Chapter 6. Time and change

6.1. Introduction

Many fields of science, human and natural science, identify structure and process as interdependent aspects of their subject matter. Process approaches are even dominant in some disciplines, as in thermodynamics and, with respect to the development of individual organisms, or that on an evolutionary scale, in biology. Social and behavioural sciences increasingly recognise that understanding the subjects of study is at least partly situated in the specific histories borne by the phenomena under review. Whether these phenomena are social systems and institutions or individual choice and behaviour, the disciplines concerned show more and more interest in the processes from which they evolved. Although the meaning of ‘process’ in various disciplines and subdisciplines is quite different, and is differently associated with concepts like change, development, evolution or history, it has one consideration in common: the element of time. Whereas time figures prominently in the study of population and population change, the general understanding is a rather mechanical one; usually unattached to the social and behavioural processes underlying population change.

A main purpose of this study, and the principal aim of this chapter, is to replace the static understanding of fertility with a dynamic approach by adding an element of time. The addition of time is not achieved by inserting another basic conceptual component to the theoretical framework, but rather, by extending the framework with another dimension. In such a dynamic perspective, the principal elements of context and choice are allowed to evolve in time. To some extent a dynamic representation of choice and context is already apparent in the interpretation of these concepts in the previous chapter. At the contextual level, the reciprocal influence of person and environment contains one source of social change. At the micro level, the notions of procedural rationality and stages of decision making define choice as a process. Through learning, choice and behaviour are also linked to processes evolving at higher levels, like cumulating experiences in a specific life domain, the life course as a whole, or changes occurring in the broader social context.

This chapter deals with the theoretical viewpoints on such time-related backgrounds. The notion of time itself is addressed in the following part of this chapter, since its conceptual complexity inhibits a simple understanding of its role in social and behavioural science. Section 6.2.1 specifies a dynamic interpretation of time with the essence of development. Subsequent sections elaborate on different dimensions of time (Section 6.2.2) and the meaning of age (Section 6.2.3), and consider the interrelatedness of different time dimensions (Section 6.2.4). Section 6.3 elaborates the life course approach which provides an appropriate conceptual framework for the introduction of dynamics in the study of individual behaviour. Rather than a theory in itself, it is an organising framework which orders stability and changes in facets of human behaviour and which allows reproductive behaviour to be situated within the entire area of human life. A more substantive interpretation of life course coherence is the subject of Section 6.4. Here, several development theories are briefly reviewed in order to deduce an appropriate understanding of the mechanisms of behavioural change during the life course. In particular, social learning perspectives are stressed, since these enable personal considerations and choice to be embedded in the context of both the individual life course and the broader (institutional) environment.
The concluding Section 6.5 summarises the main ideas and provides the connection to the subsequent chapter that provides the synthesis of the various concepts identified in this study.

6.2. Time and change in human sciences

6.2.1. Static and dynamic approaches

Static and dynamic approaches adopt a fundamentally different understanding of their subject matter. Static views focus on structures and outcomes and describe their subject matter in terms of time-frozen states of being. Dynamic views emphasise that structures and outcomes evolve from processes that extend over time and describe a subject in terms of processes of becoming.

Both static and dynamic approaches may apply notions of time, but in a different meaning. The connotation of the term ‘time’ refers to the meaning of ‘location in time’ but can also contain the sense of ‘subject to change’. Static views apply time in the first connotation, usually indicated by ‘physical’, ‘objective’ or ‘Newtonian’ time. Time is only a parameter, organising events in neutral terms of ‘earlier than’, ‘simultaneously with’ or ‘later than’ another, but unaffected by the transformation that it monitors (De Gans 1993, Prigogine 1980).

Descriptions relying on such a static approach adhere to the implicated assumption that history doesn’t matter and that past and future play the same role. Dynamic or ‘process’ approaches, on the other hand, rely on the second connotation of time. In this sense, there is a strong contiguity between the concept of time and those of development and evolution. In this ‘real’ or ‘subjective’ conception, time can be apprehended as a measure of change: a flow of events which “… would not be a flow in time; rather, it is or constitutes time” (O’Driscoll and Rizzo 1985, p. 60, their emphasis, cf. Bourdieu and Nice 1977). The aspect that basically distinguishes this notion of time from physical time is the understanding of irreversibility or path-dependency of the processes described. The functional space of conditions and constraints for further development is not invariant as in a static view, but changes over time. This implies that events crucially depend on earlier stages in the process. O’Driscoll and Rizzo, two institutional economists, translate the general message of path-dependency into a behavioural perspective:

“The individual’s experience of today’s events itself makes tomorrow’s perceptions of events different than it otherwise should be. As an individual adds to the stock of his experience, his perspective changes and so both the present and the future are affected by the past flow of events” (O’Driscoll and Rizzo 1985, p. 3).

Static and dynamic approaches are not equally applicable to all subjects of scientific inquiry. Prigogine’s (1980) study of time in the physical sciences illustrates the use of notions of time in different fields of interest. A static notion of time is incorporated into theoretical structures such as classical or quantum mechanics. Time, here, is associated with motion, but this concerns “… a motion unrelated to time or, more strangely, a motion which proceeds in an intemporal time ) a notion as paradoxical as that of a change without a change” (Prigogine 1980, p. xii). Thermodynamics, on the other hand, applies a dynamic conception, as time is related to irreversible processes and ‘progressive’ phenomena. Similarly, evolution theory in biology, as well as analyses of the development of individual organisms, understand ‘being’
from the time-oriented processes of ‘becoming’.

