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Theories and Heuristics: How Best to Approach the Study of Historic Fertility Declines?

Simon Szreter *

Abstract: *»Theorien und Heuristiken: Mit welcher Herangehensweise sollte man historische Geburtenrückgänge untersuchen?«*. This paper argues that a move away from a unifying but teleological framework for studying fertility declines can only been intellectually emancipating and is a necessary precondition for scientific advance. The study of change in human reproduction is an immensely complex and multi-faceted problem which requires the combination of both quantitative and qualitative forms of evidence and their respective methodologies of enquiry. The theoretical challenge is to construct an intellectually facilitating heuristic framework for synthesis of comparative, multi-disciplinary study of the multiple fertility declines that have occurred, not to seek a replacement 'general narrative' for discredited demographic transition and modernisation theories. Quantitative historical demography can only gain in its explanatory power by engaging with studies which also incorporate research into such qualitative aspects of gender as sex and power and which address a more historicist understanding of the role of culture by exploring its relationship with institutions, ideology and politics. It is argued that a number of recent, contextualized local and comparative studies of fertility declines are demonstrating how productively to combine quantitative and qualitative methods to explore rigorously these aspects of the history of fertility declines. Within the heuristic framework envisaged here, priorities for further research in the future would include exploring comparatively the relationship between reproductive change and communication communities with respect to the ideologically and politically-mediated issues of sex, religion, health, disease and education.

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1. Introduction

In his stimulating and challenging article 'Science without laws' Mikołaj Szołtysek has argued that recent trends in the study of fertility declines have created an epistemological crisis for the discipline of historical demography (Szołtysek 2007). The key propositions of a previously dominant theory of fertility decline, closely associated with the Princeton Office of Population Research, have all been effectively challenged over the last two or three decades by an accumulation of historical, anthropological and other empirical studies. Attempts by some demographers, such as Ron Lesthaeghe and Dirk van de Kaa, to revitalize a unifying general theory for researching fertility change are seemingly contradicted or just ignored by other scholars' work. Consequently we are now in a situation where there is a proliferation of 'often incommensurable scientific discourses', which seem only to affirm the radical 'heterogeneity' of fertility declines. Szołtysek concludes that 'The proliferation of discourses will likely become the most serious threat to the disciplinary identity of the future historical demographic studies of fertility' (Szołtysek 2007, 32).

I am certainly happy to plead guilty to being one of the many scholars who have contributed with their research during the last three decades to bringing about this state of affairs. However, while this may constitute an epistemological crisis for one particular approach to the study of fertility declines, I would view the achievement of emancipating the study of human reproductive variability from the confines of modernisation's singular teleology as an unalloyed scientific gain for the field as a whole. To a Cambridge-raised historian, it is a great irony that the eminent historian who was Master of Peterhouse here when the young Tony Wrigley was the College's Bursar in the mid-1960s, Sir Herbert Butterfield, should have published his celebrated denunciation of teleological approaches to our understanding of the past, *The Whig Interpretation of History*, as early as 1931, at the beginning of the same decade in which Talcott Parsons published *The Structure of Social Action* in 1937, the founding work of structural functionalist evolutionary sociology which provided the intellectual basis for the thoroughly teleological modernization view of history that underpinned the demographic transition theory of the Princeton school (Butterfield 1931; Parsons 1937). Butterfield's text was an eloquent demonstration of how presentist, teleological interpretations of the past were little more than political ideologies triumphalising the present at the cost of genuine understanding either of the past itself or of the true nature of the often far from straightforward pathway of historical change which had led to the present.

It was not until the publication in 1970 of Alvin Gouldner's *The coming crisis of Western Sociology* that American sociology truly woke up to the ideological bias in Parsons' theory of 'the evolutionary universals' – those institutional features supposedly needed for any society to make the transition from traditional to modern:

> What this implies is that the "free enterprise system" of American society is a uniquely powerful embodiment of all the important evolutionary universals that, according to Parsons, have ever been invented. That is, it implies that the U.S.A. represents the apex of evolutionary development, that is the most advanced of modern nations.'[1]

Thus, for historians approaching the task of understanding and explaining dramatic variation in reproduction during the past, the notion that our research efforts should be guided by a unifying social science theory, which looks remarkably like a Whig interpretation of history, has never carried much scientific appeal. Szołtysek's observation about the lack of a humanities training among most of the key figures involved in the Princeton European Fertility Project is highly relevant in this regard – I wonder if any of them had ever read Butterfield's text? Yet it was essential reading for all history undergraduates, at least in Britain, in the 1950s and 1960s.

So I, for one, as a trained historian who read Butterfield's denunciation of all forms of Whig history in the sixth form at school in the 1970s, am quite happy to put on one side any and all teleological grand theories or general narratives about 'the' fertility decline, or 'the demographic transition'. These narratives invite us to view fertility change as a generic phenomenon with determinative causes, which the right kind of singular, positivistic methodology can analyse and identify. History teaches us to be wary of these theories; this is not how the processes of historical change occur. However, this does not necessarily mean that therefore I subscribe to an entirely relativist position: that any and all questions and methodologies are equally valid and useful where research into fertility declines is concerned. It does, however, seem to me that research into the history of variation in human reproduction is an extraordinarily complex and multi-faceted subject and that we can only help ourselves by deploying all useful and appropriate means available, in terms of sources of evidence and methods of enquiry. Quantitative methods, and the prior existence of accurate records of demographic events occupy a certain position of primacy in this field of intellectual endeavour, because they are absolutely essential in order for us to have a subject of study in the first place. But once we have satisfied ourselves that we have used this valuable methodology to observe accurately when, where and how changes in the different components of fertility

[1] Cf. Gouldner (1970, 367); C. Wright Mills had first launched a critique of Parsonian structural functionalism as early as 1959 but his premature death at 45 years old in 1962 robbed US liberal sociology of its heterodox voice: Mills (1959).

have occurred, other methods of enquiry, including the purely qualitative, can then be of enormous importance in the pursuit of understanding and explanations for these changes.

I take it, then, that Szołtysek's paper is posing the question, what is the form of the theoretical framework that we can most productively use to advance our comparative understanding of changing fertility in the recent past? I would argue that to begin to answer this question we must first fully acknowledge the complex nature of the intellectual problem we are confronting. Fertility is a central part of the larger topic of reproduction, or, if you like, the more ancient historical term, generation.[2] To understand, to interpret and to explain large-scale changes in fertility in human societies can, in principle, involve us in the examination of just about everything there is to study about those populations and their societies. Reproduction is influenced by laws, governments, civic associations, other institutions of governance, religious and secular beliefs, sexual codes and moral norms, emotions, aspirations and myths, physical and biological environments, technologies, forms of knowledge and cultures, social and ethnic divisions, relations of power, hierarchies of status and symbols of prestige, forms of employment, consumption patterns and economic relations, ideologies of gender, inter-generational relations, and, of course, the contingent internal and external political and economic histories of societies. This is, in short, a most formidable subject to attempt to study and comprehend! Most of us, most of the time can only realistically attempt to study aspects and parts of the whole. Our one advantage in this uneven intellectual struggle is that there are many of us and we can learn from each other and assist each other to build a comparative knowledge. However, as Szołtysek's article warns, our numbers are only a strength to us if we can avoid becoming a cacophonous squabbling Babel and, instead, synthesise and integrate our very different contributions. In the long term trustworthy comparative insight and understanding of changing reproduction will only be possible on the basis of researches involving in-depth and multi-dimensional knowledge of societies and their many unique histories.

