Chapter 9. Conclusion

9.1. Introduction

Demography needs theoretical foundations. It does not need theory as a goal in itself, nor does it need profound theories to produce the statistics on the events and states that form the core of a discipline whose task is to describe populations and population changes. At least, it does not need much behavioural theory in this respect. But it does need behavioural-theoretical backgrounds to place demographic phenomena and demographic change in a perspective that allows their adequate interpretation; such backgrounds are indispensable for an answer to the most fundamental and ever recurring question of scientific endeavour: why? The value of this study is situated in the provision of an interpretive framework to answer this question.

Demography has a variety of theoretical backgrounds, but as yet these are not sufficiently adequate for a satisfactory answer to this fundamental question. Taken together they are often inadequate in the sense of completeness, coherence and, much too often, depth. Pending the evolution of the theoretical apparatus for a fuller understanding, demography has little to offer for the design of effective intervention programmes or population policies. As a scientific discipline it has witnessed that (quantitative) data collection procedures, descriptive ability and statistical analysis on the one hand, and theory development on the other, have proceeded at different speeds. Acknowledging their interdependence, this book intends to contribute to the side of further progression of the conceptual background of demography and, specifically, fertility studies. In this respect, a deductive approach is followed: starting from a number of explicit premises about human behaviour, a general theoretical model is conceived for the study of fertility. In particular, it aims to provide a social-behavioural background for research and research-based action in the field of fertility and reproductive health. The various chapters of this book pursue a number of theoretical elements and starting points required for an encompassing conceptual framework of fertility which is presented in Chapter 7. This final chapter summarises the conclusions that can be drawn from the effort to integrate these constituent elements and from the application of the framework as presented in Chapter 8.

9.2. Conceptual issues

Given the nature of demographic events, demography can be classified as a social-behavioural science, even though it has to incorporate a strong biological basis. The state of the art in the discipline, or in the social sciences in general, does not permit the conceptualisation of a ‘grand unifying theory’ for demography. Most probably, the development of such an overarching theory will remain out of reach in any foreseeable future. Nevertheless, at a meta-theoretical level, it is possible to assess the various conceptual building blocks of an integrated theory and to consider their position in relation to one another. Following the major debates within and between the social sciences, these would prominently involve the role of structure and individual agency and the notion of dynamics that underlie phenomena of interest at different levels of analysis. Therefore, these major concepts delineate the structure of this book and
provide the basis for the theoretical framework presented in Chapter 7, while a biological component adds to this general model the adjustment for an approach to fertility. Any further conceptualisation of structure, agency and time requires the choice for specific theoretical orientations. This study’s aim to contribute to a theoretical basis for the understanding of fertility with possible implications for the design of intervention strategies directs this choice towards an individual and interpretive orientation. In the tradition of methodological individualism, it defines individual fertility behaviour as the ‘analytical primacy’ to explain reproductive outcomes at the societal level, but in turn it relates to the formative processes objective and subjective that underlie individual behaviour. In this respect it becomes clear that the understanding of fertility crucially depends on a realistic model of man for demography. The elaborations of various concepts in this study have shown that a cognitive perspective can provide an adequate orientation for a general theoretical framework of fertility. It can offer consistent conceptualisations of structure, behaviour and change, including the processes through which context (structure) and individual development (change) impinge on behaviour. The key concept in this cognitive approach is ‘information’ and its application is associated with its supply, reproduction and change, and its attendance, retention, organisation and actual use by individual agents. To the extent that these processes of individual consideration touch upon the (socio-)biological determinants of fertility, they can provide an adequate analytical background for the understanding of reproductive behaviour. The common interpretation in terms of information of both structure and agency furthermore provides a conceptual solution to the problem of the macro-micro gap that is encountered in the social sciences (cf. Bandura 1982, Esser 1993).

