FOR SELECTED NON-MAORI AND TOTAL POPULATION SYNTHETIC COHORTS UNDER VARYING CONFINEMENT ASSUMPTIONS

Confinement Assumption	1000q(x)										1000q'(x)										1000q''(x)									
	14	15	16	17	18	19	20	21	22	23	24	15	16	17	18	19	20	21	22	23	24	16	17	18	19	20	21	22	23	24
Non-Maori																														
1913																														
1	2	4	7	11	14	15	14	13	14	14	13	1	4	12	20	24	27	27	28	27	28	3	7	17	28	38	88	84	97	111
2	2	4	7	10	12	12	9	8	7	6	5	1	4	12	20	24	27	27	28	26	27	3	7	17	28	38	88	84	97	111
3	2	4	7	11	13	14	12	10	9	9	7	1	4	12	20	24	27	27	28	27	27	3	7	17	28	38	88	84	97	111
4	2	4	7	11	13	14	12	10	10	10	8	1	4	12	20	24	27	27	28	27	28	3	7	17	28	38	88	84	97	111
5	2	4	7	11	13	14	13	11	11	11	10	1	4	12	20	24	27	27	28	27	28	3	7	17	28	38	88	84	97	111
1923																														
1	1	2	5	8	10	13	12	11	13	13	13	1	4	12	19	25	31	30	27	24	23	1	6	16	29	38	93	93	109	121
2	1	2	5	7	9	10	8	7	6	6	5	1	4	12	19	25	30	29	27	23	22	1	6	16	29	38	93	92	109	121
3	1	2	5	7	10	12	10	9	9	8	7	1	4	12	19	25	30	30	27	23	22	1	6	16	29	38	93	92	109	121
4	1	2	5	7	10	12	11	9	9	9	8	1	4	12	19	25	30	30	27	23	22	1	6	16	29	38	93	92	109	121
5	1	2	5	7	10	12	11	10	11	11	10	1	4	12	19	25	30	30	27	23	22	1	6	16	29	38	93	93	109	121
1933																														
1	1	2	4	6	8	9	8	9	8	7	7	1	5	10	18	23	25	26	23	19	17	2	6	17	25	34	79	79	95	107
2	1	2	4	6	7	7	6	5	4	3	3	1	5	10	18	23	25	26	23	19	17	2	6	17	25	34	79	78	95	107
3	1	2	4	6	8	8	7	7	6	4	4	1	5	10	18	23	25	26	23	19	17	2	6	17	25	34	79	78	95	107
4	1	2	4	6	8	8	7	7	6	5	5	1	5	10	18	23	25	26	23	19	17	2	6	17	25	34	79	78	95	107
5	1	2	4	6	8	8	8	8	7	6	6	1	5	10	18	23	25	26	23	19	17	2	6	17	25	34	79	78	95	107
1943																														
1	1	2	6	9	13	14	15	17	19	19	21	1	4	9	16	17	18	19	17	15	13	2	7	20	41	60	109	112	121	130
2	1	2	5	9	11	12	10	10	10	8	7	1	4	9	16	17	18	19	17	15	13	2	7	20	41	59	109	112	121	129
3	1	2	6	9	12	13	13	13	13	12	11	1	4	9	16	17	18	19	17	15	13	2	7	20	41	59	109	112	121	129
4	1	2	6	9	12	14	13	14	14	13	13	1	4	9	16	17	18	19	17	15	13	2	7	20	41	59	109	112	121	129
5	1	2	6	9	13	14	14	15	16	15	15	1	4	9	16	17	18	19	17	15	13	2	7	20	41	59	109	112	121	130
1953																														
1	1	3	6	11	14	17	20	23	28	34	49	2	11	22	32	36	38	36	38	40	45	4	13	40	93	142	249	267	296	324
2	1	3	6	10	12	14	13	13	14	14	16	2	11	22	32	35	38	35	37	37	41	4	13	40	93	142	249	265	296	323
3	1	3	6	10	13	15	15	16	17	18	21	2	11	22	32	35	38	35	37	38	42	4	13	40	93	142	249	266	296	323
4	1	3	6	10	13	15	16	16	18	20	24	2	11	22	32	35	38	35	37	38	42	4	13	40	93	142	249	266	296	323
5	1	3	6	10	13	16	16	17	20	22	27	2	11	22	32	36	38	35	37	38	42	4	13	40	93	142	249	266	296	323
1963																														
1	3	10	19	27	31	35	39	43	51	75	100	5	18	35	49	54	56	57	60	60	64	3	18	47	104	164	268	263	212	221
2	3	10	18	25	27	28	26	25	25	29	31	5	18	35	48	53	55	55	56	54	53	3	18	47	104	164	269	261	216	227
3	3	10	18	25	28	29	27	27	27	32	34	5	18	35	48	54	55	55	56	54	54	3	18	47	104	164	268	261	216	226
4	3	10	18	25	28	29	27	27	27	33	35	5	18	35	48	54	55	55	56	54	54	3	18	47	104	164	268	261	215	226
5	3	10	18	25	28	29	28	28	28	34	37	5	18	35	48	54	55	55	56	54	54	3	18	47	104	164	268	261	215	226
Total																														
1963																														
1	4	12	22	32	37	44	50	57	69	101	145	6	20	37	52	58	59	61	65	66	70	3	18	46	100	155	250	244	190	192
2	4	12	21	29	32	33	30	29	29	33	34	6	20	37	52	57	58	58	59	55	52	3	18	46	99	155	251	240	195	198
3	4	12	20	27	29	29	25	23	21	23	23	6	20	37	52	57	57	57	57	53	49	3	18	46	99	155	252	239	196	199
4	4	12	21	29	33	36	35	35	35	42	45	6	20	37	52	57	58	59	60	57	55	3	18	46	99	155	251	240	193	196
5	4	12	21	29	33	36	35	35	35	42	45	6	20	37	52	57	58	59	60	57	55	3	18	46	99	155	251	240	193	196
6	4	12	21	29	32	33	30	29	29	33	34	6	20	37	52	57	58	58	59	55	52	3	18	46	99	155	251	240	195	198
1973																														
1	8	22	35	43	46	48	50	57	70	84	96	6	17	29	32	32	29	28	28	30	29	7	24	74	135	183	184	159	125	119
2	8	22	33	39	39	36	30	29	29	28	24	6	17	29	32	31	28	26	26	26	23	7	24	74	135	183	185	158	128	122
3	8	22	32	37	36	32	25	23	21	20	16	6	17	29	32	31	28	26	25	25	22	7	24	74	135	183	186	158	129	122
4	8	22	32	38	37	34	27	26	25	24	20	6	17	29	32	31	28	26	25	25	23	7	24	74	135	183	185	157	128	121
5	8	22	33	39	39	36	30	29	29	28	24	6	17	29	32	31	28	26	26	26	23	7	24	74	135	183	185	158	128	122
6	8	22	32	38	37	34	27	26	25	24	20	6	17	29	32	31	28	26	25	25	23	7	24	74	135	183	185	157	128	121

Source: Statistics of the Dominion of New Zealand 1913-15; New Zealand Vital Statistics various annual volumes; unpublished data supplied by the Department of Statistics.

women still at risk. Overall, it is unlikely that Table 4.1 misleads greatly as to the pattern of change in the probabilities of conception leading to ex-nuptial confinement prior to 1945. A more likely general fault is that it understates their magnitudes at ages over twenty, and thus exaggerates the contrast between that period and the late 1960s (when proximity to the date of the 1970 Ex-nuptial Birth Survey invites greater faith in results).