Given the subject matter of social and behavioural sciences, a static notion of time is insufficient (De Gans 1993, O’Driscoll and Rizzo 1985; see also Kellerman 1989). Social institutions have a history, people have a past and a memory, and they behave on the basis of anticipations of future states. This history, past and future develop continuously and provide different conditions for every new event. Institutional functions and arrangements, or individual behaviours often cannot be fully understood by relating them to present conditions only. They also depend on their developmental processes of becoming, which involves the present, the past and a future.

There is increasing recognition of such dynamic approaches in the human sciences. In many fields new theoretical concepts and orientations have emerged which comprise a process perspective and add an element of time to the analysis of social and behavioural phenomena: Nelson and Winter’s (1982) ‘evolutionary theory’ of economic change, the related idea of ‘economics as a process’ in Langlois’s (1986a) institutional economics, ‘path-dependency’ in social institutions and macrosocial structures (e.g. Arthur et al., 1996), Giddens’ (1984) notion of ‘structuration’ that tries to bridge the gap between structure and process in sociology, ‘modes of temporalisation’ that account for the context-shaping actions of agents in an anthropological interpretation of time (Munn 1992), ‘sequential decision making’ in the study of fertility behaviour (Namboobiri 1983), Bulatao and Fawcett 1981, Hollerbach 1983), ‘procedural rationality’ in choice theory (H.A. Simon 1979a), or Levinson’s ‘evolving life structure’ in developmental psychology (e.g. Levinson and Gooden 1985). Moreover, life course development has emerged as a new multidisciplinary orientation in the human sciences. Without doubt, the roots of such perspectives lie further back in scientific history, but the increased attention for dynamic approaches can be read as a paradigm shift in the social sciences. Although in demography trends towards dynamic approaches are visible (Crimmins 1993), Willekens observes that as yet the theoretical standards of demography show no signs of such a paradigm shift (Willekens 1990b). He concludes that a process approach is a major requirement for improvement of both demographic forecasting (Willekens 1990a, 1992) and population policies (Willekens 1990b). The quintessence of his reading is shared by others outside demography. North, for instance, is critical of mainstream neoclassical theory for being static, unable to acquire understanding of the change of economies, and therefore unable to prescribe policies for economic development (North 1994, p. 359). In Sugarman’s (1986) behaviour intervention strategies, the process approach is encountered at the individual level in the sense of life-span development. Effective intervention is possible because interventions can directly aim at the ontogenese of processes or on processes while they are under way, thereby influencing further development in a preferred direction.

The point made here is that scientific insight into social or behavioural phenomena) and practical applications of this understanding) improve if conceptual frameworks are transformed into dynamic frameworks. In a dynamic perspective, the conceptual elements are supposed to move in time. However, a true dynamic interpretation implies not merely the addition of time, but the addition of a dynamic notion of time. In such a dynamic perspective, changes or sequences of events are interpreted as developmental processes, in which outcomes are consequences of earlier conditions and in which these conditions change with time.

6.2.2. Dimensions of time
The processes of interest in social and behavioural sciences are diverse and cannot be measured on one single time scale. The relevant dimensions of time depend on the subject levels involved in the various theoretical concepts and frameworks in the human sciences. Grand historical processes like modernisation or secularisation may require a different measure of time than institutional change. Definitely, their rates of change diverge from the time scales applicable to the individual life course, to various physiological processes, or the development of knowledge and motivation through learning processes. The involved dimensions of time may be apprehended as simultaneously running clocks, but of a different magnitude. They vary in their units of measurement reckoned in intervals between specific time-ordered markers, and in their meaning of what kind of time or change is supposed to be measured. A comprehensive understanding of behaviour distinguishes processes at several conceptual levels that operate in different dimensions of time.

**Historical time**

The most encompassing notion of time is historical time. It is encountered in the particular configuration of a socio-cultural, economic and physical context as instantaneous exposures of historical development. This historical dimension of time is recognised in many social disciplines. Thus, in human geography, time as an essential constituent of context can be encountered in the concept of time-space (Hägerstrand 1975, Kellerman 1989), a concept which also appears, for instance, in the sociology of Giddens (Giddens 1984). Behavioural differentiation in comparative analysis of regions usually cannot be explained by geo-graphical disparity alone, but must involve the interaction of specific social and sometimes physical transformations in historical time. Comparing regions, then, is in fact comparing histories. Recent trends in anthropology also emphasise the dynamic nature of culture and society. They criticise the mainstream anthropological conception which sacrifices the capacity for change and historical evolution of societies and cultures to the search for their intrinsic coherence in the recorded appearance. The static perspective leads to what Geschiere refers to as ‘modern myths’: the image of local societies as timeless and unchangeable, pigeon-holed and isolated from the course of history (Geschiere 1989, see also Archer 1996, Galjart 1993). Greenhalgh contends that this is exactly the problem of the conceptualisation of culture in demographic research (Greenhalgh 1995b).

The social change that transforms the historical setting over time results from incremental and relatively continuous developments, like population change, emancipation, urbanisation, technological progress and environmental deterioration, or from more abrupt and accidental events like enactment of new legislation, wars, economic crises or natural disasters. The location of people in this historical time perspective and the condition of shared socialisation induced Mannheim’s concepts of *Zeitgeist* and generation (Mannheim 1952) and the role of cohorts in the study of social change (H.A. Becker 1992, Ryder 1965). Changes in demographic behaviour are similarly part of broader societal processes of modernisation and development. Lesthaeghe and Surkyn (1988a), for instance, relate fertility change in the West to the historical specific position of successive cohorts in the general processes of secularisation and individualisation. Demographic transition theories in general rely on such historical time perspectives (Thompson 1929, Notestein 1945, Lesthaeghe and Van de Kaa 1986).