The model of fertility presented in this book deals with some of the major issues encountered in the social sciences, including demography. The framework’s structure satisfies the need to cast explanation of demographic phenomena in a multi-level perspective (e.g. Bilsborrow et al., 1997, Wunsch 1995). It not only acknowledges the basic distinction (and interrelation) between structure and agency in terms of context (macro) and behaviour (micro). The structure also distinguishes different levels within the embedding social context, and it differentiates between an individual and an intra-individual level within the microlevel. The study suggests that each level by itself, but importantly also the interpretation of the linking processes between the different levels, provide a distinctive contribution to the understanding of fertility behaviour (cf. Greenhalgh 1995b). Furthermore, the model mirrors the increased attention for process approaches which can be read as a paradigm shift in the social sciences, including demography (cf. Crimmins 1993, Willekens 1990b). The time dimensions incorporated in the framework in terms of life course development, institutional change and the processes underlying individual choice, assert that reproductive outcomes cannot be adequately understood by reference to only present circumstances, states and perceptions, but crucially also acquire their meaning through the emergence of these in evolutionary, developmental or procedural perspectives.

The thematic Chapters 4, 5 and 6 provide interpretations of the model’s basic components by elaborating a theory of individual behaviour, an approach to the structure and contents of the environment embedding individual agents, and by providing a dynamic perspective, in particular with regard to changes and development over the life course. Furthermore, they address the socio-biological determinants of fertility which provide the last step in the causal
chain leading to reproductive outcomes.
The quintessence of the life course is envisaged as the people’s evolving mental representation of reality ensuing from events, developments and anticipations in different life domains, which structure their sequential and parallel careers. The various types of considerations that people employ in reproductive behaviour are interpreted as cognitive constructs that are shaped, maintained and reshaped, depending on these changes in different life careers.
The challenge to define the directive role of the social environment has been taken by perceiving context in terms of social institutions made up of complexes of rules of meaning and behaviour that are constructed, reproduced and changed through the interaction between people. The structure by institutions lend to the social environment is captured in terms of contextual levels, subsistentential dimensions of institutions and their impact on different life domains. In this way, the conceptualisations of context and life course provide articulations of their meaning to individual agents and their effects on behaviour.

The leading principle to capture behaviour is embodied in a theory of choice. The notion of choice is elaborated beyond the conceptualisation prevailing in standard decision-making theories and allows a much broader spectrum of human behaviour to be addressed, if only as a benchmark (Elster 1983, 1984, cf. Ní Bhrolcháin 1993). The broad concept of choice includes a number of issues that are suggested to account for the personal considerations that shape individual’s fertility behaviour: a perspective on the construction of motivation for behaviour, a theory of attention and representation, the addition of perceived personal control in decision making, and a regard for the heuristics and styles of decision making. This elaboration relies on the assumptions of a realistic model of man (Chapter 2) and transforms the concept of choice into a tool to make behaviour understandable, rather than a tool to forcibly compress behaviour into the confines of a small sense of rationality. The central theme of this approach to behaviour formation is to identify and describe how and why people decide and behave in the way they do: which processes are involved, what are the contents of their considerations, and how are these related to the social context and the individual life course.

Lastly, the link between social, developmental and behavioural backgrounds on the one hand, and the (biological) outcomes of fertility on the other, is represented in the framework by incorporating a model of intermediate fertility determinants as derived from the work of Davis and Blake (1956) and Bongaarts (1978). The function of this conceptualisation of intermediate determinants lies in its ability to identify and structure those choice considerations that are relevant to the extent that they actually impinge on the physiological processes of conception, pregnancy and childbirth.