In my opinion the theory of demographic transition, or the associated idea that there can be a general explanatory (and therefore predictive) theory of fertility decline has been scientifically valuable to the discipline of demographic history during the last sixty years or so, despite itself. It has provided a shared language and a shared target for much productive historical research which has essentially been conceived in critique of the theory. To have 'a universally valid "grand narrative" about how fertility changes' is not something any of us, as sceptical rationalists, should necessarily be striving for; or any-

[2] 'Generation to Reproduction' is the title of a multi-disciplinary Wellcome-funded 5-year research project underway in Cambridge University 2009-14, co-ordinated by the Department of the History and Philosophy of Science, to reassess the history of reproduction from the Greeks to the present: <http://www.reproduction.group.cam.ac.uk/>.

thing we would ever want to believe in. But it has provided a provocative critical target against which to launch our research enterprises and one that has been understood internationally and across many disciplines.

Over sixty years of historical and contemporary demographic research into fertility variation has occurred since Notestein and Davis presented their canonical statements of transition theory in 1944 (Notestein 1945; Davis 1945). This has shown what great diversity in reproduction can be found in the empirical and historical record. Many different sources and methods have been required to research and understand why reproduction has changed with a particular, unique narrative in each nation's history. Contrary to the presumptions of a general theory, this demonstrates that we can only derive our comparative knowledge of reproduction from the study and understanding of *difference*, not from the attempt to impose a grid of similarity. This is a key principle of historical method and knowledge: the appreciation of difference and what we can learn from it. It is the heart of Butterfield's point about the fallacy of Whig teleological history being unable to truly research and learn about the past and about the processes of historical change itself, because it has prejudged the whole issue as simply being a matter of showing in what ways the past was deficient to the ideologically-preferred and 'known' present, with all the effort devoted to charting the triumphal rise of the favoured features of the present from the imperfect past. For the Princeton historical demographers, armed with their highly selective fertility indices for interrogating the past, they were only really interested in charting how parity-specific stopping behaviour had risen to world dominance. This was to abstract one aspect of reproduction from its context and to miss so much else in the story.

The study of fertility change has both benefited from and been limited by a necessary bias towards quantitative methodologies and associated positivist epistemological assumptions. The immense benefits of this intellectual heritage have been – and continue to be – precision and clarity in working with very large amounts of data to produce reliable information about exactly when, where and among which sections of variously defined populations different forms of fertility change have occurred, along with significant related information about mortality and, where available, migration, too. The importance of this achievement cannot be overestimated since, put simply, without these products of a positivist demographic science we would all be chasing moonbeams, as the history of the eighteenth-century 'Population Controversy' in Britain illustrates (Glass 1973; Rusnock 2002). However, to then study the causes of demographic change only with reference to other forms of information which can also be counted and rendered quantifiable alongside the biological events of births and deaths, is to impose an entirely counter-productive and virtually arbitrary limitation on the intellectual scope of such enquiry. Most of the important influences upon reproduction – and therefore upon observable fertility patterns – such as aspects of politics and power, religious beliefs, moral

norms, ideologies of love and sex, and all the variety of social and cultural institutions – can only be appropriately studied through a range of more 'qualitative' methods. Ideally, therefore, a theoretical framework to study fertility declines comparatively requires a specification which combines the quantitative virtues of demography with an acknowledged role for the more qualitative methods of disciplines such as history and anthropology to provide fully contextualised and dynamic empirical studies of all the significant, but often unquantifiable influences on reproduction.

It is particularly important, if we are to learn about and from the past, therefore, that a general theory – or heuristic framework – should not commit us to any potentially methodologically exclusionary position. An approach which facilitates comparative understanding of fertility change will not be possible without deploying a full range of both quantitative and qualitative methodologies. To allow such a catholic range of methods to combine together fruitfully requires a particularly open theoretical matrix, which avoids biasing our viewpoint and privileging certain representations of 'the data' or excluding certain forms of analysis. To start with the notion that there is – or should be – a single "grand narrative" is just such a bias.

However, neither can any general heuristic framework for comparative research be simply descriptive and aimless. It should ideally give us a conceptual order with which to understand the diversity and complexity of our intellectual task. It should help us to articulate together the combination of distinct methods and sources we need to employ, rather than simply presenting us with an almost infinite set of intellectual tasks, a mere listing of alternative investigative methods and approaches.

2. Multiple Fertility Declines: A First Step Towards a General Approach

The foundational methodological principle for constructing a general facilitating theoretical framework of this sort for research in demographic history is to eschew the notion that there has been a single, general or grand narrative of fertility decline and to use instead the working assumption that there have been many quite different fertility declines. It may emerge, at a much later stage of comparative review of the findings on each society and community studied, that there are certain quite general similarities but this would be a matter of inductive discovery, not a deductive premise before our enquiries begin. While it is true that the challenging and contested ideas surrounding birth control have certainly enjoyed an international history of exchange and debate, as has the dissemination of the technology of birth control, this aspect of international exchange in no way implies a globally homogenous history. That there have been internationally mobilised discourses of Malthusianism, eugenics, Neo-Malthusianism, transition theory, family planning and others does not negate

the fundamental principle that fertility declines have occurred in quite distinct ways in different national and community contexts. The reception, use and meaning of an item of technology, such as a condom, IUD or contraceptive pill, depends on cultural and political context.[3]

This foundational proposition that we should explore the diversity of multiple fertility declines follows directly from an elementary and indisputable property of human fertility throughout history: its intrinsic variability among individuals and couples. Due to the phenomena of involuntary innate and acquired sterility, individual women have extraordinarily varied reproductive capacities, even with an approximately equal exposure to the chances of conception. A significant minority in every population are biologically unable to conceive or carry to term a single fetus, a further few percent only able to produce a single birth and so on, with, at the other extreme some women producing viable livebirths – sometimes even multiple livebirths – over twenty times in the course of their lives. Consequently, human residential and 'family' groups have always varied widely in their fertility patterns, having to adapt in many diverse ways to the natural lottery of fecundity.[4] There has always been great variability in the fertility of individuals of both sexes and in the sizes and forms of families and households; and thus there has always been the potential for observation and reflection among individuals in all communities on the advantages and drawbacks of these differences in rates and patterns of childbearing. Given this, whenever changes have occurred in the ecological, economic or social environment in favour of greater or less household size or fertility than the prevailing norm, there would always have been plenty of real-life examples of fertility both greater than and less than the norm for all to see – and ponder the relative advantages and disadvantages. It is therefore only on extremely restrictive and unrealistic assumptions about the supposed incapacity of 'non-modern' men and women to reflect on and regulate their fertility that there would not already be many, many such adaptive multiple fertility regimes already in existence long before the dramatic documented changes of European

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[3] See Matthew Connelly's (2008) recent ambitious and controversial 'global' history of the twentieth-century birth control movement. Connelly's study demonstrates the diverse fortunes of the individuals and their ideas and of the technologies of contraception as these were refracted through different national political contexts at different times in the twentieth century, notably for instance the work of Margaret Sanger in USA and in India. For a much older study documenting something similar, see Glass (1940).

[4] Thus, the well-documented and ubiquitous practice of service and apprenticeship in early modern England, which has been described as a system of 'ex post facto family planning', whereby young adults from about age 12 left the family home to reside and work in other households where there was a labour need. This represents a classic example of social and institutional adjustment to the natural lottery of fecundity (cf. Kussumaul 1981). Other examples would include Mende fosterage arrangements in West Africa analysed in Bledsoe (1990).

and North American peoples from the eighteenth to the mid-twentieth centuries.

Although the Princeton project was prepared, despite the then-available plethora of anthropological and historical evidence, to make such an unwarranted assumption about 'uncontrolled' fertility prevailing throughout early modern Europe, demographic historians have established beyond any doubt that a multiplicity of fertility regimes regulating reproduction in many diverse ways did indeed exist in early modern Britain and other parts of Europe, as well as in the many societies previously studied by ethnologists and anthropologists.[5] Thus, rather than conceptualising the problem of studying fertility change during the last two centuries of European and North American history as one of explaining an entirely novel singularity, referred to as 'the' fertility decline, we need a theoretical framework which embraces the continual variability and dynamics found in human reproduction at all times throughout the documented history and wherever anthropologists investigate the subject. Fertility declines during the nineteenth and twentieth centuries were significant events but they did not comprise a single common phenomenon of change from one uniform, steady-state of unrestricted, high fertility to another such uniform 'modern' condition of planned, low fertility. Reproductive patterns changed in diverse fashions among multiple fertility regimes that had already been regulating their fertility in many different ways.