**Institutional time**

If historical time is understood as the development of the encompassing social context in
space, ‘institutional time’ refers to the evolution of the various institutions that make up this social context. The historical and institutional dimensions of time are of course very close, but whereas the concurrent changes in different institutional realms produce the encom-passing trends observed in historical perspective, single institutions (labour markets, caste systems, religions or family systems) develop at their own rates of change. Each single institution has its own separate history and different accelerations and decelerations of change. The strength of adopting an institutional dimension of time is that it perceives behavioural patterns as the effect, in situ, of a unique conjuncture of institutions in their own specific stage of development.

The interpretation that the meaning and existence of social institutions derive from their specific evolvement over time alongside each other, indicates the interdependence in their development. Developments in one institutional realm may provide a changing interpretative framework and consequently, possibly with considerable time lags, produce changes in another. A classic example of the dependence between ideational and economic institutions is Weber’s thesis on Protestantism and capitalism (Weber 1976). Historical materialist interpretations similarly emphasise such links, but situate the sources of change primarily in the economic structure of society (e.g. Taylor 1979).

The role of institutional change has also been recognised in population studies. Demographic transition theories traditionally emphasise the emergence of modern socio-economic institutions (education and health systems, an industrial economy, the urban society) but additionally evolution in cultural and ideational realms have been recognised as an autonomous sources of demographic change (e.g. Lesthaeghe 1983, Lesthaege and Surkyn 1988a, Lesthaege and Wilson 1986, Cleland and Wilson 1987). However, the extent to which the evolution of institutions is the subject of demographic analysis is limited, although there are notable exceptions, particularly in the historical and anthropological work of, for instance Greenhalgh (1988, 1990, 1995a), McNicoll (1980, 1994), the Caldwells and Reddy (1982b, 1983, 1985), Lesthaeghe and Surkyn (1988a) and Schneider and Schneider (1984).

**Social time**

Time is also manifest at a lower conceptual level. People’s lives may be perceived of as consisting of different stages which are represented by distinct rules for relations with other people, responsibilities, duties, and behaviour (H.A. Becker 1989, Elchardus 1984, Hagestad and Neugarten 1985, Kohli 1978). In this perspective, dispositions or behaviour are ascribed to more or less defined periods of life according to some generally agreed standard. The periods or stages are separated by reference points, like events and initiations, which are objectified measures of change in the sense that they are socially constructed realities (Berger and Luckmann 1966, Fry and Keith 1982). Neugarten and Datan (1973) refer to the underlying time dimension of age systems as ‘social time’.

This is a time perspective on human life that is particularly highlighted in sociological and anthropological orientations and has clear affinity to concepts like age norms and the life cycle (as opposed to the life course) (Elchardus 1984, p. 253). The implicit rules related to social age may vary in their degree of formalisation and in the presence of sanctions; they may be abstract or practical, and compliance or non-compliance may be explicit or more

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1 This concept of social time is different from the notion of social time as opposed to ‘private time’, e.g. the time at work or school time at home.
subconscious and internalised. The social structure of human life from birth to death is encountered in expectations about age-related events, about their sequential patterning and about the duration of processes or relationships (Elchardus 1984, Zerubavel 1981). Age-related norms and age-specific behaviour as such do not represent a dynamic time perspective (cf. Bourdieu and Nice 1977); they only do if they recognise that behaviour and expectations are a function of a socially recognised (but sometimes implicit) perception of stages in the process of individual maturation and experiences (Elchardus 1984, p. 254, cf. Sugarman 1986, p. 12).

**Individual time**

The time scale that pertains to the individual life course may be referred to as individual or personal time. Here the theoretical stance on the perception of time clearly refers to an orientation encountered in psychiatry and developmental psychology. It represents a truly dynamic time concept, since life phases, events or dispositions in the present are perceived as instantaneous positions in a life trajectory, in which later outcomes are consequences of earlier conditions, events and experiences in the life course (Mayer and Tuma 1990). Experience, mental and physical capabilities, motivation, status and knowledge are typically aspects that are considered to change during transitions from one stage to another.

Personal development represents a source of understanding that is endogenous to the individual. Stages in life are determined by ‘developmental readiness’ (Erikson 1980) for specific tasks and challenges during the life course and evolve as the consequence of various processes. Havighurst (1972) arranges these processes in three areas: biological processes that determine physical maturation; socialisation processes through which a person learns the expectations of the social environment; and the uniquely emerging personality with its particular desires, aspirations and values (cf. Sugarman 1986, p. 39). Both Erikson and Havighurst acknowledge the prominent role of the social context. But its impact on individual development crucially depends on the intermediate internal reflection on the world, which can be a source of inconsistency between individual and social time.

The biological processes set some broad limits to the stages in the individual life course through the effects of the commencement, maturation, and decline of physical functions. Although achievements of medical and health-related interventions encroach upon the autonomy of biological development, by maintaining, extending and restoring bodily functions, changes in physical abilities remain an important aspect in the timing of stages in the life course (Elchardus 1984, Fry and Keith 1982). Since fertility, morbidity and mortality are closely related to such processes, the underlying biological time dimension is an important aspect in the study of demographic phenomena. With regard to reproductive behaviour for instance, menarche and, to a lesser degree, menopause are major time markers that demarcate a woman’s reproductive span.

**Process time**

While in the general life course, development can be interpreted in terms of the unfolding of the biological, social and psychological aspects, numerous component processes contribute to the exact shape and contents of the life course. Life events that are the milestones or transition points in human lives are themselves outcomes of processes with starting points, durations and changes. Childbirth, for example, is the outcome of conception and pregnancy. Marriage or employment can be the result of search processes. As elaborated in Section 4.3, life events can be viewed as the outcomes of processes of thought and may involve various stages of decision.
making. Each of these elementary processes is associated with a specific dimension of time.