Massive disparities between results obtained at older ages under confinement assumptions 1 and 2 are the most striking feature of 1953 and 1963 non-Maori data presented in Table A8.1. The former assumption, however, is totally unrealistic, and the latter is almost certainly too conservative for the earlier post-war period. For reasons stated in Appendix 7, assumptions 3-5 are more plausible, and they produce sets of $q(x)$ values which show little variability until after age twenty-one. Such variability as there is diminishes through time, consistent with these assumptions converging from different 1945 base schedules of $p'(x)$ values on a common 1970 schedule. Thus, if there is a general flaw in 1945-69 non-Maori trends in Table 4.1 it is probably that the net change at ages over twenty is a little exaggerated.

Confinement assumption 1 may again be discounted when attention is turned to the total population segments of Tables 4.1 and A8.1. If the degree of change in the schedule of $p'(x)$ values between 1962 and 1970 which is incorporated into confinement assumption 4 (the one adopted in Chapter 4) exaggerates reality, then Table 4.1 may understate and even suppress incremental tendencies during the 1960s (compare 1963 confinement assumption 4 and 2 results in Table A8.1).

Assuming no change in the $p'(x)$ schedule after 1970, on the other hand, moderates the downward trends indicated by Table 4.1, although not greatly (compare 1973 confinement assumption 4 and 2 results). There remain, however, the solid grounds detailed in Appendix 7 for believing that the basic feature of confinement assumption 4, continuous decline in $p'(x)$ values throughout 1962-78, is sound. One therefore has reasonable confidence that the pattern of change indicated by Table 4.1 is also sound. That still leaves the possibility that assumed $p'(x)$ values are generally too high (because of bias in the 1970 Ex-nuptial Birth Survey), so that computed values of $q(x)$ are also too high.

From Table A8.1 it is evident that pre-1945 probabilities of conception followed by nuptial confinement are not affected by changes in the confinement assumption. Post-war, changing this assumption (other than to the unrealistic assumption 1) has no impact either, except on total population probabilities at older ages during the early 1960s. Overall, then, if Table 4.2 has a flaw which is attributable to the confinement assumptions it rests on, it is again that the steepness of the rise and fall in probabilities at ages 22-24 during 1949-76 could be a bit understated. Table A8.1 shows that probabilities of marrying for the first time never pregnant are affected little by changes in the confinement assumption.

Table A8.2 shows the impact which varying the confinement assumption has on synthetic cohort values of $d(x)$ and $d''(x)$ for the period since 1950. Data for earlier cohorts are not shown, since the probabilities from which they are derived varied little under different confinement assumptions. Similarly, no $d'(x)$ values are

Table A8.2

VALUES OF $d(x)$ AND $d''(x)$ FOR SELECTED NON-MAORI AND TOTAL POPULATION
 SYNTHETIC COHORTS UNDER VARYING CONFINEMENT ASSUMPTIONS

Confinement Assumption	$d(x)$										$d''(x)$										
	14	15	16	17	18	19	20	21	22	23	14	15	16	17	18	19	20	21	22	23	24
Non-Maori																					
1953																					
1	1	3	6	10	13	15	14	13	11	9	8	4	13	37	79	103	144	107	79	55	
2	1	3	6	9	11	12	10	8	6	4	3	4	13	37	79	103	147	110	84	60	
3	1	3	6	10	12	13	11	9	7	5	4	4	13	37	79	103	146	109	82	58	
4	1	3	6	10	12	13	11	10	8	5	4	4	13	37	79	103	146	109	82	58	
5	1	3	6	10	12	13	12	10	8	6	5	4	13	37	79	103	146	108	82	57	
1958																					
1	2	5	11	14	16	17	15	14	12	11	10	3	12	39	89	116	141	96	55	39	
2	2	5	10	13	14	13	10	8	6	5	4	3	12	39	89	117	144	100	60	45	
3	2	5	10	13	15	14	11	9	7	6	4	3	12	39	89	117	143	99	59	44	
4	2	5	10	13	15	14	11	10	7	6	5	3	12	39	89	117	143	99	59	43	
5	2	5	10	13	15	14	12	10	7	6	5	3	12	39	89	116	143	99	58	43	
1963																					
1	3	10	18	26	27	26	24	20	15	13	12	3	17	40	79	100	121	75	38	26	
2	3	10	18	23	24	21	16	12	8	6	4	3	17	41	79	102	126	80	44	32	
3	3	10	18	24	24	22	17	13	8	6	5	3	17	41	79	101	125	79	43	31	
4	3	10	18	24	24	22	17	13	8	7	5	3	17	41	79	101	125	79	43	31	
5	3	10	18	24	24	22	17	13	8	7	5	3	17	41	79	101	125	79	43	31	
1968																					
1	5	13	25	32	31	27	23	20	16	15	13	4	17	47	92	108	105	66	32	20	
2	5	13	24	29	27	22	16	12	8	7	5	4	17	47	93	110	110	70	38	26	
3	5	13	24	29	27	22	16	12	8	7	5	4	17	47	93	110	110	70	38	26	
4	5	13	24	29	27	22	16	12	9	7	5	4	17	47	93	110	110	70	38	26	
5	5	13	24	29	27	22	16	12	9	7	5	4	17	47	93	110	110	70	38	26	
Total																					
1963																					
1	4	12	21	29	32	32	30	25	19	17	16	3	17	39	73	91	108	67	32	21	
2	4	12	20	27	27	24	18	13	9	7	5	3	17	40	74	94	115	73	40	29	
3	4	12	20	25	25	22	15	11	7	5	4	3	17	40	75	94	117	74	42	31	
4	4	12	20	28	28	26	21	16	11	8	6	3	17	39	74	93	113	71	38	27	
5	4	12	20	28	28	26	21	16	11	8	6	3	17	39	74	93	113	71	38	27	
6	4	12	20	27	27	24	18	13	9	7	5	3	17	40	74	94	115	73	40	29	
1968																					
1	5	15	26	37	38	36	30	25	22	20	17	5	18	45	84	96	92	57	26	15	
2	5	15	26	34	33	27	19	13	10	8	5	5	18	45	85	99	99	63	34	23	
3	5	14	26	32	30	24	15	11	8	6	4	5	18	45	85	101	102	65	36	25	
4	5	15	26	34	33	27	19	14	10	8	5	5	18	45	85	99	99	63	34	23	
5	5	15	26	34	33	27	19	14	10	8	5	5	18	45	85	99	99	63	34	23	
6	5	15	26	34	33	27	19	13	10	8	5	5	18	45	85	99	99	63	34	23	
1973																					
1	8	22	33	39	37	33	27	23	21	18	16	7	22	60	94	100	74	47	27	20	
2	8	21	32	35	32	25	17	12	9	7	5	7	22	61	95	103	79	51	33	25	
3	8	21	31	34	30	22	14	10	7	5	4	7	22	61	96	105	81	53	34	27	
4	8	21	31	34	31	24	16	11	8	6	4	7	22	61	95	104	80	52	33	26	
5	8	21	32	35	32	25	17	12	9	7	5	7	22	61	95	103	79	51	33	25	
6	8	21	31	34	31	24	16	11	8	6	4	7	22	61	95	104	80	52	33	26	