When the Princeton European Fertility project found that there were indeed a diversity of fertility decline patterns visible within nations, it was emphasized that these most obviously seemed to correlate with religious and linguistic-ethnic difference. The principal conclusion that was drawn from this was that it showed that the economic and material conditions related to economic growth, rising living standards and urbanization were not as determinative of fertility declines as the original version of 'demographic transition' theory had postulated. Instead 'culture' and ideational change were proclaimed to be more significant determinants, focusing attention on the extent to which different religious and ethnic inheritances were susceptible to 'secularisation' of their values.[6] Something of the same form of 'cultural determinism' informs the more recent 'second demographic transition' thinking, which invokes yet another generalising sociological theory about cultural 'individuation' in 'post-

[5] The research of the Cambridge Group for the History of Population has demonstrated widespread control of reproduction in early modern England through late marriage, high proportions of celibacy and low levels of illegitimacy (Wrigley and Schofield 1981; Laslett and Oostereven 1973). Long-standing studies which have documented the wide range of fertility control practised by different societies and cultures have included (Carr Saunders 1922; Himes 1936; Ford 1945).

[6] These conclusions were presented in the summary volume of the Princeton project (Coale/Watkins 1986), particularly in chapters 6-8 and 10.

modern', affluent, consumerist and risk-averse societies (Lesthaeghe and van de Kaa 1986; van de Kaa 1987).

Consequent on the findings that emerged from the Princeton project about the importance of the 'culture of rationality' or secularization, A.J. Coale developed his theoretical framework of the three logical 'preconditions' for rational family planning, which Lesthaeghe has recently reformulated as 'ready, willing and able' (Coale 1973; Lesthaeghe and Vanderheoft 2001). According to this theory, a rational, secular approach by decision-making parents was required before fertility could be truly controlled in the modern sense. This means that the various possible impediments to the achievement of this modern, rational mentality can be conceptualised and then their presence or absence in different societies can be modeled and studied so these factors can be tracked empirically to show how such a planning approach originated in a society and how it then spread or was impeded. Coale's approach has enabled a link to be made with a revived version of the venerable tradition of 'diffusionism' in the study of fertility decline. Earlier, simpler notions of diffusion had envisaged fertility decline spreading, by analogy with a contagion, as acceptability of contraceptive technology 'diffused' through society or, in a more sophisticated version, as the ideals and values associated with small families diffused.[7] Coale's approach promised to render this more rigorous by identifying three separable, empirically testable 'cultural' conditions, which would all have to be satisfied before rational family planning could be adopted, so enabling the sources or impediments to the diffusion of such modern birth controlling practices to be identified.

The fundamental problem with diffusionism as an approach, even in this more sophisticated and methodologically discriminating form embracing Coale's three preconditions, is that it assumes that in order to explain fertility declines our primary goal is the need to explain a changed 'mental state', value system or 'culture' from one that does not plan its fertility to one that does. This way of looking at the problem, though of course immensely logically plausible (it would not have been taken seriously otherwise) nevertheless heroically abstracts from and stylises the problem to be addressed. The beginning point and end point of the process to be studied are presented as two polar opposites. This may be a correct assumption… but, there again, it may not. There is nothing in the approach to guard against the possibility that this dichotomy is an entirely arbitrary, invented and mistaken way of posing the historical problem.

How could it be a mistake? Firstly, because, as pointed out, there were many important senses in which reproduction was carefully regulated before the

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[7] On such earlier forms of diffusionist thinking in application to explanations of fertility decline and in the discipline of anthropology, see Szreter (1996, 13-20 and ch. 5, notes 109, 110 and ch.10 note 56). For a recent review see Palloni (2003).

modern observable 'fertility declines', embracing also various rational strategies and tactics in relation to marital fertility.[8] Therefore 'the beginning point' may be qualitatively quite dissimilar in different historical societies or among different sections and communities of a society. Secondly, in a society with low fertility, after the historic process of fertility decline has occurred, many individuals and couples even with very low fertility may not see themselves as consciously rationally planning their families in any particular way.[9] Thirdly, there is the important point raised above about the ubiquitous, involuntary variability of fecundity – and therefore fertility – in all cultures. Among the strongest influences on people's motives to restrain their fertility were the practical lessons in front of them from observing others around them faring better or worse in the changing economic and social circumstances they all faced, because of their involuntarily-produced larger or smaller families. In responding to the practical examples of what they could see worked best for the family's survival and living standards among their neighbours, we know that in English modern history, for instance, they primarily drew upon the range of fertility regulators that their society and culture already had a long history of utilizing: late marriage, non-marriage, abstinence, coitus interruptus, various efforts to deploy cervical obstructions or spermicides, douching, abortifacients and abortion (Santow 1993; Fisher and Szreter 2003). When fertility declined continuously and dramatically in England from 1877 to 1937, use of condoms and other 'modern' barrier methods were a minority practice throughout the whole process. Thus, in this well-documented case marital fertility declined for six decades without a significant cultural change across society in any of Coale's three preconditions having played an integral role in that process. This, at least, is exactly what has been concluded from the most detailed recent empirical research on the history of fertility declines in England and Wales. It has required an eclectic combination of methods of enquiry, combining both re-evaluation of the official, quantitative demographic sources and the pioneering creation of qualitative oral history sources enabling us to attend to the voices, perceptions and testimony of ordinary people involved in fertility declines in interwar England and Wales, to be able to demonstrate this empirically (Szreter 1996; Szreter and Garrett 2000; Garrett et al. 2001), chs. 5-7; Fisher 2006; Moore 2008, ch. 5; Szreter and Fisher, 2010).

Note that there is nothing in this alternative, historicist approach and in its findings, which negates the broad validity of one of Coale's several premises, namely that English society by the 1960s and 1970s – exactly at the time Coale formulated his model – was, in general terms, a society of family planners,

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[8] For recent research demonstrating this, reported in this journal, see Schröter (2007), Gehrmann (2007). On pre-modern England see above. See also the results of methodologically innovative new research on the Netherlands: Van Bavel and Kok (2010).

[9] This is confirmed in the British oral history evidence, for instance, see Fisher (2000; 2006).

observing his three preconditions. However, the crucial point which an historian will want to emphasise is that this does not entitle us to suppose that an earlier process of the 'diffusion' of these social and cultural characteristics played any crucial role in the history of changing fertility during the sixty-year period of secular decline, which had ended approximately a generation earlier in the 1930s. It may well be that the kind of 'modern' culture of 'family planning', in which Coale found himself in 1960s USA, and which also existed in England at that time – and which Coale modeled in the early 1970s – was the consequence of quite social discourses of relatively recent provenance, involving popular ideological and cultural reflections upon the small family norm. The importance of family planning, avoiding illegitimacy and unwanted births was certainly a discourse that prevailed in a peculiarly dominant fashion in immediately post-war, liberal democratic, affluent western societies, along with the widespread adoption of two new contraceptive technologies, the pre-lubricated condom (a 1950s invention) and the pill (in the 1960s).[10] But these were all characteristics of the kind of societies that had come to exist in the postwar era, some time *after* the historic fertility declines of western Europe and North America has run their course, and they were very different places – socially, culturally and demographically – from the societies which had experienced sharp fertility declines, c.1860-1940. To conclude, as Coale did, that certain features of contemporary American and European societies which had become normative in the 1960s and 1970s, which were generally associated with family planning behaviour at that time, were precisely the same features which had caused a widespread fall in fertility in USA and Western Europe during the course of the previous 100 years, appears, to an historian, little more than an unwarranted, arbitrary and a-historical imposition. In terms of causal thinking it looks to an historian remarkably like placing the cart before the horse: all the processes bound up with the fertility declines before the 1940s must have contributed in various ways to the affluent consumerist and relatively secure welfare entitlement societies that emerged across the western world after WWII, where a public discourse and practice of careful and reflexive family planning at last made perfect sense to the vast majority of the population; but to suppose that the latter caused the former is to confuse effect with cause. This is the defining flaw in teleological approaches to understanding historical change.