6.2.3. Interrelatedness of dimensions of time

The various dimensions of time may be perceived as clocks that run simultaneously, although on different scales. Sometimes the progression of one dimension is contingent on or related to another. Thus, institutional arrangements like household systems or legislation can be adapted in the wake of changes in other institutional domains, such as a society’s economic organisation. Such institutional development can be deliberate and planned and with clear milestones marking the location of change or less intentional and articulated, as in many other social domains. Since institutional arrangements tend to have built-in constraints against transformations, the coherence between development of different institutions can display considerable time lags and may become evident only in the larger historical perspective.

Social, individual and biological dimensions of time that pertain to behaviour of individuals frequently run synchronously and appear to be highly intertwined (Hareven 1994). Although the various theoretical and analytical perspectives usually emphasise one time scale more than another, their interrelatedness is often acknowledged (e.g. Baltes and Nesselroade 1983, Elchardus, 1984, Elder 1985b, Neugarten and Datan 1973, Filipp and Olbrich 1986, Mayer and Tuma 1990, Sherrod and Brim 1986). Because of the undeniable nature and importance of changes during biological development like birth and death, fecundity, changing motor skills and muscle power, the biological process is often regarded as a kind of baseline development. Many psychological and socio-cultural processes impinge on this biological unfolding and contribute to the patterned sequences of behaviour (cf. Elchardus 1984, Fry and Keith 1982). Many life domains and various stages in the life cycle illustrate this dependency. Retirement or decreasing contribution to local and family economies has much to do with the process of slowing down because of aging. Piaget explicitly connects children’s cognitive development to levels of physical readiness for the encounter with new aspects in the physical and social environment. Psychological readiness for sexual behaviour is assumed to be closely connected with hormonal balances that depend on biological maturation (Udry 1988, Udry et al., 1986). In many societies marriage patterns are closely connected with the onset of fecundity, indicating the dependence of a social time scale on biological development (Chowdhury et al., 1977, Udry and Cliquet 1982, Sandler et al., 1984). The confinement of fertility to a reproductive life stage has important consequences for the time-related structure of people’s life courses and to the emergent population structures and developments.

In general, biological factors place some very broad limits on the timing of individual behaviour and development, but the acknowledgement of the importance of a biological clock in human lives does not impose a strict biological determinism: the exact timing and connotation are largely matters of social and personal achievement (cf. Sugarman 1986). In this respect, the Bongaarts model of proximate determinants of fertility has taught us that although a given physiology over the life span of human beings defines the upper boundaries of reproduction, the importance of biological factors in the explanation of fertility is strongly reduced because
of the impact of other, behavioural, factors. Most of these behavioural factors (marriage, contraceptive use and induced abortion) are clearly related to socio-cultural and individual perspectives on personal development.

These different determining factors have been encountered in the concept of the person as advanced in the Chapter 2. Besides biological factors, it prominently assumed the social embedment and the inherent interpretative capacity of human beings. In the individual perspective of time as well as in the social time perspective as the collective product of individual interpretations) biological developments are assigned a position and a value in the course of life. Thus, while the socially constructed meaning of childhood usually incorporates the state of physical development, it also depends on the interpretation of personal maturation, which may differ considerably among communities, societies and historical times (e.g. Ariès 1962, UNICEF 1991). For instance, nowadays in many countries normal criminal law is only applied to children who are considered to have reached the (socially agreed) age of discretion. Considerations with regard to minimum age for marriage also reflect such social constructs and can be encountered in official legislation or in a culturally shared understanding of proper relations between partners and within families. Although the biological capacity for bearing children, as indicated by menarche, can be involved in such considerations, often (and increasingly) other qualifications define the acceptable lower age limits of marriage: a person’s capacity to support or maintain which enables him or her to take care of others in a family relationship; a presumed level of maturity and responsibility; or requirements of educational attainment. The study of Caldwell et al., in south India elevates the perspective to the level of historical time by relating changes in marriage patterns to changing concepts of childhood and maturity:

[previously,] “families tended to prefer very young daughters-in-law who were not old enough to have become wilful. Now, many are apprehensive of their sons marrying girls who have not attained menarche, or who have only just done so, on the grounds that they are too immature to fill adequately such roles as wife, mother, or even daughter-in-law”
(Caldwell et al., 1982a, p. 698).

Although the social time scale implied by the meaning of minimum marriage age can differ from one society to another, even within a society it can be challenged by alternative interpretations of personal readiness for marriage. For instance, in some areas in India the marriage law enacted in 1979 that raised the minimum age for marriage for girls to eighteen, is still frequently circumvented by the custom of child marriage. This may be interpreted as a conflict between alternative institutional time scales.

In the developmental perspective of Havighurst (1972), the individual time dimension explicitly retains a connection to biological time and implicitly to the social interpretation of time in the life course. In fact, few developmental theorists, with the notable exception of Erikson and Havighurst, have paid attention to the social environment’s changing expectations of the person during life course progression, as embodied in the notion of social time. Since individuals’ experiences and interpretations importantly anchor in the structure of the social environment, which itself is also subject to change, individual development over the life course may to some extent be the effect of the person’s drift on the currents of institutional and historical change. Here, the life course of an individual is the span of intersection between different dimensions of time, personal time, social time and institutional time (cf. Harris 1987).
6.2.4. A note on age

