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TEACHER EDUCATION NEEDS TEACHERS: BUT CAN THE SUPPLY BE PLANNED?

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Introduction

On the face of it, planning the supply of teachers for Australian schools by estimating the supply of, and demand for, primary and secondary teachers in Government and non-Government schools seems eminently rational. With inflation curbing public spending, with political support for public spending on education eroding, with a consequent tightening of educational budgets, and a new austerity demanding that there be no surpluses — that nothing more be produced than what is required for the purposes in hand — what more needs to be said? If educational planning is rational, and, in particular, if it is rational that forecasts of future long-run equilibria in teacher demand and supply should provide a basis for planning teachers for Australian schools, then rational people must endorse such an approach. To dissent would be irrational. Or would it? As Wildavsky (1975:127) points out:

One good question deserves another: can it be rational to fail? Now anyone can do the best he can and still not succeed. Suppose, however, that the failures of planning are not peripheral or accidental, but integral to its very nature. Suppose planning, as presently constituted, cannot work in the environment in which it is supposed to function. It is irrational to entertain this hypothesis?

The Claimed Rationality of Planning

The point has been made and must now be defended. This question, once put, immediately raises another. Just what is the nature of planning? The large and growing literature dealing with different kinds of planning recognizes the *basic nature* of planning as a *methodology of rational thought and action*. Parsons (1937:58) has given us a succinct statement of what such rational action should entail:

Since science is the rational achievement par excellence, the mode of approach here outlined (towards a definition of what it is to act rationally), is in terms of the analogy between the scientific investigator and the actor in ordinary practical activities. The starting point is that of conceiving the actor as coming to know the facts of the situation in which he acts and thus the conditions necessary and the means available for the realization of his ends. As applied to the means/ends relationship this is essentially a matter of the accurate prediction of the probable effects of various ways of altering the situation (employment of alternative means) and the resultant choice among them.

It should be noted that it is Parsons' scientific-conception of the rational act which is reflected in any conventional definition of educational planning, such as, 'Educational planning is . . . the application to education itself of a rational scientific approach to examining one's alternatives, choosing wisely among them, then proceeding systematically to implement the choices thus made' (UNESCO/IEP, 1969). And, as has been shown by Kim's more recent comprehensive review of concepts of the educational planning process, there is nothing particularly unique about this definition. In fact, as Kim (1975:74) points out, such a definition of educational planning constitutes a mere restatement of the five phases which Dewey outlined several decades ago as the indispensable traits of reflective thinking, namely:

- defining the problem:
- noting the conditions surrounding the problem
- forming the hypotheses for the possible solution of the problem
- elaborating the probable value of the various hypotheses for solving the problem
- actively testing the hypotheses to see which idea offers the best solution

The Problem of Defining the Problem

However, there is one basic catch in this methodology of rational thought and action: namely the difficulty of defining the problem. The educational planning literature itself has begun to recognize this problem over the past few years. For example, Rowley (1971) does not hesitate to point out that it would be disastrous if educational

planners either developed plans, or facilitated the implementation of plans, which sought to impart 'instant' solutions to very complex problems. Likewise Scurrah (1974), in his review of Chai's (1971) discussion of the planning of education for a rural society, is concerned that the educational planner does not collect faulty information leading to so-called 'solutions', which actually do not even address themselves to the real problem areas. Benoit (1975), too, points to the matter of uncertainty in the identification of the 'real' issues in his note on the decision-making processes in the politics of education, while McKinnon (1973:11) has asserted that 'the frequency with which plans are rejected implies that often planners do not address themselves to the 'right' problems. . . .'

Perhaps that is why Vickers (1970: 168), in his discussion of the policy making process, makes the point that he hopes 'not for greater efficiency in our problem-solving, but for better understanding of our problem-setting'. Problem setting, Vickers (1972: 103) suggests, is a function of what he describes as our 'appreciative system', our ways of conceptualizing and valuing, which determine for us what 'the facts of the situation' are, what might be overlooked in a situation, and what must be attended to without delay. Boulding (1956: 16) made the same point several years ago. Problems, he believed, are not objective states of the real world, but subjective perceptions — 'images' — constructions of reality. To paraphrase Boulding, a problem is what someone or several people perceive as a problem. Hence what is a critical problem to some people may be regarded as unimportant or perhaps even as a solution by as many others.