The methodological premise of multiple fertility declines is the opposite of that assumed by the Princeton approach. It is, however, analogous to how economic historians, a social science disciplinary group who deal with closely related intellectual problems of historical causation, now understand the pro-

[10] On the socially conservative postwar promotion of the norms of small planned families by companionate marriage partners in Britain, for instance, see: Finch and Summerfield 1991; Riley 1983; Lewis 1990. On condoms see Cook 2004, 133-9; on the pill see Marks 2001.

cess of industrialisation, economic development and economic modernisation. Industrialisation, like fertility decline, has also occurred repeatedly in the histories of many different countries – in fact the same set of 'developed' countries, which have all experienced completed fertility declines. However, economic historians would today all accept that this has happened in a quite unique way in each nation's history. There was a time in the immediate post-war decades when it was widely believed that economic growth was a generic, repeatable process, principally driven by the master causal factor of achieving an incremental capital:output ratio. This viewpoint attained its most complete expression as late as 1960 with the publication that year of W.W. Rostow's best-selling *The stages of economic growth*. However, it is the opposite, historicist view, articulated most clearly in Gerschenkron's contemporaneous, masterly essay 'Economic backwardness in Historical Perspective', which is now accepted by all economic historians.[11]

Gerschenkron's essay made the logically impregnable point that no country could simply follow England's path or formula for industrialisation partly because her position as first-comer was itself evidence of various unique advantages she enjoyed, but also because she had reaped numerous additional advantages of being first into global markets, thereby changing forever, with her global trading empire, the context for all those following. These advantages were, by definition, not available in the same way for later followers, who, Gerschenkron argued, would necessarily need to rely more and more on the active guidance of their central states to achieve successful industrialisation in the increasingly competitive global environment. Thus, Gerschenkron proposed a general 'law' about the character of repeated industrialisations but the validity of his general law depended on acknowledging that each case of industrialisation manifested itself in a unique and different way! Note also that Gerschenkron's thesis that every industrialisation is qualitatively different does not deny that they share some features, ideas and innovations in common. For instance, in each case investment in a mineral energy source technology has been an essential feature. But having this in common does not amount to the claim that any two histories of industrialisation happened in essentially similar ways. The exact configuration of social, political and ideological influences and forces was different in each case. Similarly with repeated fertility declines: they happened in the contexts of distinct and unique trajectories of industrialisation in each country and they also happened in a unique context of the particular institutions, ideologies, politics and social and economic policies in each country (and the unique ways in which these all interacted over the course of the period of declining fertility). To be able to specify analytically that an industrialised economy is one that can continuously increase per capita national

[11] Gerschenkron 1962, this was the fully developed version of an essay published in 1951.

income does not provide us with an adequate historical account of how its industrialisation occurred. Similarly, to be able to specify analytically the logical requirements for a society of careful family planners does not offer us an historical account of how any particular society came to endorse this disposition.

Indeed the most sophisticated thinking in the social sciences today, both among those in development studies and sociologists of the contemporary 'globalised' developed world, envisages that, contrary to the recent superficial certainties of modernisation, neoliberal economics, the Washington consensus and Fukuyama-style 'End of History', just as there have been multiple pathways through economic growth, there are also today 'multiple modernities' in the world's different societies and cultures.[12] Among the developed societies of the world there are multiple welfare regimes, there are multiple models of market economies (Esping-Andersen 1990; 1996; Wade 1990). It is entirely consistent with this that demographers should approach their studies with the understanding that there have been multiple fertility declines – multiple demographic pathways to multiple demographic modernities. There are today multiple low fertility regimes – each of them dynamic and continuing to evolve – not a singular type of 'post second demographic transition' regime; indeed, USA itself is clearly as distinctive for its relatively high fertility as Italy is for its very low fertility (see the debate triggered by Caldwell and Schindlmayr 2003; Billari et al. 2004; Caldwell and Schindlmayr 2004).

3. Communication Communities

The principle of multiple fertility declines is perhaps even more radical as a guide to research than it appears at first sight. Not only does it imply that different nations have had quite distinct reproductive histories, but also that there has been significant variation in fertility change trajectories within nations. The latter was a principal argument to emerge from my (Szreter 1996) detailed study of the demographic evidence of fertility declines in England and Wales, a conclusion also confirmed by a subsequent (Szreter 2001) collaborative study, using a distinct evidence base (Szreter 1996; Garrett et al. 2001). A number of other, well-contextualised historical and anthropological studies of fertility change in other societies, fortunate enough to have accessed sufficiently rich sources of evidence, have also confirmed this.[13] Of course this immediately raises the issue of how to demarcate these sub-national divisions of reproduc-

[12] Bayly 2004. For an historical enquiry into the notion of 'multiple modernities', see the contributors to: *Daedalus* Special issue on 'Early Modernities' (Summer 1998); and also to *Daedalus* Special issue on 'Multiple Modernities' (Winter 2000).

[13] Early examples include: Haines 1979; Schneider and Schneider 1984; 1992; Bean, Mineau, and Anderton 1990).

tive change? What are the social units within each nation that differentiate experiences of fertility decline? This is where we need a combination of theory and detailed empirical knowledge to decide in each case – respecting the historicist principle of difference. Theory can be used to tell us what we should be looking for, but it is only through knowledge of the historical society in question and examination of the evidence that we can make competent judgements about this methodologically crucial issue.

Anthropology and psychology inform us that we need first to be able to identify who are playing the socially significant primary roles in relation to reproduction in the society in question and what are their relative powers? Fathers and husbands, wives and mothers, other kin (vertical and lateral) of either sex with significant authority. Secondly we need to identify what are the principal influences upon these different agents. For instance, religious or other ethnic beliefs related to reproduction (perhaps distinguished by sex); sources of livelihood and the economic or gender implications of this for fertility; government policies and agencies and their provisions or sanctions (such as social security, education, health). In the case of England and Wales during the period 1870-1914, scrutiny of the available evidence, bearing in mind these theoretical considerations, led to the conclusion that religious distinctions and extended kin were usually relatively unimportant influences, whereas the question of how husbands and wives earned the family's income was a powerful cause of multiple distinct fertility regimes and declines. This was because in this particular society at this time, there was a great diversity of industries and forms of employment, many of which were quite locally or even regionally concentrated. In many of these industries there had been quite distinctive histories of labour relations resulting in a range of different outcomes with respect to remuneration levels of different categories of workers and the relative exclusion (or more unusually inclusion) of women and children in relation to paid employment outside the home (Szreter 1996, ch. 9).