Source: New Zealand Vital Statistics various annual volumes; unpublished data supplied by the Department of Statistics.

1 No sets of $d'(x)$ values are included in this table because for the synthetic cohorts selected they never change from the values given in Table A2.9. Appendix 2, no matter what confinement assumption is adopted.

shown because they remain unchanged from those shown in Table 4.6, irrespective of the non-Maori and total population confinement assumptions adopted. [1]

Except under confinement assumption 1, the range of variation in $d(x)$ values is minimal at all ages for non-Maori cohorts. The range is wider for total population cohorts because the assumptions cover a more varied set of underlying patterns of change in the schedule of $p'(x)$ values. Discounting confinement assumption 1 again, and noting also that assumption 3 is probably extreme, there remain some moderate differences. Because of the convergence on a common schedule of $p'(x)$ values for 1970 these again show up most strongly in results for the cohort (1963) farthest removed from that date. However, they are not large enough for it to be likely that the pattern of change in Table 4.6 is seriously in error. Furthermore, it is apparent that variability in $q(x)$ values at older ages under different assumptions is of limited consequence for patterns of $d(x)$ values because there are relatively few survivors to those ages.

Values of $d''(x)$ are affected very little by changes in the confinement assumption (Table A8.2). Only at older ages under confinement assumption 1 do appreciable disparities occur for either non-Maori or total population cohorts.

[1] There are in fact minor changes, but these are not large enough to be apparent at the level of accuracy to which results have been rounded.

APPENDIX 9

METHOD USED TO ESTIMATE NUMBERS OF CHILDREN PER 1000 FROM 1963-77 EX-NUPTIAL BIRTH COHORTS WHO WERE ADOPTED BY AGE AT ADOPTION AND RELATIONSHIP TO ADOPTIVE PARENTS

The main data source used to construct Tables 5.3 and 5.11 was a special tabulation giving final adoption orders made on ex-nuptial children by age of child and relationship to the child of the adoptive parents. This tabulation was supplied by the Department of Social Welfare for the years 1963-78, and included only those adoptions coming to the Department's attention. It was therefore necessary to adjust the figures upward to allow for adoptions not included, either because they involved Maori children placed with at least one Maori adoptive parent or because one adoptive parent was a natural parent and no social worker's report had been called for (see Chapter 5, footnote 10).

Before discussing the adjustment procedure used, it is necessary to indicate the method by which the adjusted data were eventually converted to birth cohort distributions of adoptions by age for children adopted 'by strangers, relatives, close friends, or foster parents' and 'by a natural parent and spouse'. Following standard practice in this type of exercise the number of adoptions occurring at age x of ex-nuptial children born in year y could be estimated as:

$$A(x,y) = 0.5[A'(x,y+x) + A'(x,y+x+1)] \dots\dots(1)$$

where $A'(x,y)$ is the number of adoptions of ex-nuptial children aged x occurring in the calendar year y .

Equation (1) was considered satisfactory for values of x greater than or equal to one. However, for $x=0$ account had to be taken of New Zealand's adoption laws, which mean that very few children are subjects of final adoption orders before they are eight months old. Thus, much less than fifty percent of adoptions at age 0 in year y , and considerably more than fifty percent of those at age 0 in year $y+1$, relate to births in year y . Given that adoptions of ex-nuptial children are heavily concentrated at age 0 and that changes in adoption levels from year to year have been quite substantial it was desirable to estimate for each year a coefficient k indicating the proportion of adoptions of ex-nuptial children at age 0 in that year which involved children born in that year.

To do this resort was had to a table published in the annual New Zealand Vital Statistics for the years 1963-73 which gave final adoption orders made on children aged 0 years by age in completed months. This table covered all final adoption orders made, and the fact that it was not specific to ex-nuptial children was overlooked as of little consequence. It is unlikely that the use of values specific for nuptiality status of birth and relationship to adoptive parents would significantly alter the results ultimately obtained.

The assumptions were made that adoptions occurring at age m months occurred at exact age $m+0.5$ months, and that within any single-month category adoptions occurred evenly throughout the year. Under these assumptions it followed that the number of adoptions at age 0 in year y which involved children born in that year was given

by:

$$A''(0,y) = 1/24[23a(0,y) + 21a(1,y) + \dots + 3a(10,y) + a(11,y)] \dots(2)$$

where $a(m,y)$ is the number of adoptions of children aged m months occurring in year y .

The required coefficient was thus given by:

$$k = \frac{A''(0,y)}{T(0,y)} \dots(3)$$

where $T(0,y)$ is the total number of adoptions of children aged 0 years occurring in year y .

Coefficients estimated for the birth cohorts of 1963-73 are shown in Table A9.1. Later calculations required that coefficients also be estimated for the birth cohorts of 1974-78. Given the stability of 1970-73 values in Table A9.1 it was decided to assume a constant coefficient of 0.225 for these cohorts.

Returning to the adjustment upward of data obtained from the Department of Social Welfare, the number of adoptions each year which did not find their way into the Department's records was known. One option was to distribute these additional cases (plus a small number of cases known to the Department but classified 'not known' on nuptiality status of the birth) by age of child at adoption, nuptiality status of birth, and relationship to the child of the adoptive parents in exactly the same proportions as the cases for which these details were known. This was the approach followed by O'Neill et al (1976).