The 'Problem' of Teacher Over-supply

Take, for example, the question of projected potential surplus (of teachers) in the 1980s. In what sense should this question be construed as a problem? Is it the case that in Australia we currently have 'too many' teachers? It has been argued that it makes no sense to talk of a teacher surplus when most communities are without pre-schools; when physically and mentally handicapped children are in large part neglected; when an uncomfortably large percentage of the adult population are reported as being functionally illiterate; when there is a dearth of technicians in the workforce, and so on. From this viewpoint, then, the problem is not an imminent teacher surplus, but rather a continuing educational deficit, which for the first time since World War II, educational systems have the

opportunity to correct. In fact, it has been suggested by Corrigan (1972) that the so-called problem of teacher surplus, in so far as it represents an unwillingness on the part of governments to attempt to meet pressing educational needs in the present economic climate, is indicative of a far more complex problem; that is, the problem of a nation, which may not simply be losing its faith in education, but its faith in the future.

It is interesting, however, that those who tend to perceive the problem in this way are either teacher educationalists who need student teachers to train or retrain, or the leaders of professional organizations of teachers who are committed to the full employment of their membership. That raises yet another point. There is enough evidence, in the various State reports on the question of teacher supply which have been published over the past few years, to suggest, not only a very conservative preoccupation on the part of planners and advisers which the purely quantitative aspects of teacher planning, but, in addition, a very conservative, if not increasingly outdated view, of the rational planning and management of teaching personnel. That is to say, given the recommendations in these various reports for the need to reduce the number of students admitted to teacher education institutions and courses in the face of a threatened oversupply, it might be said that the so-called 'problem' of teacher surplus has been construed by Government bureaucracies (no doubt with an eye to the undesirable repercussions of militant teacher unionism) as the 'problem' of teacher unemployment; that is of having a supply of teachers to hand whose services are not being utilized — who cannot or will not be hired by the various State Departments because no jobs for them exist.

It is worth noting, with respect to this question, that at least two State Government reports — the Report of the Post Secondary Educational Committee of Inquiry, Victoria, 1978, and the Report on the Supply of and Demand for Teachers for Government and Non-Government Schools in N.S.W., 1978-1986 — explicitly recognize, with respect to the current teacher unemployment situation, that only a small proportion of primary and secondary teachers who were not hired by the respective State Government Departments were willing to work anywhere in the State. Furthermore, it is not clear whether any of these so-called unemployed teachers, who failed to gain employment with the

various State Departments, were employed by non-Government teacher employing bodies, or were successful in obtaining employment outside the teacher profession itself, and so for this, or perhaps some other reason, have left the teaching work force altogether. However, even if it were substantiated that there are a number of teachers in Australia who are not being utilized at all by virtue of their failing to gain employment with any educational or other employing body, it is suggested here that what is currently viewed essentially as an employment/unemployment problem might be better construed as a problem in educational resource planning.

Such planning would not be concerned simply with ensuring that those who are already 'qualified' teachers can obtain a teaching job if they want to, or with guaranteeing to those who are admitted to teacher training that they can secure employment on graduation, if they so wish. The mere utilization or not of currently or potentially qualified personnel represent only one aspect of educational resource planning. A more comprehensive approach could include:

- (1) policies designed to achieve the fullest development of educational resources, both human and capital,
- (2) policies concerned with the optimal allocation of such resources, and
- (3) policies concerned to ensure educational resource maintenance and conservation.

What implications then, would a 'resource policy' approach to the planning of teachers for Australian schools, have for the so-called 'problem' of teacher surplus? In the first place, the question of the utilization of human resources would not be eschewed, but rather would be investigated in depth. How, for example, are teachers being utilized within systems for different subjects, institutions, geographic areas? How are they being utilized across systems? There is, for example, an implicit (if not explicit) acceptance, in current Government reports on the teacher supply question, of the current rigidities which prevail in Australian educational systems — between different sectors (technical vs professional), different levels (school vs pre- or post-school) and different kinds of teaching (specialist vs. general). Yet the General Report of the O.E.C.D. Conference on Teacher Policies (1974: 50) suggests that 'the maintenance of surpluses at certain levels, co-existing with shortages at other levels, is a symptom of the lack of flexibility in the structure and content of training courses provided'.