Although the different concepts appearing in the framework acquire a certain degree of coherence due to their specific elaboration in terms of an interpretive and information-oriented perspective, they still reflect their theoretical origins. Some of the concepts (such as the developmental-psychological perspective on the life course, learning processes, choice processes and heuristics) have been introduced from neighbouring disciplines, while others - in particular the notion of intermediate determinants (Bongaarts 1978, Davis and Blake 1956) - originate from within demography itself. Others again may concern theoretical constructs developed in other disciplines but already applied to the field of demography. For instance, the role of life course development in the model mirrors Easterlin’s hypothesis (Easterlin 1978b, 1980). The choice perspective on individual behaviour retains some links with psychological decision making approaches applied to fertility, in particular with attitudinal and value-expectancy approaches (e.g. Bagozzi and Van Loo 1991, Bulatao 1981, De Jong and Fawcett
1981, Fawcett 1972). Some of the aspects of choice (locus of control, decision styles, dynamic choice considerations, choice as a process) have been addressed in occasional publications (cf. Bulatao 1984, Fawcett 1991, Hollerbach 1983, Hull 1983, Namboodiri 1983), but never in a coherent way as in this study. The institutional approach suggested in the model is in line with a recent branch of demographic theory headed by Greenhalgh and McNicoll, and which traces its origins to anthropology and institutional economics (e.g. Greenhalgh 1995b, McNicoll 1994). However, its conceptualisation is taken a step further, thereby taking up some of the threads left dangling in the original article by McNicoll (1980) and extensively relying on cognitive fields within economics, anthropology and sociology (e.g. D’Andrade 1995, Burns and Flam 1987, Giddens 1984, North 1994, Nelson and Winter 1982). Lastly, the (renewed) search for some theoretical content of diffusion of fertility-related behaviour and considerations (cf. Bongaarts and Watkins 1996, McNicoll 1992, Pollak and Watkins 1993) may be met by the mechanisms of social learning that are introduced and developed in this study.

9.3. Methodological issues

The model of fertility represents not a formal theory as much as an interpretive framework. In this respect, it constitutes a rather foreign element among the standard, quantitatively-oriented approaches in demography. Given the origins of many of the model’s components, there might be a good chance to develop those concepts into formalised approaches, if desired. But the very aim of this study (to acquire a thorough understanding of reproductive behaviour and to comprehend the meaning of the constituent factors and processes) cannot easily be realised by the standard, survey-like methodologies and quantitative analyses. A more interpretive approach is better suited to this task (cf. Greenhalgh 1995a, Lockwood 1995, Obermeyer 1997) and therefore, the application of the model of fertility would firstly rely on qualitative and more holistic methods, such as case studies, in-depth and focus-group interviews, (participant) observation, network research, but also the exploration of local archives, document analysis and historical accounts. This appraisal of qualitative methods by no means rejects the value of quantitative research; it only states that for specific aims, interpretive research methods may be favoured. Ideally, qualitative and quantitative methodology should be complementary and reinforce each other towards a full and representative account of demographic behaviour. Qualitative research yields different information and can provide both an interpretation frame for results from other studies and a guide to collect specific quantitative material (cf. Bongaarts and Watkins, 1996, Knodel 1997, Lockwood 1995). Several research projects have already demonstrated this complementarity and synergy, for example Caldwell et al., (1982b) on demographic change, Eelens et al., (1992) on labour migration, Hutter (1994) on health during pregnancy, Khan et al., (1989) on access to family planning services, and Hull et al., (1988) and Shedlin and Hollerbach (1981) on fertility regulation.

9.4. Evaluation and future perspectives

The main contribution of the interpretive model presented in this book consists of the provision of theoretical depth to the discipline of demography. It does not provide an exhaustive and all-
encompassing theory for demography, nor one for the narrower field of fertility. But it does provide a contribution to the foundations of demographic theory, in terms of both extending the theoretical basis of the discipline and integrating different approaches. In this respect the model of fertility addresses the requirements formulated for social theory (cf. Chapter 2) and enhances several of the shortcomings and lacunas that were identified with respect to the existing theoretical approaches (Chapter 3).