Table A9.1

k-COEFFICIENTS 1963-1973

Year	Coefficient
1963	0.212
1964	0.201
1965	0.211
1966	0.194
1967	0.204
1968	0.213
1969	0.211
1970	0.224
1971	0.224
1972	0.223
1973	0.223

However, there is good reason to suspect that such a simple adjustment results in inflated estimates of the proportions of ex-nuptial birth cohorts who are adopted, particularly at ages 0 and one. First, it is reasonable to suppose that variables associated with the exercise of magisterial discretion in not calling for a social worker's report when one adoptive parent is a natural parent include the age of the child (reports would be less likely to be required the older the child) and its nuptiality status (reports would be less likely to be required on nuptial than on ex-nuptial children). Second, the number of adoptions not coming to the attention of the Department of Social Welfare has fluctuated year by year, and there are indications in these fluctuations that older and nuptial children feature much more prominently in the residual group than in the eighty to ninety percent of 'known' cases. [1] Finally, data obtained from the 1966 New Zealand Birth Register show that Maori ex-nuptial children are adopted at older ages than non-Maori children. At the

time data were collected in late 1979, 64.0 percent of non-Maori ex-nuptial children who had been adopted had been adopted at age 0, and a further 21.5 percent had been adopted at age one. Only 5.5 percent had been adopted after their fifth birthdays. Comparable figures for children with half or more Maori blood were 17.4, 33.1, and 18.6 percent.

With these factors in mind it was decided to make use of data on adoptions of ex-nuptial children whose births were registered in 1966 and 1976. Primary emphasis had to be placed on 1966 data, since 1976 data were complete only for adoptions at ages 0 and one. The strategy followed was to estimate the numbers of adoptions involving children from these ex-nuptial birth cohorts by single years of age from the Department of Social Welfare data. These distributions could then be compared with distributions derived from the birth registers so as to calculate coefficients by which the frequencies for the various age categories in the former needed to be multiplied to raise them to the frequencies in the latter.

The former distributions (Table A9.2) were calculated using equation (1) at ages above 0, and the following equation at age 0:

$$A(0,y) = k(y)A'(0,y) + [1 - k(y+1)]A'(0,y+1) \dots\dots(4)$$

where $k(y)$ is the k -coefficient for year y .

[1] A particular case in point is the residual group for 1971, which numbered 736 as compared to 475 and 362 in 1970 and 1972. In 1970 there were 206 final adoption orders made in respect of children aged 11 or older, this figure more than doubling to 499 in 1971 then dropping again to 259 in 1972. The most plausible explanation for this pattern is that the substantial increase in the divorce rate between 1968 and 1969 (Chapter 7) and the remarriages which followed resulted in a temporary surge in adoptions of older nuptial children.

Table A9.2

DEPARTMENT OF SOCIAL WELFARE AND BIRTH REGISTER DISTRIBUTIONS OF
 ADOPTED CHILDREN BY AGE AT ADOPTION: 1966 AND 1976
 EX-NUPTIAL BIRTH COHORTS

Age	Department of Social Welfare Distribution		Birth Register Distribution		Inflation Coefficient	
	1966	1976	1966	1976	1966	1976
0	1799	801	1795	873	0.998	1.090
1	609	296	659	314	1.082	1.061
2	113		132		1.168	
3	66		94		1.424	
4	76		97		1.276	
5	64		65		1.016	
6	26		33		1.269	
7	25		30		1.200	
8	25		33		1.320	
9	18		11		0.611	
10	14		12		0.857	

Source: Unpublished data supplied by the Department of Social Welfare; New Zealand Birth Register 1966 and 1976.

Theoretically 'inflation coefficients' in Table A9.2 should have a minimum value of 1.000. The fact they do not at ages 9 and 10 is due to the small numbers of cases and shortcomings of the method used to derive the 'Department of Social Welfare distribution'. For the second of these reasons the 1966 coefficient at age 0 is also marginally below unity. However, for all the irregularities Table A9.2 supports earlier speculation that adoptions of ex-nuptial children escaping the Department of Social Welfare's net involve a generally older group.

On the basis of Table A9.2 it was decided to apply the following inflation coefficients to the period data obtained from the Department

of Social Welfare. At age 0 a coefficient of 1.010 was adopted until 1966, whereafter it was increased by 0.008 annually to a 1976 value of 1.090. At ages 1-3 coefficients of 1.070, 1.170, and 1.400 respectively were used for all years. Finally, at ages 5 and over a coefficient of 1.270 was decided on for all years. Having applied these coefficients, the adjusted frequencies for each age at, and year of adoption were distributed to the two 'relationship to adoptive parents' categories in the same proportions as unadjusted frequencies had been distributed. Equations (1) and (4) were then used to derive distributions by birth cohort and age at adoption of adoptions of ex-nuptial children whose adoptive parents were (a) strangers, relatives, close friends, or foster parents, and (b) natural parents and their spouses. By relating these distributions to the known sizes of 1963-77 ex-nuptial birth cohorts Tables 5.3 and 5.11 were produced.

APPENDIX 10

ASSESSMENT OF THE COMPARABILITY OF TWO METHODS OF CLASSIFYING EX-NUPTIAL BIRTHS BY ETHNIC ORIGIN

Births are officially classified as Maori if the child has half or more Maori blood or, in the case of ex-nuptial births where the father's details are not registered, if the mother has half or more Maori blood. When collecting data on ex-nuptial confinements from the 1966 and 1976 birth registers it was possible to use these criteria to classify births by ethnic origin only at the earlier date. For comparative purposes the only option open was to classify as Maori those confinements where either the mother's or, if registered, the father's name suggested Maori ancestry.

This appendix presents tables and statistics from the 1966 data which allow the comparability of the two classification procedures to be assessed. These data exclude 231 live ex-nuptial confinements (out of 6907) which were followed by marriage of the parents prior to birth registration. It should also be noted that in the vicinity of 250 live ex-nuptial confinements which were officially classified as Maori were not so classified from data obtained from the birth register. This source yielded only 1692 confinements satisfying the official criteria for designation as 'Maori'. The official figure was 285 higher, a few of which cases would have been among the 231 not covered by birth register data. Coding errors could not possibly account for this shortfall. A more likely explanation is that because the

administrative purposes for which the birth register is maintained do not require that ethnic origin be known, the staffs of some registries on occasion did not transfer the relevant details from the birth registration form to the register itself.

In Tables A10.1 and A10.2 the ethnic origins of fathers and mothers of ex-nuptial children whose births were registered in 1966 are tabulated by degree of Maori ancestry and the Maoriness of their names. Approximately one in five (20.7 percent) of the fathers who claimed more than half Maori blood had names which gave no clue to their Maori ancestry. At 16.4 percent the comparable figure for mothers was a little lower. For those claiming exactly half Maori blood the percentages were considerably higher at 45.6 and 34.3 respectively. Finally, for those claiming some, but less than half Maori ancestry they were higher still at 68.8 and 50.4. Thus for both parental groups Maori ancestry was less likely to be apparent from a person's name the smaller the degree of ancestry. This is as expected, and aids the comparability of the two sets of classificatory criteria. But substantial misclassification still occurs when only names are used.