That conference recognised, that the question of any impending teacher surplus, was a challenge, not just for *recruitment* planning but equally for *training* policy. It seems, however, that an emphasis has been placed, in the current Australian response to the question of teacher supply, on the appropriate adjustment of current recruitment levels. Training, it seems, is to be for teachers only, and for the most part, for only one category of teacher. Yet it is clear that versatility in training, involving an extended core programme with some *final* specialization, the unification of teacher categories, the employment of teachers in different sectors of the system, and the employment of adults with other than educational professional experience in the educational system, together with opportunities being made available for those currently employed (or unemployed) teachers to transfer temporarily or permanently out of the teaching force, are all matters of resource policy which impinge very closely on the question of teacher supply. They are, however, as much a matter of training and retraining as of recruitment. It might be added also, that any such initiative would not only appear to be more in keeping with the current trend of opening up of the school to the outside world, but may also go some way towards avoiding the long-term effects of 'stop-go' recruitment policies such as an ageing, tiring, and retiring teaching force! (Williams: 1977).

There are matters, too, which impinge upon the optimal allocation of, and full development of, teaching resources. There is evidence in all of the current reports on teacher supply that the improvement of teaching is to be achieved primarily by a reduction in respective pupil-teacher ratios. It is suggested here, however, that this very traditional PTR concept is no longer meaningful in the kind of teacher-learning situation that has already been developed in many Australian schools. The traditional class has been broken into different groups of pupils in units of various sizes, often engaged in independent work, and supported by different specialists and media. The report of the Australian Education Working Party on The Supply of and Demand for Teachers in Australian Primary and Secondary Schools, 1978-1985, (p.84), explicitly recognises that where there may be an overall 'excess' of teachers traditionally defined, 'it is likely that shortages will continue to exist for certain specialists'. But those specialists this Working Party appears to have in mind are the traditional subject, remedial and librarian specialists.

Yet, with 'the electronic age', 'the coming of the post-industrial society', 'the cybernetic revolution', the futurists have it that it may not be too long, and perhaps could well be before 2000, that all teachers will be specialists. They will be specialists, however, not in the traditional sense, but, according to Burdin (1975), as values developers, resource finders, learning diagnosticians, prescription specialists, interdisciplinary liaison specialists, human counsellors, community learning facilitators, profession builders, utilizers of futuristic processes and substance, and learning specialists. Is it that there are already, or are likely to be, by 2000 and thereafter, 'too many' such specialists and hence, too many teachers? Or is it that planners and policy-making advisers are continuing to think in terms of the *employment* of teachers, rather than their *redeployment*? That is to say, even given that education is an acknowledged labour intensive sector, the problem, as education too feels the impact of the cybernetic revolution, might be better construed in terms of the optimal redeployment of teachers in conjunction with such new capital resources as computers, lasers and holography.

It has been suggested by Knezevich (1975: 48), that 'sometime before 1995 there will be an important point where the cost of traditional instruction with live teachers will rise to intersect the declining cost curve for sophisticated and computer-based instructional systems.' This is not to indulge in some futuristic fantasy where, for example, chemical gases will be released through school ventilating systems to keep pupils and teachers, with or without their knowledge, alert during formal school sessions. The writing does appear to be on the wall. Already simple, though still relatively expensive, home video recording and playing equipment is available. Micro-computers, with the aid of programmes prepared by experts, already have an extensive instructional capacity. They are not yet connected with the computers of the outside world, but when that happens — the micro-computer, the telephone and the television receiver will together constitute a technological force which must influence and change traditional modes of instruction, and with that the traditional definition of 'teacher'.

It could be argued, then, that rather than reacting to a so-called 'oversupply' of teachers by reducing recruitment levels, a more sensible strategy might be to revise and extend the current period of professional preparation for teachers, to take fuller advantage of

the technology, that emerged during the 1960s and 1970s and with the advent of the micro-computer is now readily available for educational purposes. Indeed, Knezevich (1971) suggested that in this event the extended period of study might constitute at least six years of collegiate level work, a large number having earned a doctorate before entering practice. If such a training and/or retraining policy were to be adopted, the next few years might witness, not an oversupply, but actually a substantial shortage of traditional teachers in the short term and, in the long term, if such a policy is *not* adopted, a critical shortage of those educational professionals who have the capacity to adapt effectively and productively to the new technology and organisation of instruction.