This meant that in British society during the period of the secular fertility decline the crucial social roles of husbands/fathers and wives/mothers were highly differentiated, due to the various kinds of employment they pursued in different industries. This effect was amplified because of the geographical concentration found in many industries, resulting in quite distinctive communities of considerable geographical extent. In 1996 I termed these 'communication communities', to get across just how distinctive they each were (often with their own dialects) but also how the individuals within them would mutually influence each other because of sharing similar commonsense expectations of the roles that adult partners would perform in marriage and in the community, which could be quite different from those prevailing in other such communities, where a different mix of gendered labour market opportunities had been

historically negotiated between workforces and employers (a process increasingly mediated by the state itself in Britain, incidentally).[14]

However, the importance of industries in influencing the dominant form that communication communities took in relation to reproduction would not necessarily be a universal feature of British society at this time. In applying these same concepts and theoretical approach to another part of the United Kingdom, the province of Ulster in Ireland for instance, it would be surprising if religious differences did not emerge as an equally or more powerful constitutive force in creating the communication communities which experienced multiple fertility declines in that society.[15] In a similar context of polarised religious diversity, this has certainly been shown to have been the case by Anne-Françoise Praz in her excellent, carefully contextualised study of Catholic and Protestant communities in Switzerland (Praz 2005). Thus, we need to use and deploy theory which can illuminate difference, not concepts and general narratives which shepherd our thinking towards uniformity.

4. Embracing the Qualitative: Gender, Sex and Power

If, therefore, we propose that, in order to investigate fertility declines in the past, present and future, we should seek to explore all the difference and variety found in contexts and processes, rather than attempt to search for analytical commonalities, what, then, are the further theoretical considerations which could heuristically guide this daunting research programme, beyond the idea of communication communities and multiple fertility declines? One of the several values and purposes of theory is to alert us to what we don't know and what we need to know. Constructive theory leads us to ask new questions of the evi-

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[14] Szreter (1996, ch. 10). Communication communities comprise the social networks through which persons acquire, reproduce and negotiate their social and gender identities. An individual may identify with multiple communication communities with varying influences during their lifetimes in addition to those into which they are socialised. During the period of modern British history encompassing the fertility decline, c.1870-1950, the most powerful of such communication communities were often strongly related to the unique characteristics of specific towns and other geographical localities, lodged in distinctive industrial regions with their diverse histories of gendered labour relations, resulting in distinctive sets of family and work roles for those living there. For an important new study by Sian Pooley which explores diverse fertility patterns in such communication communities, see Pooley (2009). Another recent doctoral study which has attempted to study declining fertility comparatively, though it did not explore the primary sources of communication communities with such depth and rigour as Pooley, has been: Atkinson (2010). On growing state mediation of labour relations, see Davidson (1985).

[15] For an early examination of this, see Grada (1985). A current Leverhulme-funded research project to examine this among a large sample of Catholic and Protestant Belfast households is currently being pursued by Eilidh Garrett, Alice Reid and Simon Szreter: 'Housing, mobility and the measurement of child health from the 1911 Irish census', Leverhulme Research Grant January 2010-December 2011.

dence and, if necessary, to try to find or construct new forms of evidence. The fields of demography and historical demography have witnessed a classic episode of just this kind of theoretical advance during the last two decades or so, in the form of the spectacular rise to the top of the intellectual agenda of the concept of gender. It is not so long since Alison MacKinnon and Susan Watkins published their much-cited articles berating demographers for studying fertility declines as if women were bystanders to the whole process (Watkins 1993; Mackinnon 1995). For other humanities disciplines, notably history, the rise of gender as a re-configuring conceptual category was something of a political process allied to the rise of feminism and also an empirical contribution, as it is acknowledged that much of the pioneering gender literature from the 1970s onwards has consisted of historians' innovative studies of women in history and more recently of gender as a constitutive relationship.[16] For demography the adoption of gender as an integral component of its understanding of fertility change came rather later. It was partly experienced as a political event at the 1984 Cairo conference, but gender was also a methodological and theoretical revolution that has by no means as yet exerted its full potential for reinvigorating our historical understanding of fertility declines.[17] A recent collection edited by Angelique Janssens (2007) has showcased the new research of a number of scholars who are now developing this intellectual agenda.

Taking gender seriously requires a heuristic framework to incorporate at least two further important theoretical considerations, where the study of fertility declines is concerned: sex and power. Previously, although demography was strangely gender-blind as Watkins and Mackinnon protested, the manifest influence of power relations could not be plausibly entirely ignored. Instead its pervasive effects were acknowledged in a statistical form by use of the 'professional model' of social classes: a system for classifying households according to five or six social status gradations of male occupational categories, which was adopted by many official statistical agencies in the Anglophone world between the 1920s and 1950s and was used to depict the widespread class differences in fertility and mortality which approximately reflected the diverse influences of power in many different societies (Szreter 1993). There can be no doubting that dynamic social class relations have been important causes of the changing perceptions and behaviour which have resulted in the dramatic repro-

[16] Early historical studies included the pioneering collections edited by Vicinus (1972; 1977). The most widely-cited theoretical work by a gender historian has been Scott (1988). The most widely-cited theoretically informed early treatment which embraced the masculine dimension of gender was Connell (1995).

[17] For instance Müller and Schraut's (2007) article in this journal was still protesting that studies of fertility decline pay insufficient attention to gender.

ductive changes of the last two centuries.[18] However, the national unitary 'professional model' of male occupational gradings provides only the crudest of summaries of the relationship between inequalities of power and demography. As has been shown, there is consequently enormous intellectual opportunity cost in continuing to defer to its statistical summary measures as a satisfactory model of what is a much more complex phenomenon: 'social class' requires study through contextualised accounts of communication communities, where the intimately related issues of gender, sex and power relations can all be examined in their relationship with changing patterns of reproduction.[19]

The task of researching the dynamic relationship between sex, power and gender in relation to the histories of fertility declines is, therefore, a major research project which is only beginning to be addressed. Indeed, among demographers most detailed empirical knowledge of this subject during the last two decades has emerged from the primarily epidemiological and public health research focused on the HIV-AIDS crisis. This has resulted in a strange disciplinary distortion and imbalance of knowledge about this subject. There is a very considerable amount of research now published on the pathologised relations of gender, sex and power in certain impoverished HIV-AIDS-afflicted communities and networks in the poor countries of the South during the last two decades of world history.[20] However, we have had comparatively little effort devoted to researching empirical information about changing sexual behaviour and attitudes among the vast majority of the married populations of the world's now-developed countries of the North during the last two centuries, during which fertility declined so significantly.

There has been a good deal of historical research on nineteenth and twentieth century sexuality in Europe and North America but it has mostly focused on analysing the texts produced by sexologists, doctors and other ideologists and the public discourses associated with laws and policing in relation to the 'transgressive' topics of prostitution and 'deviant' sexualities.[21] The assumed

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[18] For explorations of the relationship between social class, gendered sex education, courtship, and birth control practices in early and mid-twentieth-century Britain, see Szreter and Fisher (2010, chs. 2-3 and 6).

[19] Szreter (1996, chs. 6-10) offered an initial exploration of how the study of the fertility decline in England and Wales could be enriched by abandoning the 'professional model' of social class differentials when examining the historic occupational fertility data officially published from the 1911 census enquiry, data which had itself formed the original empirical basis for the creation of the 'professional model' of social classification (documented in ibid. chs. 2-4).

[20] The literature is voluminous. For contributions by well-known anthropological demographers, see for instance: Caldwell, Caldwell, and Quiggin 1989; Caldwell 2000; Setel 1999; Setel, Lewis, and Lyons 1999. The doyen of African historian has also provided a careful study Iliffe (2006).

[21] Important early historical studies were: Foucault 1990; Corbin 1990; Walkowitz 1980; Weeks 1981. Important recent studies have included Chauncey 1994; Houlbrook 2005.

reference point of 'normal', legal, marital, hetero-sexuality has attracted relatively little research (see Hall 1991; Stanley 1995; Cook 2004). Before the revolution in norms of public discourse about sex during the 1960s sex was not something respectable citizens of modern liberal societies had believed should be discussed in public.[22] In the absence of first-hand testimony from ordinary citizens historians necessarily took their cue from the evidence left policing activities and by extraordinary individuals, predominantly those progressives who were prepared to speak out and research the subject. The latter were motivated by their perceived need for change, advocating something they termed 'companionate marriage', the use of modern contraceptives and the promotion of mutual sexual pleasure among marriage partners. From these sources, historians have reproduced a history which conforms to these ideologists' wishes, so that the history of sex, power and gender in relation to marriage and reproduction has been portrayed as a cross-cultural general process of 'the rise of companionate marriage', neatly joined at the hip to the modernizing transition to reduced family size along with the rise of aspirational consumerism and secular values (for a recent study of this sort, see Collins 2003). Whereas the simplifications of cross-national 'modernization' theory, originating in American sociological theorising of the 1930s and 1940s, are no longer considered acceptable by demographic historians in their accounts of the history of change in the fertility of marriage, this crude general model of historical change in the sexual relations of marriage has somehow continued to enjoy a currency.