In behavioural studies, and particularly in demography, age is an important variable. It refers to a time scale that is appropriate for the analysis of the distribution of specific behaviours and events over life. Age is universally applied as a major standard to judge the timing of behaviour and to classify situations and life events in some temporal order. As such it is a key dimension in the organisation of individual life courses and consequently in the organisation of the structure of society. Together with gender it is, in fact, the only universal point of reference to ascribe status. The recognition of age as a structuring principle of society is a longstanding common notion among anthropological and sociological researchers studying age systems and status transitions in various societies (e.g. Eisenstadt 1956, Van Gennep 1960, Gluckman 1962, Lowie 1949, Merker 1910, M.W. Riley et al., 1972). In developmental psychology and life course studies, the concept of age is generally the main criterion for anchoring the changes over the lives of individuals. It must be clear, however, that chronological age is not a determinant of individual behaviour. It is not the intrinsic meaning of age itself (as the time passed since birth) that brings certain specific life course patterns. Age is not an explanation of behaviour or a cause of change; it is in fact nothing more than the passage of time and a marker of stages in a sequence as such only a shorthand term for the underlying formative processes (Bandura 1986, p. 81, Sugarman 1986, p. 51). Age and age-related behaviour and change remain, to quote Prigogine’s interpretation, static interpretations of time unless such underlying developmental processes are referred to. The context represented by individuals’ histories is required to assess the functional timing of events, and the sequence and duration of states over their lives (e.g. Bourdieu and Nice 1977, Elchardus 1984, Hagestad and Neugarten 1985, Hareven 1982, Neugarten and Datan 1973, Zerubavel 1981). Often specific events and occurrences or the duration in a position provide the relevant points of reference for life development, but not chronological age as such (Filipp and Olbrich 1986, Mayer and Tuma 1990). These events are related to a large variety of elementary processes (among which biological processes) that shape the structure of life stages. Thus, in most societies, fertility and parenthood occur after the transition into marriage; in some socio-cultural locations the timing of marriage depends on the occurrence of menarche (Chowdhury et al., 1977, Udry and Cliquet 1982, Sandler et al., 1984), in other on the termination of the educational career (Blossfeld and Huinink 1991); conversely, the termination of the educational career can also depend on the entry into marriage (Jain and Nag 1985). The preparedness for new life stages can also build up by gradual changes. The mere elapse of time, the continuous exposure to new information and cumulative experiences change the perspective from which the world is seen (O’Driscoll and Rizzo 1985, p. 62).

It is not always occurrences or built-up experiences that prompt subsequent behaviour. People’s interpretative capacity involves the ability to anticipate events and status positions, which may just as easily provoke action. Here, conditions for behaviour are located in the future and the relevant measure is the ‘time left’ rather than duration in a position (Kohli 1978, p. 26). Cyntrybaum and Crites (1989), who apply a dynamic perspective to career development, mention the principle that under circumstances time may be viewed in terms of an outstanding period rather than time from inception. With regard to the fertility career, the study by Suchindran and Koo (1992) supports the suggestion that one of the reproductive goals of twentieth-century American women has been to avoid having children when they are
‘too old’. The variety of tactics to produce this result included all kinds of combinations of age at first birth, child-spacing and parity progression ratios of lower and higher birth orders. Ware (1979) found that in the United States and Australia women want to stop childbearing well before the onset of infecundity (see also Rindfuss and Bumpass 1978).

In all these perspectives the coherence of life over time does not derive from the static chronological concept of age, but from a path-dependent representation of ageing. Behaviour is interpreted as a function, not of age, but of experience (past or anticipated), which demarcates people’s capacities, options and motivations at certain stages of their life.

6.2.5. Time in a microlevel perspective

The different dimensions of time that appear to be relevant call for a dynamic framework with a multi-time perspective. This is, in fact, a logical consequence of the theoretical requirements as advanced in Chapter 2. The assertion that both choice and context are key elements in demographic theory, combined with the assessed need for a dynamic perspective prompts a framework in which elements at micro and macro levels are allowed to change over time (Section 2.4.2). The required conceptual framework could be described as a multi-level and multi-time framework (Filipp and Olbrich 1986, Mayer and Tuma 1990, Runyan 1982). Since this study takes a microlevel approach as its principal point of departure, the individual dimension of time, which positions persons’ decisions in their life courses, occupies a central position. Its incorporation into the conceptual framework allows a dynamic perception of choices and behaviour, that is, as outcomes of a developmental process. The time dimension pertaining to the contextual level in the conceptual framework referring to institutional change is of additional relevance and has been dealt with in Chapter 5. The past effects of contextual evolution are assumed to largely operate through the impact on the individual life course at the intersection of individual and institutional histories. Given the framework’s micro perspective and the degree of contextual change already represented by the interpretation of the agent-context interaction (Chapter 5), the subsequent parts of this chapter will concentrate on time and change at the individual level.

6.3. The life course as a design for behavioural structure

6.3.1. Introduction

Demographic behaviour and underlying individual choice can gain in explanatory power if their role is perceived against the background of the changing conditions over the life time. A life course approach provides an appropriate interpretation of such a dynamic perspective on individual behaviour. Its main strength is the organisation of relevant events and considerations in a time and development framework, thereby facilitating attempts to understand the coherence of behavioural aspects (cf. Abeles 1987). It should be noted, however, that life course analysis cannot take the place of behavioural theory, as by itself it does not provide any substantive assumptions with regard to individual behaviour formation, causal interpretation or the mechanisms that relate processes and events to one another. Instead, the notion of the life course is perceived as an organising principle in the study of
behaviour.