What, then, is the 'right' problem? What is the 'real' issue? Is it a matter of teacher surplus or educational deficit: a loss in faith in education and an unwillingness on the part of the Government to finance that enterprise adequately, or a loss of faith in the future? Is the 'real' issue teacher full-employment planning or educational resource development — that planning of teachers for Australian schools which seeks to take account of the utilisation of teachers in different areas, regions, disciplines, levels, sectors and kinds of teaching; the kind of planning which addresses not only the question of recruitment, but also the question of training and retraining; in short the kind of planning which concerns itself, not merely with the full development of human educational resources, using traditional pedestrian tools and equipment, but rather with the preparation of highly skilled and professionally prepared personnel who are not made redundant by, but are professionally enriched as education 'wires into' society.

Critics of the educational planning process to date have been right to focus on the importance of the definition of the problem. The definition of the problem is a vital part of the planning process, because, as the above discussion implies, the way in which a problem is perceived tends to determine not only the range of possible solutions to the problem but the kind of strategy that is identified as being appropriate to its solution (Cartwright, 1973: 179). The planner, it is true, may not be able to exert any real discretion, either with respect to the definition of the problem, or the appropriate strategy for its solution. The politicians, the administrators who surround the politicians and control the machinery of administration, and those whose futures are likely to be affected

by the planner's designs may already have arrived at a fairly definite view of how the problem should be perceived, and how it should be solved. Nevertheless, the history of educational planning suggests that it is the definition of the problem which is most useful for planning purposes with prevails.

But what is the purpose of planning? Certain philosophers of management, particularly Ozbekhan and Churchman (quoted in Fromm, 1972), have raised the question of 'planning purposes' quite explicitly: 'What are we planning for? What are the values of our planning?' They have insisted that before any consideration can be given to either strategic or tactical planning, the norms and values underlying all our planning should be investigated. The major thrust of the first section of this paper has been to provide some thought about certain educational norms and values which lead us to construe the problem of planning teachers for Australian schools in one way rather than another. But what are the general norms and values that underpin the educational planning process? This paper has already pointed out that they are rational and scientific principles; but, in addition to defining the problem, what does this mean?

Planning is not peculiarly a twentieth century phenomenon. There is evidence enough, however, that, in this century, the accelerating interest in and emphasis on planning in the public sector, has followed upon major social crises, and the uncertainty such crises have generated. Thus early Soviet planning followed the revolution, and was an attempt to deal with the crisis which arose as the control of the economy passed from private hands to those of the State. Likewise French planning followed the disruption and devastation of the World War (Beneviste, 1972). Further, before that war had ended, the United Kingdom enacted its 1944 Education Act, requiring Local Education Authorities in England and Wales to prepare a development plan. In the United States, plans were made at State and local levels to accommodate returning soldiers, and to prepare for the war-induced 'baby boom'.

This planning, forced upon industrialised nations in a reconstruction phase, was then taken up by the developing nations during the 1950s and 1960s, in their attempt to deal with the uncertainties of national construction and growth. Thus in every instance it can be said that the educational planning process in this century reflects an attempt to control the future — to control the future in the Reconstruction

Phase of the 1940s, the Manpower Shortage Phase of the 1950s, the Rampant Expansion Phase of the 1960s (Coombs, 1970); and now to control the future in which might be best described as the Comprehensive Contraction Phase of this decade. Indeed it seems that it is in this phase, more than in any other, that a rational scientific approach to the planning of education is called for. Such planning, however, and the control of the future it promises, is a control based in prediction, that is, in the effort to determine what will be the case in education by offering information about education in the future sense. If the causal deterministic model of the physical world is accepted: namely, that in the physical world everything that happens has a definite cause and will give rise to a definite effect, then, in principle, certain future tense descriptions are uniquely implied by any sufficiently complete present tense description of a situation. Such future tense descriptions, logically deduced from complete information about the initial situation, together with deterministic 'laws', are 'certain' to be confirmed. In this 'certainty' about the future which prediction seems to promise, that uncertainty which made planning imperative in the first place appears to have been overcome, and so control of the future is assured.