The reason for this has been the relative paucity of research on the appropriate kind of detailed empirical information. We need to know much more about sexuality in private in marriages in each country during the periods in which fertility declined. Trite general accounts of the rise of companionate marriage, which base their empirical support on the public and self-consciously progressive, self-serving discourses of mid-twentieth century sexologists, birth controllers and marriage guidance counsellors, are inadequate guides to the attitudes and behaviour of the silent, socially conservative majority.[23] Influential contemporary social theorists like Giddens and Beck have premised their sociological theories of the changes in sexual culture happening in the West in the 1990s and 2000s on rather uncritical acceptances of the notion of a prior rise of

[22] Although there is certainly plenty of evidence to show that the drawing of a veil of respectability over public discussion of sexual matters and the eventual restriction of the topic to a moralised medical discourse was a cultural accomplishment of the first half of the nineteenth century and did not reflect earlier norms of public discourse of late eighteenth and early nineteenth century Society, graphically documented in Gatrell 2006. For the best empirical account of the subsequent ideological and cultural developments, see Mason (1994a, 1994b).

[23] Historical accounts of British society which have offered much more nuanced and complex interpretations of change in marriage and sexual relations include notably: Light 1991; Langhamer 2006; 2007.

companionate marriage earlier in the twentieth century and these theories have in turn fed into demographers' notions of a 'second demographic transition', as a general phenomenon. Empirical limitations in the theorising of Giddens and Beck, as descriptions of contemporary realities, are mirror images of the historical limitations of the notion of the rise of companionate marriage.[24] Of course, historical sources to research this private area of the recent past are not abundant and require imagination and interpretative skills to utilise. However, the methodology of oral history can be put to particularly effective use here, as Szreter and Fisher have demonstrated, along with a number of other scholars, who have used similar methodologies for researching sex, power and gender relations in other recent historical contexts (Szreter and Fisher 2010; see also Hirsch 2003; Gervais and Gauvreau 2003; Johnson-Hanks 2006; Gribaldo, Judd and Kertzer 2009).

5. Theorising the Respective Roles of Culture, Institutions, Ideology and Politics

One of the considerable theoretical advances that has occurred in the study of fertility change as a result of moving beyond the modernization framework, bequeathed by Parsons, Notestein and Coale, has been a much more discerning approach to 'culture'. Again this has partly been the result of the astringent effect of having to think seriously about gender. A series of important anthropological and historical studies and accompanying theoretical reflections have transformed historical demographers' understanding of 'culture' and its influence on reproduction; and in doing so this has produced a much clearer specification of the relationship between culture and institutions, and also how, in turn, they are both related to issues of ideology, contested power and politics.[25]

The issue of power in the context of gender relations and changes in sexual practices and attitudes within marriage is of course only one aspect of the way in which the study of power needs to be incorporated into histories of fertility declines. Many aspects of political history, in addition to those related most directly to national debates over the laws governing 'public morality', marriage, prostitution, abortion, sexuality, etc are of importance for understanding the diverse histories of fertility declines.[26] For instance it is quite clear from all the research that has now been done on British demographic history, both before, during and after the fertility decline, that significant changes in the British

[24] For an empirically-informed critique of the theoretical work of Giddens and Beck, see Jamieson 1999.
[25] Important contributions here have been: Lockwood (1995); and the essays in Greenhalgh (1995) and in Kertzer and Fricke (1997).
[26] On this, see for instance the range of stimulating studies in Ginsburg and Rapp (1995); or the collection of historical studies in Bock and Thane (1994).

state's social security and welfare policies had enormous impacts on the nation's entire demographic system, including marriage itself – the social institution most directly influencing reproduction. The Old Poor Law and its increasing generosity in the period of rising population growth c.1750-1820, its restraint in the 1820s and ruthless retrenchment in the 1830s, and, much later, the dramatic expansion of welfare services in the 1940s and 1950s, were each associated with trend-changes in marriage behaviour, with direct fertility consequences (the latter resulting in the postwar, high fertility plateau lasting throughout the 'golden age' from 1945 until 1973 in Britain).[27]

The changing history of the nation's welfare regime was the product of its national political history and contending ideologies. However, as we benefit from more detailed and exacting local comparative research, it is also becoming increasingly visible how a more local politics and related set of institutions influenced reproductive beliefs and behaviour during periods when fertility declined. In Alsace, in Canada and in Switzerland we are indebted to Kevin McQuillan and Anne-Françoise Praz, respectively, for their fine local studies, which have capitalised on the existence of religiously contrasting communities living cheek-by-jowl to demonstrate conclusively the influence of politics – above all else – at this local level in generating quite distinctively-gendered demographic regimes in neighbouring, religiously distinct communication communities, each with quite different fertility patterns (McQuillan 1999; 2004; Praz 2005). Indeed, as Szoltyszek notes, the Schneiders have shown something similar due to the local political economy of class relations in Sicily, where two communication communities of landless peasants and landed elites, sharing the same language and religion in this case, nevertheless contrived two distinct fertility declines side by side. Important new research by Sian Pooley has also demonstrated the diversity of cultures of child-rearing and parenting in three contrasting localities in England during the period c.1860-1910, the weaving town of Burnley in Lancashire, the colliery town of Bishop Auckland in Co. Durham, and the affluent London commuter dormitory of Bromley in Kent. Pooley has demonstrated in detail the ways in which these different regimes were intimately related to many different manifestations of local politics. This included gendered employment and industrial relations, different approaches to education, child-care practices, sanitation, housing and public health, and diverse forms of provision of social and maternity services (municipal-collectivist in Burnley; philanthropic-paternalist in Kent; and largely

[27] George Boyer (1990, ch. 5) has shown that those rural southern counties adopting the most generous form of family allowance outdoor relief under the Old Poor Law saw their birth rates increase the most, while Szreter and Garrett (2000, 52-8) have pointed out that the nation's overall birth rate declined as marriage become substantially more unpopular during the post-Napoleonic War decades, when the previous upward trend in Poor Law expenditure was curtailed and then sharply cut after 1834 to approximately half its previous level.

absent in the conservatively patriarchal and autarkic coal-mining community of Bishop Auckland) (Pooley 2009).

In linking such localised differences in beliefs and ideologies to divergences in reproductive patterns McQuillan has clarified the crucially important conceptual point that the independent role played by institutions needs to be carefully analysed and dissected. With his focus on the function of institutions McQuillan helpfully enables us to see culture, politics and ideology as distinctive components, with institutions – of various kinds – acting as the socially mobilising vehicles which deliver these influences and monitor and enforce their power – with varying degrees of effectiveness. McQuillan persuasively shows that ideologies and culture each have the potential to cause dramatic differences in reproductive regimes, even between imbricated communication communities living in and among each other and enjoying essentially similar economic resources and choices, but only if they possess the institutions to enforce their ideological and cultural authority throughout their membership networks. This requires institutions to instill their teaching and to provide credible and feared sanctions against defaulters. This in turn depends on command of resources by such institutional enforcers of ideologies, which ultimately derives from effective political strategies in relation to potential ideological competitors for the resources to support the institutions. This may well require the capacity to forge effective alliances outside the local community to access the superior resources required for enforcing local authority. As McQuillan shows, the Catholic Church in Quebec has often proved itself adept at playing the politics, not just locally but in relation to the Canadian national government, in such a way as to powerfully influence Catholic fertility in Quebec until at least the 1960s (McQuillan 2004).