The added value of the fertility framework consists first and foremost of its ability to present in an integrated perspective different concepts that are required to understand how and why reproductive behaviour evolves in terms of starting, spacing and stopping of childbearing, the number of children born or the sex composition of offspring. Although the model definitely adopts a microperspective, it explicitly encompasses both the micro and the macro level as well as the dynamics that are inherent to context and individual behaviour. Moreover, these major concepts are elaborated in a way that emphasises their interactive processes and their meaning vis-à-vis one another. The model provides a interpretive background for research findings by proposing various conceptual elements that enable a comprehensive understanding of reproductive behaviour. Furthermore, the model may direct the research focus itself and it suggests lines along which research activities may proceed. Since the research efforts implied by such a holistic framework involve a very large amount of work and different expertise, the model may well be perceived as the kind of research agenda McNicoll (1992) had in mind to further develop the field of population studies.
Whereas a major function of the model is to unite a number of theoretical perspectives from within and outside demography in order to provide an encompassive approach to fertility, it also contains some important contributions to their further development and application. They provide the conceptual tools to better interpret subjects like life course development or diffusion, and, in particular, fertility decision making and the meaning of the embedding social context.

In combination with and in addition to this contribution to population research, the notions underlying the model can provide a theoretical basis for the design of effective intervention programmes, for instance in the field of family planning or reproductive health. The application of the model for the case of India in Chapter 8 indicated that the specification of the aspects and processes involved in reproductive behaviour can help to direct possible intervention strategies and identify promising points of impact. Its foremost value may be situated in its ability to locate, from an individual and subjective point of view, the problems people encounter to attain a desired reproductive outcome in terms of health and number and timing of children. These boil down to inadequate knowledge about and (perceived) control over fertility and fertility-related behaviour; insufficient and non-client oriented supply of services and facilities, both in terms of methods and treatment, as well as in terms of information and messages conveyed. An interpretation according to the conceptual model identified the sources of these problems in terms of the impact of the institutional context on the meaning of children and fertility, on gender relations, on the status of women over the life course as well as on the information and behavioural options available to people to regulate fertility in agreement with their own needs. Such analysis may further indicate which information and services, from which sources, and through which channels to which audience a family planning and health programme should operate to improve people’s opportunities in this respect. In view of this, the theoretical reasons for employing an individual perspective to the study of fertility are backed-up by a functional consideration and, taking into account the central position assigned to individual men and women in the ICPD Programme of Action, a normative motivation as well.

Another important feature of the model is its general applicability. The model’s formulation is content-free and its concepts and processes are considered to have a universal validity, even though some will be more relevant in one setting than in another. The model provides a general framework identifying and situating these various concepts and processes; their specific contents will depend on situational analysis. In this way it is suitable for the study of fertility in, for instance both Western and non-Western settings. There is no reason to question the relevance of the concepts of social institutions or even rationality and choice as defined in the broad sense, although their specific form and contents will vary over time and place (cf. Blake 1994, Greenhalgh 1995b, McNicoll 1992, Ní Bhrolcháin 1993). Accordingly, the model explicitly defines individual fertility behaviour as context-dependent, but it provides a general perspective for this dependency by introducing context as a variable and a subject of examination, rather than as a given (cf. Hammel 1990, p. 455). In this respect, the model provides the conceptual tools to \textit{(in Greenhalgh’s terms) “situate fertility, that is, to show how it makes sense given the sociocultural and political economic context in which it is embedded”} (Greenhalgh 1995b, p. 17).

The only part of the framework that is not exactly content-free is the incorporated model of intermediate fertility determinants, but its inherent physiology may be considered to be an
objective representation of fertility. The incorporation of these determinants adjusts the general model to the specific study of reproductive behaviour. If this part is omitted or modified, the model is in principle applicable to other demographic behaviour as well. In this perspective it can be considered a general foundation of demography.

Whereas many of original theories comprised in the model supported quantifiable measurement, the related concepts appearing in the model of fertility have a more interpretive character. A major issue for future research remains, therefore, the (renewed) operationalisation and formalisation of the theoretical approaches represented by the framework. At this time, however, the interpretive nature of the framework presents a plea to complement the standard and strongly quantitative approaches in demography with ones that are located towards the end of the continuum between quantitative and qualitative methodology. Especially in view of the aim to understand the complexities of reproductive behaviour, qualitative methods may be the most valuable way to acquire the meaning and role of choice, life course development and context (Obermeyer 1997, Caldwell 1988). In this respect, the model fulfils the purpose it was developed for in the first place: a contribution to the theoretical foundation of demography for the interpretation and understanding of fertility.