However, it should be pointed out, that physicists today have come to query, if not to reject, the causal deterministic model of classical physics on which such prediction and control rests. For example, space and time have been intimately connected in relativity theory to form a four-dimensional continuum called 'space-time'. As Louis de Broglie (cited by Schilpp, 1949: 114) has observed:

In space-time, everything which for each of us constitutes the past, the present, and the future is given en block . . . Each observer, as his time passes, discovers, so to speak, new slices of space-time which appear to him as successive aspects of the material world. though in reality the ensemble of events constituting space-time exist prior to his knowledge of them.

All events in space-time are interconnected but their connections are not causal. Such inter-connections between events can be interpreted causally only when a definite direction is imposed on them, as for example, when a space-time diagram for electron-photon scattering is read from bottom to top. If, then, the classical notion of causality has undergone considerable revision with respect to the prediction and control of events in the physical world, there would seem to be good grounds for seriously questioning its

applicability to the prediction and control of, and hence the planning of, events in the social world.

But let us imagine for the moment that the social world of the planner is, indeed, a determinist's Utopia in which the classical principle of causality still operates. What kind and degree of 'certainty' could (in principle) be attached to the predictions pertaining to this world? On the face of it, it might be agreed, that, given such a Utopia there are certain future tense generalisations about this social world which could be accepted as certain. Take, for example, the proposition G: 'Individuals of type T, with history H, in circumstances C, will do X'. Interpreting such a proposition in terms of the planning of teachers for Australian schools, let it read for the moment, 'Women teachers of child bearing age, after teaching five years full-time, will retire from the teaching force'. It seems that applying the syllogism, 'A is a teacher of Type T, in circumstances C, therefore from G, A will do X'.

But in the first place, even in a deterministic Utopia, what certainty is there that the circumstances C will remain the same as those assumed in calculating X? In the United Kingdom in the 1950s there was prevalent much the same fear of a teacher surplus as has been evident in Australia for the past few years. In 1956, a report (cited by Williams, 1977) of the National Advisory Council on the Training and Supply of Teachers in England and Wales advised the Minister for Education that:

Without the introduction of the three year course or some other equivalent restriction of recruitment (and without some major new source of demand for teachers) it is not impossible that there may be some difficulty in the early 1960s . . . in maintaining full employment in the teaching profession.

It is instructive to compare the latter recommendation with respect to teacher recruitment policy made by the U.K. National Advisory Council at the time, with, for example, a somewhat similar recommendation by the Partridge Committee of Inquiry into post-secondary education in Victoria (1978: 40), namely that:

The Committee recognised that predictions in 1978 of the staff demand in 1983 may prove to be inaccurate but concludes that the evidence indicates strongly that present intakes will lead to considerable oversupply of secondary teachers in Victoria and that a significant reduction should be made as soon as possible . . .

It is, of course, well known that in the 1960s there was no teacher surplus in the United Kingdom, as was feared, but rather a chronic shortage of teachers. The circumstances assumed in calculating the feared teacher oversupply had changed. On the demand side the birth rate rose rather than fell, as had been predicted, which in turn affected the supply side, because this event meant that more women of child bearing age were withdrawing from the labour force and hence from teaching. To this was added the pressure for a greater reduction in class sizes than had been planned for as public dissatisfaction with staffing standards grew.

Will history repeat itself? There are already indications that it may! For example, the Correy Report makes it clear that, at least as far as the supply of teachers for New South Wales is concerned, 'there appear to be real possibilities for shortages . . . (in certain subject areas) . . . *in the middle years of the decade* unless some appropriate corrective action is taken' (1981). It has also been argued (Burke, 1981) recently that the future demand for teachers could exceed the upper estimates made in the Tertiary Education Commission's Report for the 1982-84 triennium by some 30 per cent. Which, then, it is correct to say:

- (a) We can be justifiably certain the A will do X?
- or (b) It is certain that A will do X?