Furthermore, as Katherine Lynch acutely notes, the tendency of diverse Church authorities, as in Catholic Canada or Protestant England for instance, to mobilise a rhetoric of 'traditional' family values against birth control propagandists should not necessarily be understood as unqualified enthusiasm for large families or unregulated fertility. It was also part of an institution-defending reaction against the perceived challenges of the secular birth-control advocates of the early twentieth century. Call for traditional family values was directed less against the wisdom of moderate families per se and more against the secular birth controllers' unwanted rocking of the boat. In seeking to place birth control and therefore also sexuality in the public domain, secularist birth controllers threatened the uneasy peace which the established churches in both these societies had established with great difficulty in order to both police, but also neutralise this most contentious area of human behaviour and morals, by adhering to the convention that sex was, above all, a private matter (Lynch 2006, 34-9). Religious institutions defended tradition as a matter of privacy and preserving public silence in these affairs, not because they were against moderation in marital fertility (as was shown for instance by the very moderate

family sizes of both Anglican and Nonconformist ministers in the 1911 census of Britain), but because they wished to preserve the customary privacy surrounding these issues, which enabled religious agencies to maintain moral authority over their flock without having continually to tackle openly and head-on these de-stabilising issues of personal and public sexual morality.

6. Practical Implications: Priorities for Future Research on Fertility Declines

What, then, don't we know and what do we need to know about the process of fertility decline? I believe that collectively we know more than we think we do – but there is a considerable and genuine problem in bringing it all together in a helpful way. But apart from this issue of effective synthesis in a field so broad and deep, I should try to answer with some specific suggestions about priorities, as I see them, for future research in the history of fertility declines, which follow from the above discussion of a heuristic framework for study. I will offer suggestions under five headings here: sex; religion; communication communities; health; education.

Firstly, sex. There should be a very high priority among the international community of demographic historians to mount oral history projects in other European or North American countries to investigate the histories of sexuality, gender, power and marriage in those many diverse national contexts, before members of the older generations who lived through the periods of declining fertility, are no longer available for interview. For instance there are many European societies where fertility declines were so recent that many can still be interviewed from all cohorts during the process, such as Spain, the Netherlands, Bulgaria, Eire or Poland for instance.

I would add that, having worked as part of a team with Kate Fisher on our oral history research project, I now have the greatest respect for the difficulties involved in working with oral history evidence to produce valid and interesting findings about the past. It is certainly not remotely an easy option for studying the recent past; however I am all the more convinced that it is an extraordinarily valuable and important potential source, especially for this crucial subject of the relationship between sexuality and changing fertility. There are very few other comparable sources which can give the ordinary person's views on this subject. In Britain we have the cache of interwar correspondence generated by Marie Stopes, which certainly is a valuable source to set beside the oral history testimony, but there is little else that is comparable. The sources created through public discourses of the period – the arts and literature, the processes of law and the medical profession – all tell rather different stories from those of ordinary people. Without oral history or something comparable like the Stopes letters, it is not possible to understand in detail the difference between the public discourses – mainly reflecting preoccupations, practices and aspirations of

agenda-setting sections of the educated social elites – and the diversity of private practices of the vast, conservative majority of the populace.

Secondly, religion. The decline of religious sentiment and the rise of secularism is a well-worn item in the modernisation canon, including among the proponents of the 'second demographic transition'. However, recent historiography on Britain indicates a much more complex story than one of smooth, gradual reduction of religiosity in step with falling fertility. Studies in British history have focused on the persistence and adaptation of religious frameworks of thought in relation to gender relations within the family and models of child-rearing throughout the era of declining fertility, including a notable religious revival in association with social conservatism in British society as recently as the late 1940s and 1950s, in a very low-fertility context.[28] Many factors seem to have been involved in the subsequent rapid fall-off in religious participation rates from the 1960s, including post-war full employment, rising affluence, social security and welfare replacing the need for some of the support functions previously provided by religious organisations to the poor, and the dramatic changes in gender relations and expanding female choices, in relation to both sexuality and employment during the 1960s and 1970s (cf. Davie 1994; McLeod 2007; Brown 2009). Furthermore, politics and institutions are all involved in this story of changing religious dispositions – it's not just about autonomic changes in ideology and culture. McQuillan and Praz's exemplary work has been mentioned and there is also the excellent recent volume of case studies edited by Derosas and van Poppel (2006).

Thirdly, and to some extent another dimension of research on the religious dimension, the general approach suggested here of identifying 'communication communities' which have distinctive child-rearing patterns could probably be helpfully brought into articulation with the research inspired by Goldscheider's (1971) pioneering work on the fertility of minorities and immigrants. The concept of communication communities and the way that it envisages that its participants may moderate their fertility in response to observation of the family size patterns of others around them sharing the same values, concerns and constraints, could benefit from the kind of geographical and network analysis used by Derosas on Jews and Gentiles in Venice to examines issues of relative sizes and preponderance of these different communication communities in different sections of the city and the extent to which their relationships were exclusive of each other (Desrosas 2006). In England some communication communities can be identified in 1911 which were quite geographically dominant and separated from others; but where they shared space, as in Venice or

[28] On the strength of the post-war decade of Christian religious revival, c.1945-55, see Brown (2009, 170-5, 212-15; Harris 155-81). On the increased popularity of a socially conservative form of marriage, see Finch and Summerfield (1991, 7-32); and on renewed emphasis on domesticated maternal roles, see Riley (1983).

Ulster for instance, whether their different ideologies and cultures result in differential fertility patterns will depend on the extent to which their respective religious authorities have the institutions and resources to maintain social and economic differences among them, as McQuillan and Praz show. Issues such as these in fertility research, in turn, also relate to the new interests of 'world history' researchers, who have revitalised migration studies with their focus on the social identities and resources of inter-continental networks and diasporas, although rigorous study of the demography of such groups will certainly remain technically challenging.[29]

Fourthly, the general subject of the relationship between fertility and health and disease remains under-examined, especially as this relates to issues of culture and ideology. Part of the divergent fertility patterns of different communication communities may be related to distinctive health or disease patterns due to cultural or employment-related conditions. Certainly the unusual low fertility and child mortality of Jewish minorities, even when living in difficult urban conditions, has been a well-attested finding in the literature (Marks 1994). While the important general association between aspects of poverty and poor housing and infant mortality has been clearly demonstrated, the Jewish anomaly indicates that considerably more could be done to refine our understanding of the relationship between fertility, health and disease and culture. One way in which such work has developed has been in relation to gendered ideologies in regions of India and China and their influence on sex-differential survivorship of the young and maternal mortality. In some Asian societies, the high relative costs of girls have long been reflected in 'post-natal' abortion methods – infanticide or neglect. In an Asian cultural dispensation, mortality rates are therefore just as significant as fertility rates in helping us to understanding the cost-benefit calculus of parents. As Kishor (1993) has shown, gender mortality differentials in India are particularly pronounced in areas where women have both low economic and, more importantly, low cultural value. Generally speaking, North Indian mortality differentials are pronounced because of the confluence of low cultural and economic worth. In the North, mechanized agricultural production has led to the exclusion of female labour. Together with higher-than-the-norm dowry rates, this makes the relative economic value of girls extremely low. The North is also more patriarchal than the South, further depressing the overall value of girls via the cultural account. In the South, there is relative equality of mortality partly because the labour intensive rice industry is dependent on female labour. There are also resilient matriarchal traditions in the South, particularly in Kerala state. In short, women in the North get the worse of both worlds, while women in some areas in the South get (relatively) 'the best' of both worlds. The significance of long-lasting

[29] For a leading exponent of this, see McKeown (1999; 2004; 2008). For an introductory text, see Cohen (1997).

geographical influences is also indicated here in that such gender discrimination against female infant survivorship seems to be markedly absent throughout most of sub-Saharan Africa, a region with poverty to match parts of India. As a gross generalisation it can be said that Africa has been characterised as generally exhibiting a much more pronounced 'pro-reproduction' set of cultural beliefs due to a long-standing perceived labour shortage in this vast, sparsely populated continent (Caldwell and Caldwell 1987; Iliffe 2007).