When the 'degree of Maori ancestry' categories are collapsed to a Maori/non-Maori dichotomy using the official criterion it transpires that 26.6 percent of officially Maori fathers and 21.2 percent of mothers were classed as 'non-Maori' according to their names. The 200 and 368 misclassifications that these figures respectively represent are 'offset' in a sense by 37 and 183 misclassifications as 'Maori' of individuals not claiming at least half Maori ancestry. It is possible, though, that many of the latter misclassifications involved

Table A10.1

LIVE EX-NUPTIAL CONFINEMENTS 1966: FATHER'S DEGREE OF MAORI
¹
 ANCESTRY BY MAORINESS OF FATHER'S NAME

Degree of Maori Ancestry	Maoriness of Name		Total
	Maori	Not Maori	
None	17	1236	1253
Under one-quarter	1	11	12
One-quarter and under one-half	19	33	52
One-half	98	82	180
Over one-half but not full	56	15	71
Full	397	103	500
Total	588	1480	2068

Source: New Zealand Birth Register 1966.

- 1 Table relates only to confinements for which the father's details were registered, and excludes from among these cases where marriage occurred between confinement and registration.

Table A10.2

LIVE EX-NUPTIAL CONFINEMENTS 1966: MOTHER'S DEGREE OF MAORI
¹
 ANCESTRY BY MAORINESS OF MOTHER'S NAME

Degree of Maori Ancestry	Maoriness of Name		Total
	Maori	Not Maori	
None	69	4644	4713
Under one-quarter	25	29	54
One-quarter and under one-half	89	87	176
One-half	309	161	470
Over one-half but not full	139	36	175
Full	917	171	1088
Total	1548	5128	6676

Source: New Zealand Birth Register 1966.

- 1 Table excludes cases where marriage occurred between confinement and registration.

individuals for whom degree of Maori blood was simply not transferred from the birth registration form to the birth register.

Confinements, however, are officially classified as Maori according to the child's degree of Maori ancestry, which, if both are known, is an average of its parents' degrees. Similarly, when classifying confinements by ethnic origin using the name criterion the names of both mother and father were taken into account. It transpired that 1434 confinements were classified as Maori and 4676 as non-Maori under both classification systems. Some 313 were classified as Maori under the name system and as non-Maori under the official system, and 253 were classified as Maori under the official system but as non-Maori under the name system. This implies a modest net gain of 60 'Maori' confinements in a total of 6676 when the name system is used, but the important statistic is the 566 confinements which were classified differently depending on the system used. Moreover, if there is any tendency for persons who are ancestrally more Maori to be culturally more Maori as well, use of the name system may have effectively watered down the 'Maoriness' of the 'Maori' category.

There clearly is a considerable disparity between the two classification systems. One can but be aware of the problem and bear it in mind in interpreting results obtained using the name system.

APPENDIX 11

DESCRIPTION OF THE PROCEDURE USED TO ESTIMATE 1961 AND 1976 DISTRIBUTIONS OF MARRIAGES BY RELATIVE AGES AND RELATIVE MARITAL STATUSES OF BRIDES AND GROOMS

The requirement for tabulations showing, for each possible combination of marital statuses of brides and grooms marrying in 1961 and 1976, age of bride by age of groom was met by way of a two-stage iteration procedure. The first stage yielded estimates of the marginal totals for the required tables.

Marginal totals for crosstabulations of brides and grooms of each marital status by single years of age and partner's marital status were known from published vital statistics. For brides aged 16-69 the cell frequencies of these tables were estimated on the assumption that, for any marital status of bride, the probability of the groom being of a given marital status equalled the probability of any groom five years older being of that marital status. Likewise, for grooms aged 16-69 the cell frequencies were estimated on the assumption that, for any marital status of groom, the probability of the bride being of a given marital status equalled the probability of any same-aged bride being of that marital status. For brides and grooms aged seventy and over it was assumed, for all marital statuses, that the partner was as likely to be of a given marital status as the bride or groom was at her or his age. These assumptions were fixed on after considerable experimentation, and following their application iteration was used to

adjust cell frequencies so that they totalled marginals in both (not just one) directions.

Marginals for the required tables now having been estimated it was assumed that grooms of marital status x marrying brides aged a of marital status y followed the known distribution by age of all grooms marrying brides aged a of marital status y . Iteration was then used a second time to adjust cell frequencies so that they added to marginals in both directions.

APPENDIX 12

METHOD USED TO CONSTRUCT REMARRIAGE TABLES FOR 1961 AND 1976

SYNTHETIC DIVORCE COHORTS

Considering first male and female divorce cohorts unrefined by age at decree absolute, 1961 and 1976 remarriage data were tabulated by duration of divorce (see Table 7.6). Next, using lexis diagrams and assuming that remarriages in any duration interval occurred evenly over that interval by exact duration of divorce and evenly throughout the year of remarriage, the proportions of remarriages in each duration interval involving members of individual real divorce cohorts were determined. Applying these proportions to the original sizes of those divorce cohorts and summing for each duration interval, weighted estimates of the sizes of non-calendar year divorce cohorts yielding the remarriages in each duration interval were obtained (Table A12.1). Dividing the number of remarriages in each interval by the appropriate weighted estimate then gave the equivalent of $d(x)$ values for a synthetic gross remarriage table depleting a divorce cohort for remarriages at successive durations of divorce.

To construct similar tables, covering durations of divorce up to twenty-five years, specific for age at becoming divorced it was necessary to refine the known number of decrees absolute granted each year during 1936-76 by age of husband at divorce and age of wife at divorce. Having decided to use the age groups 16-29, 30-39, 40-49, and 50+ years, this task was accomplished with the aid of the divorce

Table A12.1

EQUATIONS USED TO OBTAIN WEIGHTED ESTIMATES OF THE SIZES OF
NON-CALENDAR YEAR DIVORCE COHORTS FROM WHICH REMARRIAGES
AT DIFFERENT DURATIONS OF DIVORCE EMANATED

Duration of Divorce at Remarriage	Size of Divorce Cohort Given by:
0 months	$0.958D(x) + 0.042D(x-1)$
1 month	$0.875D(x) + 0.125D(x-1)$
2 months	$0.792D(x) + 0.208D(x-1)$
3-5 months	$0.625D(x) + 0.375D(x-1)$
6-11 months	$0.250D(x) + 0.750D(x-1)$
12-17 months	$0.750D(x-1) + 0.250D(x-2)$
18-23 months	$0.250D(x-1) + 0.750D(x-2)$
2-24 years (single years)	$0.5D(x-i) + 0.5D(x-i-1)$

where $D(x)$ is the number of decrees absolute granted
in the year x for which the synthetic gross
remarriage table is being constructed.

i is the duration of divorce in completed
years at remarriage.

file cross-sectional samples for 1951, 1956, 1961, 1966, 1971, and 1976. Age distributions obtained from these samples (Table A12.2) were assumed to apply to divorces actually finalised in those years (in reality they were distributions for divorces for which legal proceedings were initiated in those years), and linear interpolation was used to estimate distributions for intervening years. For the period 1936-50 the 1951 sample distributions were assumed. This may be a somewhat inaccurate assumption, but as it only affects calculations for 1961 at durations of divorce greater than ten years, by which time the overwhelming majority of remarriages have already occurred, it is of little consequence.