The point is, that if we were talking about the certainty of occurrence of some purely physical event such as the sun rising tomorrow, a certainty which is based purely on our observation of such an event in the past, then it seems we can say 'it is certain the sun will rise tomorrow'. In other words, to believe that the sun will rise tomorrow is correct, to believe that it will not rise tomorrow is incorrect. In fact it does not matter what we believe about it, the sun will rise tomorrow anyhow. There is an objective certainty about that event. Given our observations of teacher wastage patterns in the past, however, is there the same objective certainty about teacher A retiring in five years' time? It would seem that there is not, simply because teacher A's retirement is an event which, unlike the rising of the morning sun, is affected very much by what teacher A believes about the event. If teacher A does not believe she will retire five years after commencing teaching then she, for one, cannot accept the proposition 'It is certain A will do X'. Likewise, for every other female teacher like herself who does not believe, either, that she will retire five years after commencing teaching, the objective

certainty of the proposition 'A will do X' is diminished. In other words, the validity of the proposition 'A will do X' depends on the individual, whereas the validity of any proposition about the occurrence of a purely physical event, such as the sun rising tomorrow, does not vary with the individual.

There is, as Jensen (1972: 1) pointed out, one way out of this dilemma and that is not to make predictions at all, but rather mathematico-statistical projections. It is interesting to note in this context, however, that although the word 'prediction' does occur more than once in the various reports on the teacher supply question which have been prepared for either for or by the State and Commonwealth Governments in the last few years, what these reports actually have done is to make, not predictions, but rather mathematico-statistical projections. Such events in the past, as new recruits seeking to become members of the teaching profession, teachers withdrawing temporarily or permanently from the profession, teachers seeking to upgrade their qualifications and so on, have been represented by figures, and these figures have been arranged and rearranged according to certain mathematical operations to produce various curves or trends. It is important to remember, however, as Jensen (1972: 3) points out about these so-called 'trends':

They neither summarise past experience nor reflect any real process of an ongoing system . . . For every curve (or function) assumed there is always a set of more comprehensive curves, delineating other possible transitions from the past to the future. Trends are always trends of the past: there are no trends of the future.

Nevertheless, according to Ahamad and Blaug (1973:315), the experience in planning qualified manpower has been that, even though it was explicitly recognised that because of the uncertainty of the future, the forecasts should not be considered for planning purposes, recommendations were often made as if the forecasts were exact and the future predictable with certainty. Such recommendations, however, are not justified, simply because what happened in the past may not happen in the future. Indeed, Drucker (1968: xi) maintains that it is major discontinuities, rather than the compelling continuity of apparent trend, that are likely to fashion the course of events in this last quarter of the twentieth century; the most important changes will focus on knowledge, which, during

the last few decades has become the central capital, the centre of cost and the crucial resource of the economy. Some consideration has already been given to the consequent changes in the labour force, work and teaching and learning in this paper. Suffice it to say, here, every supply and demand forecast assumed as a basis for the planning of teachers for Australian schools, represents a projection of a 'possible future'. As such, it represents only one of number of possible futures. Moreover, as Amara and Salancik (1972) point out, the events to be forecast are determined 'not by time *per se*, but rather by concurrent events which take place during time.'

What, Then, Can Be Done?

In view of the above, it seems that the only sensible way of planning for the future needs for teachers is not for planners to define the problem in terms of demand or supply or to look ahead to future developments in this problem as they see it, either by way of prediction or projection. Rather, this paper proposes that planners and policy making advisers should look around them, should become more aware of that present (and past, too,) out of which the future comes to be. This is not to deny the future orientation of any planning effort, but it is to endorse Eide's notion (1971: 21) that the planners' task 'is not to assist in reducing options for future policies by tying them to specific targets emerging from our current ignorance'. As Armitage, Smith and Alper (1969: 113) put it clearly a decade ago and this paper has tried to demonstrate:

. . . patterns detected in the past data are a highly fallible guide to the future development of the system; observed trends may persist for some time but they are unlikely to be perpetuated forever. What we must attempt to do is to understand how the system 'works', and for this we want more than data which tells us what happened. We must seek and anticipate data which tell us *why* it happened'.