More generally the issue of diseases and the general health burden and their relationship with fertility (both physiological and medical effects and perhaps via coital frequency) require much more research and this typically involves issues of gender, power, ethnicity and sexuality.[30] Demographic historians have moved into the difficult area of analysing stillbirth rates (Woods 2009); and we have the impressive British and comparative work of Irvine Loudon on maternal health and the dangers of childbirth (Loudon 1992; 2000). There has also been much work on the clandestine area of abortion and abortifacients in Britain (and elsewhere) during the era of the fertility decline (e.g. Sauer 1978; Brookes 1988; Fisher 1999; McIntosh 2000; Moore 2008, ch. 6). These are all important areas of research on the interface between reproduction, fertility, disease and health, where further research will be of great value. Sexual health and sexually transmitted diseases is probably the most conspicuously under-researched area in the demographic history of fertility declines. Demographers and epidemiologists have of course given very considerable attention recently to these problems in relation to HIV-AIDS, chancroid and chlamydia and their possible interactions with fertility, with many studies especially in sub-Saharan Africa.[31] To my knowledge there has been almost no evaluation of the possible historic influence of the venereal diseases, as they were called before the 1990s, on fertility variation during the era of national falls in fertility.[32]

Finally, education. Here, there is the widely-reiterated female education thesis: that nothing brings down fertility more consistently than universal female education. While I'm sure this is not incorrect in its general thrust, there does need to be more discerning research on this. As Praz shows in her study of the highly gendered differences between Catholic and Protestant communities in early twentieth century Switzerland, the effects of education expansion can be diverse in relation to fertility. Jennifer Johnson-Hanks also produces many

[30] See the recent research on Indian fertility and health reported in Borooah et al (2010); and more generally Iyer (2002). See also the attempt by Beier (2008) to relate these two themes in her secondary analysis of oral history sources.

[31] This socio-medical literature is enormous; see above for some references. For an influential early contribution from a scholar who has also contributed to the demographic history of fertility decline, see Caldwell and Caldwell (1996).

[32] My own current researches include a Wellcome-funded research project to explore historical sources of evidence to examine the possible relationship between venereal diseases and changing fertility in British history during the period 1860-1940, see above.

complex and interesting findings of a far from straightforward relationship between the acquisition of more advanced education and fertility and birth control practices among Cameroonian young women (Praz 2005; Johnson-Hanks 2006). We have found important distinctions in the gendered culture and practice of contraception in twentieth Britain, depending on whether either member of the married couple had experienced secondary education (although primary school attendance was universal, completion of secondary schooling was confined to just 7% of those aged 15-18 in England and Wales as recently as just before World War II) (Szreter and Fisher 2010, 22-3 and ch. 6). It is in fact a strong contemporary policy implication of these detailed oral history findings that 'in a society where there is no well-developed public discourse of sex (as in pre-1960s Britain and such as in many African and in many Islamic societies), there may be a crucial difference between providing girls only with elementary education (as the English working-class had before 1944 and as in much of sub-Saharan Africa and India today) and providing secondary education for all. In England it was only middle-class women with secondary education who had the confidence to negotiate with their husbands and even, where necessary, to take control of contraception in their marriages (Szreter and Fisher 2010b). Sian Pooley's local comparative study has found complex relationships between differences in local educational provision, opportunities for children's social mobility and parental aspirations and child-rearing practices in the three very different communities she studied: a mining district (Bishop Auckland, County Durham), a textiles town where the Social Democratic Federation had strong support (Burnley, Lancashire), and a middle-class commuter suburb of London (Bromley in Kent) (Pooley 2009, chs. 2, 6).

7. Conclusion

To study fertility declines comparatively with the assistance of a general framework, we must construct a framework that can acknowledge and incorporate the fact that fertility declines almost always happened in the context of political conflict over ideas and beliefs about reproduction, in both local communication communities and in national and transnational discourses, with culture and institutions mobilised through ideologies as the weapons for usually peaceful but nevertheless intense and emotionally charged negotiation, challenge and defence. This really should not be in the least surprising. After all most episodes of dramatic national fertility change, including secular fertility declines, have occurred during periods when the encompassing national societies and their economies have also gone through dramatic changes in their respective configuration – the set of economic and social transformations we broadly describe as industrialisation and urbanisation. No observant commentators on societies undergoing such changes, from Disraeli and Engels onwards – to name two politically diametrically opposed such contemporary observers in

England for instance – have ever seriously suggested that these processes of economic and social transformation are anything but profoundly disruptive for the majority of the persons involved. All the fundamental values, beliefs and institutions are shaken to their core as the family, the market, and the state are all reconstructed in their mutual relationships and this typically ensues in significant political debate and engagement (Szreter 1997). Fertility declines cannot be studied comparatively through a general narrative or framework which simply ignores this and which does not have a central place for the contingent unpredictability of politics and for the forms of social and ideological competition and division that occur. The fundamental premise for the approach proposed here, that of multiple fertility declines, acknowledges the necessity of this open-ended framework.

This does not mean that social science methods, quantification and rigorous hypothesis testing, through for instance multiple regression, multi-level modelling or other forms of mathematical representation of relationships, are any the less useful – and sometimes crucial – in our studies of fertility declines.[33] But it does mean that they are never going to give us final answers or truly comprehensive understandings of the history of changes in procreative behaviour. This will not trouble the more sophisticated users of these techniques, who would never have dreamed this was their purpose. The study of fertility change always starts with adept and critical statistical reconstructions of the demographic evidence. On the fortunate occasions where relevant information can be rendered into the appropriate form for the statistical methodology to be extended to mount careful evaluations of certain kinds of causation this is to be welcomed wholeheartedly. However, to attempt to approach a full understanding of fertility declines among specific communication communities, as are typically found in national populations, the results of such rigorous studies will always have to be combined and integrated also with the interpretative handling of other more qualitative evidence relating to ideals, ideas, beliefs, institutions, politics, policies and such highly subjective material as reported perceptions, attitudes and emotions.

I would conclude then, in responding to the challenge set by Mikołaj Szołtysek's article, that the study of fertility decline is currently not so much in crisis as pregnant with great promise. Historical demography will always be at the core of the subject but any claims to disciplinary exclusivity should be relinquished. The study of reproductive variation in history is an expanding universe of research questions and methodologies. For this we need not a uni-

[33] For instance George Alter's (2010) most recent innovative proposals for a statistical technique for discriminating between different possible patterns of reduced fertility in marriage (which have previously been discussed as 'stopping', 'spacing' and 'starting') offers a most interesting technical development for demographic historians to exploit where they have appropriate quantitative sources.

versal theory to test but a fruitful heuristic framework to enable us to see the relationships between our necessarily diverse findings and participate in an expansive multi-disciplinary dialogue. Researchers should certainly be reflexively aware of, but not necessarily overly concerned about epistemological differences related to the diverse methodologies required for researching very different forms of evidence. It requires only goodwill, intellectual humility and generosity, and capacities for synthesis to combine these kinds of knowledge productively. It can be no surprise that the study of fertility declines make such diverse intellectual demands upon its researchers, given that the subject of enquiry – historical change in human reproduction – is one of the most complex, variable and multi-faceted problems we could ever set ourselves to try to understand.

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