Table A12.2

PERCENTAGE DISTRIBUTIONS OF DIVORCEES WHOSE DIVORCE CASES WERE
INITIATED IN POST-WAR CENSUS YEARS BY AGE AT DECREE ABSOLUTE

Age at Decree Absolute	1951	1956	1961	1966	1971	1976
Husbands						
16-29	20.1	14.3	9.8	15.5	20.1	22.5
30-39	34.8	35.7	31.8	30.7	33.9	38.3
40-49	27.6	30.8	32.0	31.4	27.1	22.4
50+	17.6	19.2	26.5	22.5	18.9	16.8
Total	100.1	100.0	100.1	100.1	100.0	100.0
1						
N	319	328	378	414	741	1059
Wives						
16-29	30.8	23.7	18.3	26.1	32.7	33.9
30-39	36.8	38.6	35.5	31.9	31.4	35.8
40-49	20.8	24.0	29.6	25.9	23.1	18.1
50+	11.6	13.7	16.7	16.2	12.8	12.1
Total	100.0	100.0	100.1	100.1	100.0	99.9
1						
N	318	329	378	414	741	1059

Source: Divorce file cross-sectional samples.

1 N's exclude cases where the husband's or the wife's age at decree absolute was unknown.

APPENDIX 13

ADJUSTMENT AND ESTIMATION PROCEDURES USED IN DETERMINING RISK POPULATIONS FOR THE CALCULATION OF DIVORCE RATES BY MARRIAGE COHORT

The calculation of divorce rates for marriage cohort subgroups defined by variables such as age at marriage, previous marital status, and relative age of bride and groom was beset by two problems concerning published marriage statistics. First, prior to 1952 detailed tables covered only non-Maori marriages, except that for the years 1948-51 tables showing age at marriage by previous marital status for Maori brides and grooms were available. Second, no marriage statistics other than the numbers of marriages celebrated ever were published for the period 1941-44. Given that the divorce file sample covered marriage cohorts from 1939 onward and offered no means of restricting analysis to non-Maori marriages, it was necessary to adjust 1939-51 non-Maori data upward, after first estimating those for 1941-44.

In respect of some marriage cohort subgroups of interest there was the additional problem that risk populations were not directly available from published sources, and thus had to be estimated. This appendix details these various data adjustment and estimation procedures. It is set out using identical subheadings, or pairs of subheadings, to those identifying the portions of section 8.3 of Chapter 8 to which different parts of the discussion relate.

Age at Marriage and Marital Status

Estimates of the distributions of non-Maori marriages by sex, single years of age, and previous marital status for the years 1941-44 were prepared by Jain (1973). These were accepted, and so it remained to adjust 1939-51 non-Maori tabulations to total population bases. For 1948-51 this was done by adding the published Maori figures. For earlier years the only available datum on Maori marriages was their total number. The assumption was made that the proportionate distributions of Maori brides and grooms by age and previous marital status for the period 1948-51 held constant during each of the years 1939-47. Under this assumption Maori marriages were distributed by age and previous marital status of bride and groom, and the estimates obtained were added to the known (or estimated) non-Maori figures.

Relative Age at Marriage

Data giving annual marriages by age of bride and of groom, and relative age of partner were required only for marriages where both bride and groom were aged less than fifty (see Chapter 8). Estimates for non-Maori marriages celebrated during 1941-44 were prepared first. Marriages of brides and grooms aged less than fifty by age were known. Within each age-of-bride or age-of-groom category adopted (see Table 8.5, Chapter 8), the number of marriages was reduced by the proportion of marriages at those ages in 1940 and 1945 which were to partners aged fifty or more. The remaining marriages were then distributed by relative age of bride and groom in the same proportions as in the years 1940 and 1945 combined. Estimates were based on the known distributions for these years because they straddled the period of

interest and were war years.

Next, non-Maori data for 1939-51 were adjusted to a total population basis by assuming that Maori marriages within each age-of-bride or age-of-groom category followed the same proportionate distribution among relative age categories as non-Maori marriages. No attempt was made to first eliminate those Maori marriages which involved partners aged fifty or more. Very few Maori parties to marriage were this old during 1948-51, and any elimination procedure based on non-Maori patterns seemed likely to result in greater error than simply ignoring the problem.

Relative Marital Status

Data giving, by marriage cohort, the relative marital statuses of bride and groom by age of bride and by age of groom were required. Age groups to be used were 16-19, 20-24, 25-29, 30-39, 40-49, 50-59, and 60+. Other than for the 1941-44 marriage cohort marginal totals for the required crosstabulations were known, except that for 1939-40, 1945-48, and 1949-53 Maori marriages up to 1951 had to be added in. For 1948-51 Maori marriages by age of bride and of groom were known, and for earlier years they had been estimated (see above).

For 1948-51, Maori marriages by marital status of bride and of groom were known, but relative marital statuses were not. It was assumed that all divorcees remarrying over this period (about one percent of all parties to Maori marriages) married bachelors or spinsters, and that forty percent of widows married widowers, the remaining widowed parties marrying bachelors or spinsters. These assumptions made, all cells in the matrix marital status of bride by

marital status of groom could be determined from the marginal totals. While arbitrary, this procedure was unlikely to introduce serious error given the small proportion Maori marriages constituted of all marriages, the ultimate focus of attention. The proportionate distribution of Maori marriages among relative marital status categories obtained was assumed to apply annually throughout 1939-51.

Marginal totals in the required distributions for 1939-40, 1945-48, and 1949-53 having been adjusted to a total population basis, the next step was to estimate cell frequencies for these distributions and those pertaining to more recent marriage cohorts. Consider first the table age of bride by relative marital status of bride and groom. For each age of bride the number of spinsters, widows, and divorcees was known (Maori figures were known for 1948-51 and had already been estimated for earlier years). It was then assumed that within each marital status of bride category the proportionate distribution of marriages by marital status of groom was the same as for all marriages of grooms in the same or the next older of the seven age-at-marriage categories specified above (except at age of bride 60+ years, where the distribution of grooms of that age only was used). Under this assumption estimates of the required cell frequencies were obtained which added to the age-of-bride marginals, but not the relative marital status marginals. Iteration was then used to adjust these estimates to produce cell frequencies which added to both sets of marginals.