And, as Ackoff (1983: 1) emphasised, the ideal sought by planners should not be perfect prediction, 'but continuous increases of control and responsiveness to what is uncontrolled'.

The planners of teachers for Australian schools should then move away from their preoccupation with predictions and projections, and move their planning activities in the direction of research, and in particular of policy research. It must be added quickly, though, that policy research, as it is traditionally conceived, is anchored as

firmly as any teacher supply and demand estimates are, in a classical, mechanistic, deterministic scientific world view. Hence it is not that policy research, which constitutes nothing less than social technology, as Marcuse (1961: 223) put it, 'a methodical scientific, calculated, calculating control' which is being proposed here. It is not that policy research, which motivated by the technical interest seeks to produce and process mere information, which is being endorsed here.

Rather, the research which this paper proposes planners should pursue is not research for information but rather research for understanding: an understanding which will enlighten policymakers, educate them, allow them to stand apart from the situation which they wish to steer and control, to question the taken-for-granted assumptions about the educational process which underlie that situation, to grasp the principles (social, economic and political) which are ordering the educational enterprise, to recognise how such principles have evolved, to appreciate how such principles have imputed particular values to the question of planning teachers for Australian schools, and are still exerting considerable influence on the purposive action which planners and policy-making advisers are recommending with respect to the resolution of that question.

The difference between *information* and *understanding* that is being stressed here is not, it is contended, purely a semantic one. The choice is clear. The planners of teachers for Australian schools may go on attempting to present some sort of solution to the question of teacher supply, from a mass of poorly defined, barely quantifiable factors, whose relationships can only be vaguely known. They may continue, now that they have begun, to be preoccupied with forecasting teacher manpower requirements and social demand (a misnomer if ever there was one!!), with the determination of enrolment, transition and graduation rates; with the identification of the need for buildings and the assessment of educational costs and expenditures. But if they do pursue this approach to planning they may never come to terms with the understanding how or why any of these categories are related to the process of human learning and development.

The para-educational categories of the how-many how-much what-cost variety assume that people learn in an immense primary-secondary-post-secondary institutional complex by spending a lot of time there between the ages of 6 and 16 (or perhaps 20). They

assume that people learn by exposure to a certain quantity of teachers in a set number of classrooms and school buildings. They assume that education (including teacher education) is 'demanded' by people, because it gives them some sort of passport (via certification) to post-institutional life, and because, of course, for certain age groups education is compulsory. But such categories ignore some basic and vital questions about education that society itself is now asking. Is education to be for economic growth or quality of life? What sort of education? Who is to participate in it? How is equity for the participants to be achieved? To the extent that the future planning of teachers for Australian schools continues to ignore such questions then it seems that such planning can amount to nothing more than what it currently appears to be: the instrument of established policy directions, the operational hand of the politicians who wish to maintain and promote their power position, or of some other group, administrative or otherwise, with a vested interest in, and various degrees of approval or disapproval, towards the matter at issue.

Conclusion

This paper has suggested that planning in general (and educational planning in particular) has emerged in this century as a means whereby predictions might be made and the control of an uncertain future might be achieved. It has attempted to show, however, that prediction in, and hence control of, a situation involving human beings is not likely to be achieved. This means either, that the future planning of teachers can continue to move in a direction described by Dror (1969: 7) where 'axiomatic assumptions, provisional theories, conceptual taxonomies, doubtful (or at least untested) hypotheses and various types of value judgments' will continue to be confused for reliable factual knowledge about a problem that cannot be objectively ascertained, with the planning process being distorted accordingly, or, on the other hand, that rather than planning in response to pseudo information about a future situation, planners will proceed on the basis of a more thorough understanding of the current situation, and hence will attempt to ascertain the extent to which that current situation is denying people in the 6-20 age range, those much older and a little younger, the possibilities for their learning and development which might otherwise prevail. It is the latter direction which this paper proposes the planners should take: a direction which seeks not to control people, but

would attempt to set them (and, in particular, those teachers among them) — free for their possibilities. In sum it is suggested here that, the planners of teachers for Australian schools should not take the road to educational serfdom by planning education, and in particular teacher education, on the basis of demand and supply. Let them, rather, take the road to educational freedom, which starts with a critical analysis of just where they are right now.

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