Although the extensive attention for the life course in various social disciplines is a relatively recent phenomenon, it has already found its place in the academic establishment. The acquisition of this prominent place does not conceal the fact that the application of life course principles is not without internal dispute, conceptualised differently in disciplines concerned with time-related human behaviour. However, the life course has been widely acknowledged as a concept with an integrative capacity and it repeatedly succeeds in bringing together scientists in a multidisciplinary encounter on some relevant subject (e.g. Abeles 1987, Binstock and Shanás 1990, Hareven and Adams 1982, M.W. Riley *et al*., 1982, Rodin *et al*., 1990). The life course approach acknowledges the limitations of conventional individual survey data, which usually reflect a person’s current position on measured items without full consideration of the possibility that this might represent only one stage in a process of development. It has stimulated recent changes in research design towards biographies and longitudinal, follow-up or panel studies that try to capture the dynamic perspective of behaviour. Diverse as the disciplinary approaches might be, most converge around the interpretation that life displays a pattern of stages in some logical ordering. Levinson and associates capture this idea of a timed structure of individual lives with the formulation that “[T]he life cycle is an organic whole and each period contains all the others” (Levinson *et al*., 1978, p. 321; see also Hareven 1982, Ryder 1965). Life course analysis provides an excellent tool to discover these patterns of change, but one of its limitations is that it has to rely on other theoretical perspectives to interpret the mechanisms underlying these changes and patterns. It is mainly here that discipline-specific understandings of the life course concept diverge. With respect to demographic research, very few studies using a life course approach explore in depth such principles that provide the logic for ordering. A subsequent section (Section 6.4) conceives of a number of such behavioural mechanisms.

The potential of a life course approach is augmented if it differentiates life into relevant component processes or careers. The advancement along various career lines and their mutual influence (interdependency) is an important study field for the understanding of individual behaviour and individual development over the life course (cf. Heise 1990). Willekens (1991) refers to a principle that organises these careers in time and mentions several principles that have been suggested, like a biological clock, normative perception or cognitive development. This illustrates that the life course approach, and equally the concept of careers, can be related to the social and psychological as well as the biological notions of time and development to fill out the picture of human life (Arthur *et al*., 1989, Sherrod and Brim 1986, Sørensen *et al*., 1986, Filipp and Olbrich 1986). The dynamic perspective on individual behaviour elaborated here involves the diachronic or longitudinal meaning of the life course (Section 6.3.2), as well as its synchronic or cross-sectional connotation (Section 6.3.3). Following these elaborations of the life course perspective, Section 6.3.4 continues by addressing the organising potential of this approach to human behaviour. Section 6.3.5 concludes with an application of the life course perspective to the specifically demographic area of fertility and family planning.
6.3.2. Diachronic aspects of the life course

Life as a dynamic process

Apart from conceptualisation at a very high level of generality, it has been difficult to identify universally valid criteria for identifying phases in the life course. Representatives of structural perspectives in developmental psychology, such as Erikson, Bühler, Havighurst and Levinson, attempted to identify stages of development according to different criteria (see Section 6.4.2), but each version lacks a transcultural and transhistorical generality with regard to the transition into, and duration and substance of the specified stages. Particularly in Western societies, the social prescription of life patterns is less and less of a help for explaining and predicting behaviour associated with stages of individual development. Individual autonomy and available information about and access to different lifestyles tends to repress normative prescriptions of life patterns. The process of individualisation involves the principle that capabilities ascribed to a person and expectations about his or her behaviour depend less on the ascribed social status and more on individually acquired skills and personality traits, which allows more freedom for directing one’s life. The resulting increased differentiation and reversibility of trajectories in different spheres of life relax the supposed invariant sequence of phases through which individuals pass during the life course (Elchardus 1984, Featherman 1986; see also Lesthaeghe and Verleye 1992). For instance, Ní Bhrolcháin (1986a and 1986b) finds various strategies with regard to timing and sequencing of work and fertility that are employed by women in order to achieve an optimal investment. And Rindfuss concludes that life course transitions that deviate from the expected or preferred sequences in the fields of work, schooling and the family (like marital dissolution and extra-marital births) are the rule, rather than the exception for young people in the United States (Rindfuss 1991, Rindfuss et al., 1987). Nevertheless, the general conceptual notion of stages and development, as articulated in psychology, has had an important impact on behavioural theory and especially on the development of the life course approach. It puts forward the idea of behaviour as a process which, moreover, is not represented by a monotonous flow, but by a succession of phases that contain the implication of a propensity for certain behaviour. The idea that individual behaviour is a function of a position in the life course remains valid despite the fact that at the aggregate level it might be difficult to discover regularities. A greater variability of life patterns rather suggests that certain life course positions allow a greater range of alternative behaviours, that certain behaviour can be a function of a greater number of life course positions, and that an individual judgment of development is more important than a social interpretation.

Apart from attempts to identify the grand underlying stages of personal development, attention can also be pointed at specific life events, such as divorce, menarche, childbirth, graduation or retirement, which may invoke major adjustments of one’s frame of reference. Life events are likely to reformulate a person’s salient set of information about restrictions, options, responsibilities, tasks, efficacy and motivation for further behaviour, in short, a person’s reorientation on the world. Therefore, they signify possible new life phases or turning points that bear important consequences for subsequent decision making (Hollerbach 1983, Levinson et al., 1978, Willekens 1991, Sherrod and Brim 1986, Sugarman 1986). Such new phases may be attained after a transition period in which a person reasserts his or her position in life. These periods contribute to the plasticity of human lives, as they allow old beliefs to be abandoned and new ones to be accepted. Goode’s study on marital dissolution, for instance, describes the period before actual separation by mentioning disenchantment, consideration of
divorce and adjustments within the framework of marriage (Goode 1956). M.W. Riley et al.,
(1972) refer in this respect to the function of desocialisation and resocialisation (see also Kohli
1978) which is a typically sociological perspective. The function anthropologists ascribe to
rites of passage is that of communicating to the self and others that at a recognisable point in
time a person is stripped of earlier statuses and is moved into statuses of the next phase, which
imply different rights, duties and responsibilities (Fry and Keith 1982, Hagestad and Neugarten
1985, Norbeck 1974, Trice and Morand 1989). Adolescence is a period of transition, where
individuals try to synthesise childhood identities, pressing social expectations and challenging
physiological changes in what Erikson (1980) calls ‘the quest for identity’. This transition
period is particularly eminent because it is widely held that at the completion of this period
basic life orientations have sunk in.
The perspective of life as an evolving process establishes a causal relation over time as
personal experiences and living conditions in the earlier phases of life exert their influence on
behaviour at later ages and on the perception of the future. This strong assumption is
weakened by the recognition that experiences later in life may lead to a reinterpretation of
earlier events (Runyan 1982; see also Rosenmayr 1982, Willekens 1991), or that novel
behaviour-change processes with little continuity or connection to earlier developments may
emerge at many points in the life span (Baltes and Nesselroade 1983, Featherman 1986,
Manting 1994).