To obtain age of groom by relative marital status tables the same procedure was adopted, except that within each marital status of groom category for a given age of groom at marriage the proportionate

distribution of marriages by marital status of bride was assumed to be the same as for all marriages of brides in the same or the next younger age-at-marriage category (except at age of groom 16-19 years, where the distribution of brides of that age only was used).

The one item not covered so far is estimation of the required distributions for the 1941-44 marriage cohort. Numbers of brides and of grooms by age and by marital status had already been estimated. The latter gave marginal totals for the table showing marital status of bride by marital status of groom. By assuming that grooms of a given marital status in 1941-44 were distributed by marital status of bride in exactly the same proportions as in 1939-40, then iterating first estimates of cell frequencies obtained under this assumption, the table was completed. It meant that both sets of marginal totals for the required tables had now been estimated. For each age-of-bride or age-of-groom category the number of marriages was next distributed by relative marital status according to the pattern estimated for the 1939-40 marriage cohort. Iteration was then used a second time to adjust cell frequencies so that they totalled marginals in both directions. The main rationale for basing 1941-44 estimates on those obtained for 1939-40 rather than on those obtained for 1945-48 was that the latter marriage cohort included an abnormally high proportion of widowed and divorced persons remarrying in the aftermath of World War 2.

Bridal Pregnancy

Estimates of annual distributions of pregnant brides by age could be made using Basavarajappa's (1968) method for non-Maoris only

(i.e. for brides pregnant with non-Maori children) during 1939-61 and for all brides thereafter. [1] It was thus necessary to adjust the 1939-61 risk populations upward to include brides pregnant with Maori children.

It was possible to estimate the distribution of brides pregnant with Maori children for the period 1962-67, years for which the distribution of Maori brides by age had been estimated by Jain (1973). Age-specific ratios of brides pregnant with Maori children to Maori brides were computed and were applied to actual or estimated numbers of Maori brides by age for each year during 1939-61 to obtain estimates of brides pregnant with Maori children by age. These were added to the non-Maori estimates previously made to yield total population estimates.

Because there was probably more miscegenation in 1962-67 than in earlier years, this method may have resulted in pregnant brides being overestimated for the war and early post-war period. If so, divorce rates for pregnant brides calculated using these data may be a little low, and those for non-pregnant brides a little high for earlier marriage cohorts.

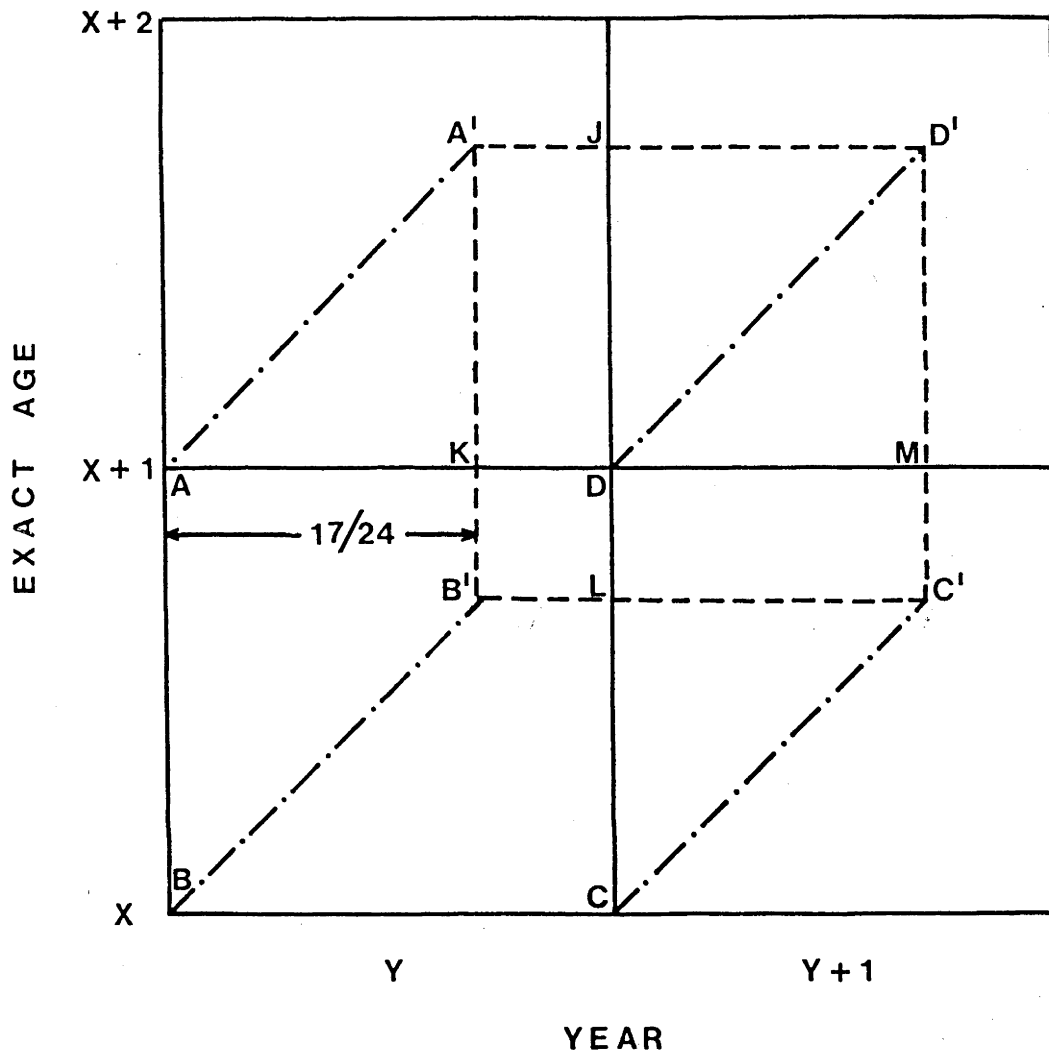
Timing of the First Birth by Non-pregnant Brides

The number of brides aged x married in year y who subsequently gave birth to their first child of the marriage at marriage duration d was estimated from annual data on live nuptial first confinements by

[1] It will be recalled from Chapter 2 that, according to official statistical definitions, 'Maori' and 'non-Maori' women do not necessarily bear 'Maori' and 'non-Maori' children respectively.

Figure A13.1

LEXIS GRID ILLUSTRATION OF DERIVATION OF EQUATION (1)



age of mother and duration of marriage. Assuming that live nuptial first confinements of women aged a in year b at marriage duration d were distributed evenly through year b and by exact age between exact ages a and $a+1$, these confinements were allocated to their correct marriage cohorts by mother's age at marriage using lexis grid principles.