**Stability versus plasticity**
The discussion touched on here refers to the interpretation of the impact of imprints in
childhood and adolescence versus those of positions later in life; cohort versus period effects;
or stability versus plasticity of human life. Many studies on human behaviour can be found that
support one of the basic theses and counter the other, or just allow the other as a moderate
modifier.
Some perspectives within psychology (particularly psycho-analysis) and sociology accentuate
the importance of early life experiences and subsequent stabilisation. This socialisation thesis
postulates that impressions and experiences in a person’s pre-adult life tend to consolidate in a
relatively stable world view. Mannheim states that

“even if the rest of one’s life consisted in one long process of negation and destruction of
[this] natural world view acquired in youth, the determining influence of these early
impressions would still be predominant” (Mannheim 1952, p. 298).

In this perspective, social change is importantly produced by replacement of cohorts that are
socialised under the same general conditions. Ryder (1965) and Inglehart (1977, 1990) are
major proponents of this view. In demography, the Easterlin hypothesis is based on this
sociological notion of cohort and attitude formation, as it relates the material aspirations of
young adults to the period of adolescent development (Easterlin 1978b). Lesthaeghe and
associates (Lesthaeghe and Meekers 1986, Lesthaeghe and Moors 1992, Lesthaeghe and
Surkyn 1988a) provide empirical support for the socialisation hypothesis with regard to
attitudes towards religiousness and individualism. H.A. Becker (1989) and Alwin (1992) also
share the basic idea, but they differ on the assumed stability in adulthood. H.A. Becker
considers socialisation after the formative period in early life to be possible in situations where
a person is confronted with a different social context and has to develop new behaviour.
Alwin’s data on aspects of political ideation support the idea of attitude stability in later phases

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of life. However, he warns against a generalisation of the stability hypothesis to other social attitude variables on the basis of these results only. The various socialisation studies differ, moreover, with regard to the length of the formative period. Some situate the end of the formative period around age twenty, while others extend it well into adulthood, as only after age 35 does a stabilisation effect occur. Others have challenged the socialisation-stabilisation thesis. Van Rijsselt (1992), for instance, finds no confirmation for the stability hypothesis as he did not find that value orientations tend to stabilise with age. Sherrod and Brim concluded from a volume on multidisciplinary perspectives on the life course that development of individual orientations is not limited to particular periods of life, and that plasticity is present throughout the life course (Sherrod and Brim 1986; see also Abeles 1987, Bandura 1982, Baltes and Goulet 1970, De Jong-Gierveld and Beekink 1989, Kohli 1978). With respect to demographic behaviour, Ní Bhrolcháin disputes the role of cohort effects (Ní Bhrolcháin 1992). Although she recognises the evidence of cohort mortality, which finds convincing foundation in epidemiological and medical research (e.g. Barker 1992, see also Caselli 1990), she is unable to find similar evidence for cohort effects on fertility. Wright tested the Easterlin hypothesis for sixteen European countries but failed to find a statistically significant correlation between relative cohort size and fertility (Wright 1989). Both Ní Bhrolcháin and Wright fail, however, to acknowledge appropriately the full range of possible mechanisms through which cohort effects may be manifested. Neither do they recognise sufficiently to what extent other variables might differentiate the consequences. Elder, for instance, links the economic circumstances during the depression in the thirties to behaviour and lifestyles in adulthood (Elder 1974, Elder and Liker 1982, see also Harris 1987). The effect on women who experienced the impact of the crisis is not uniformly distributed; it tends to be related to socio-economic strata, as it depended on the intensity of the experience (in terms of value lost); but it is also related to how these women were emotionally, socially and intellectually equipped to cope with such a situation of hardship. Miller reports the importance of experience during childhood and adolescence, like personal relationships, transmission of values, or role identification, in determining the motivation for childbearing (W.B. Miller 1992). But he also finds that the development of childbearing motivation is shaped by adult experiences in a number of behaviour domains, and by some relatively stable personality traits.

The conclusion of the argument on the distribution of the time-related sources of socio-psychological determinants of fertility behaviour must be that the jury is still out. A sound judgement may be that attitudes towards fertility during the childbearing period are partly stable value orientations and partly more fleeting attitudes (Lindenberg 1992, p. 287). This signifies that at least the younger ages seem to be very important for the development of attitudes, a fact which may leave its trace in adult behaviour. The orientations towards, for instance, religiousness and individualism, but also risk-seeking versus risk-aversive orientations or family versus working orientations, may be regarded as general dispositions of individuals and as such constitute important factors in the decision making process with respect to fertility behaviour. From the outset of life, and more particularly after the formative years and around the onset of the reproductive career, people have a number of such relatively stable personality characteristics. Such basic preferences and other enduring personal idiosyncrasies (including biological qualities related to fecundity) form the initial endowments of an individual agent. However, the outcome of this choice process depends on more factors than just these very general dispositions. The factors that compose the specificity of the actual choice frame include...
current restrictions and information, self-efficacy and

recently acquired sources of motivation, and anticipations of the future. A life course approach provides a suitable framework to locate these various factors in a developmental perspective, and to organise their longitudinal interrelatedness in life.