Consider live nuptial first confinements occurring at marriage duration eight months (those occurring at earlier durations imply bridal pregnancy). Let the square $ABCD$ in Figure A13.1 represent

marriages of brides aged x in year y who were subsequently confined at marriage duration eight months. If it is assumed that all nuptial first confinements at marriage duration eight months occur at exact duration 8.5 months, then the square $A'B'C'D'$ represents those confinements, being the sum of the rectangles $JDMD'$, $DLC'M$, $A'KDJ$, and $KB'LD$. It is fixed by the point B' , which has coordinates $(17/24, 17/24)$ relative to the point B . Thus, expressing each of the component rectangles as proportions of their main grid squares we have:

$$M(8,x,y) = 0.501736C(8,x+1,y+1) + 0.206597[C(8,x,y+1) + C(8,x+1,y)] + 0.085069C(8,x,y) \dots\dots(1)$$

where $M(d,x,y)$ is the number of marriages of brides aged x in year y resulting in live first nuptial confinements at marriage duration d months.

$C(d,x,y)$ is the number of live first nuptial confinements at marriage duration d months of mothers aged x during year y .

In similar fashion it can be shown that:

$$M(9,x,y) = 0.626736C(9,x+1,y+1) + 0.164931[C(9,x,y+1) + C(9,x+1,y)] + 0.043403C(9,x,y) \dots\dots(2)$$

$$M(10,x,y) = 0.765625C(10,x+1,y+1) + 0.109375[C(10,x,y+1) + C(10,x+1,y)] + 0.015625C(10,x,y) \dots\dots(3)$$

$$M(11,x,y) = 0.918403C(11,x+1,y+1) + 0.039931[C(11,x,y+1) + C(11,x+1,y)] + 0.001736C(11,x,y) \dots\dots(4)$$

And if d denotes marriage duration in completed years rather than in completed months:

$$M(d,x,y) = 0.25[C(d,x+d,y+d) + C(d,x+d,y+d+1) + C(d,x+d+1,y+d) + C(d,x+d+1,y+d+1)] \dots(5)$$

Application of these equations in respect of the 1939-73 marriage cohorts for values of d up to five years requires annual data for 1939-79 giving first nuptial confinements by age of mother in single years and duration of marriage. Such data are available for durations of marriage 8-11 months in single months, except that for 1939-61 they pertain to non-Maori confinements only. Separate unpublished Maori data were available for 1965-71, and these were used as a basis for adjusting the 1939-61 non-Maori data upward. For 1939-61 only the total numbers of Maori live births were known. It was assumed that the ratios of Maori live first nuptial confinements at marriage durations 8,9,10, and 11 months to total Maori live births were in each year identical to those for the years 1965-71 combined. Estimates of the numbers of Maori live first nuptial confinements at each marriage duration obtained using these ratios were then distributed by age of mother at confinement in the same proportions as in 1965-71.

For marriage durations beyond the first year the only published data available were the marginal totals for crosstabulations of first nuptial confinements by age of mother and duration of marriage in completed years. [2] Again, 1939-61 data pertained to non-Maori

[2] Data were not available for 1942. These were estimated by first assuming that the ratio of live first nuptial confinements at marriage durations greater than eleven months to total live births equalled the mean of the 1941 and 1943 ratios. The total number of live first nuptial confinements at these marriage durations was then distributed by age of mother and by duration of marriage according to the means of the 1941 and 1943 distributions.

confinements only. Aggregating duration of marriage categories six years and over, these data were adjusted to a total population basis by first assuming that the 1965-71 ratio of live first nuptial confinements at marriage durations greater than eleven completed months to total live births for Maoris applied throughout 1939-61. Annual estimates of the numbers of Maori live first nuptial confinements at these marriage durations obtained using this ratio were then distributed by age of mother assuming the known 1965-71 proportionate distribution for Maoris, and by duration of marriage assuming the known non-Maori distribution for each year. The latter assumption was necessary because the 1965-71 Maori data were refined by age of mother, but not by duration of marriage for marriage durations one year and over.

Marginal totals for annual total population crosstabulations of first nuptial confinements by age of mother and duration of marriage for durations of marriage one year and over having been obtained for 1939-61 as well as for 1962-79, preliminary estimates of cell frequencies were made by distributing confinements within each marriage duration category by age of mother in the same proportions as those occurring at marriage durations 8-11 months. Iteration was then used to adjust these estimates so that they added to both sets of marginal totals. The data obtained provided the input for estimating non-pregnant brides subsequently having first nuptial births at marriage durations 0, 1, 2, 3, 4, and 5 years by age at marriage and year of marriage for the 1939-73 marriage cohorts.

Religion

Two sets of data required some attention - those distinguishing marriages celebrated by ministers of religion from those celebrated by registrars of marriages by status of bride and groom as adults or minors, and those distributing religious marriages by denomination of the officiating clergyman. Dealing with the first set, 1939-40 and 1945-51 data were initially adjusted upward from a non-Maori to a total population basis. Numbers of civil and religious Maori marriages were known for 1939-40, 1945-47, and 1950. Total Maori marriages for 1948-49 and 1951 were thus split into these two categories by linear interpolation or extrapolation of the 1947 and 1950 percentage splits. For all of the years in question civil and religious Maori marriages were then split, for brides and then grooms, into minor and adult categories on the assumption that the percentage splits were identical both to one another and to the known or previously estimated splits for all Maori marriages. The results were added to known non-Maori figures to obtain estimated total population figures. Total population figures for the 1941-44 marriage cohort were then estimated by splitting previously estimated numbers of adult and minor brides and grooms into civil and religious wedding categories by assuming that the estimated proportionate splits for the 1940 and 1945 cohorts combined applied.

A further adjustment to data on the civil or religious status of marriages was necessitated by a change in the definition of a 'minor' after 1970. From 1971 'minor' brides and grooms were aged 16-19, where formerly they had been aged 16-20. It was decided to retain the old definition and to transfer twenty year-old brides and grooms from

the 'adult' to the 'minor' category in 1971-73. The numbers of such brides and grooms were known, and it was assumed that those being transferred were split between civil and religious wedding status in the same proportions as all brides or grooms aged twenty or over.

Turning to the data on the denominations under which religious marriages were celebrated, distributions of Maori religious marriages by denomination were estimated for 1939-40 and 1945-51 using the 1945 and 1951 census distributions of Maoris by religious profession. For 1939-40 the 1945 census denominational proportions of Maoris who expressed some religious persuasion were used. For 1945-51, denominational proportions found by linear interpolation between those recorded at the 1945 and 1951 censuses were used. Using these results, non-Maori data were adjusted upward to yield total population estimates. These having been obtained, the distribution of 1941-44 religious marriages by denomination was estimated by assuming that the mean of the 1939-40 and 1945-48 proportionate distributions applied.