6.3.3. Synchronic aspects of the life course: interdependency

Rather than viewing the life course as a monolithic flow, a synchronic perspective considers life as an interaction of developments in different fields of behaviour. This viewpoint highlights the complex of processes that constitute the human life course and defines it in terms of the sequence of interactions between different domains or careers (Filipp and Olbrich 1986, p. 352). The synchronic unfolding of the life course into domains such as marriage, fertility, education, health and employment concerns the development of various individual attributes: marital status, parity, educational level, health and employment status. The chain of events and experiences that changes the value of such attributes makes up careers; for example, marital, fertility, educational, health and employment careers (e.g. Bulatao and Fawcett 1981, Elder 1985b, Hagestad and Neugarten 1985, Heise 1990, K.R. Smith 1985, Willekens 1991). The processes related to these constituent careers are characterised by a distinctive time scale and a specific onset, advancement and termination. What needs to be explained is their occurrence and their interdependency in a life course perspective.

The notion and interdependency of careers have been worked out conceptually by Heise (1990) and Willekens (1988, 1991). At each point in time a person is characterised by a particular combination of attributes. A life stage can be distinguished if a certain combination of attribute values lasts for a period of time and is demarcated from adjacent periods in terms of different behavioural options or developmental readiness. What the most relevant careers are to characterise a person at a certain moment depends on the subject of study, but also on the meaning of the component processes in the specific context. In the case of fertility studies, parity is a primary attribute, but the childbearing stage is co-identified by the value of attributes in other careers. Thus, in a perspective of social time, a certain position in the educational career is sometimes considered conditional for childbearing; in many societies fertility is strongly associated with the marital career, whereas in others marital status is only of secondary importance.

The interdependence of careers is often manifest through the allocation of scarce resources (Elder 1985b, Willekens 1991) or through social and cognitive interpretation (Elchardus 1984, Levinson et al., 1978). Willekens (1991) distinguishes three different dependency types: event, status and resource dependence. For instance, the reproductive career can be called event dependent on menarche and sterilisation, as the ability to have a child is influenced positively and negatively respectively by these events. Status dependence denotes a situation where the probability of advancement in one career depends on the value an attribute has attained in another. Thus the fertility career and the health career can be said to be status dependent on the marital career as, generally, the chance of having a child is higher and that of dying is (apparently) lower within marriage (Hu and Goldman 1990, see also Joung et al., 1993). Two
careers are resource dependent if they share the same resources. For example, as marriage and moving house may involve large financial investments, they might be postponed in order to save enough money or they might be planned sequentially to spread expenditure. Equally, working, reproductive, educational and sports careers lay similar claims on time and energy resources and therefore need careful planning or additional facilitators.

Career dependency usually refers to careers of a single person, but can also relate to careers of different individuals. Hagestad and Neugarten (1985) assert that such interpersonal career dependencies, or to use their term, co-biographies, usually occur within the family. Common examples of such dual careers are moving house because of a partner’s new job; or children who move when their parents do. In large parts of Africa and Asia, the fertility career of mothers is expected to be concluded when their daughters start theirs (Caldwell and Caldwell 1981, Nag 1983, Niehof 1985, Srinivasan 1989, Ware 1979). Or, the proper period for sexual abstinence after childbirth is sometimes equated with certain stages in the development of that child, for instance when the child starts crawling, sits up, starts walking or cuts its teeth (Caldwell and Caldwell 1981, Davis and Blake 1956, Schoenmaeckers et al., 1981).

6.3.4. Life domains and the structure of the life course

An important issue in the life course orientation is how various composite processes are organised and establish coherence across life domains and over life time. In accordance with Willekens (1991), it is assumed that careers are organised hierarchically. The directing forces of this organisation and the determination of onset, advancement and termination of the underlying processes, are partly within the scope of personal faculty and partly outside it, in the realm of social convention or biological ruling. Some careers (fertility, education, migration, marriage careers), at least in some settings and in some stages of life, are characterised by relatively large individual control. Other careers (e.g. the health career), or the same careers in different settings (e.g. marriage under conditions of arranged marriage practices) or in different life stages (e.g. education during school age, fertility after menopause) involve fewer opportunities for individual regulation. Usually, only one or two domains receive the largest share of one’s time and energy, or have priority in the sense that they significantly influence the choices and events in other domains of life. Transitional periods in the life course enable people to reformulate their orientation towards self and life and can result in the creation of a new hierarchy of personal careers or spheres of life (Hareven 1994, Levinson and Gooden 1985, Levinson et al., 1978, Oppenheimer 1974, Willekens 1991). In adult life, family and occupation are most likely to be the central domains. At younger ages the dominant position is usually occupied by the educational career, although in many settings income-generating activities and household tasks are the primary domains. From a study on the timing and effects of life events, McLanahan and Sørensen (1986) concluded that the meaning of particular events varies over life time. For instance, the loss of a job has one cluster of meanings and implications if it occurs during the pressure of family building, but quite another if it occurs before parenthood (Elder 1985b). Similarly, whereas in some cultural settings pre-marital use of contraceptives (Caldwell and Caldwell 1987), or even mere knowledge about contraception before marriage (Basu 1984) is associated with promiscuity and immorality, after marriage it may be considered in terms of reproductive health, responsible parenthood or family welfare.

The specific needs, options and constraints for career advancement in specific settings and the
socio-cultural interpretation of careers and their interdependence, requires that the study of life course organisation to incorporate the contextual meaning of life domains. The meaning of life domains, and thereby their hierarchical structuring, can importantly be assessed by the significance of the goals they serve for the individual within a specific social context. Careers can be considered as sequences of acts that are instrumental to effectuate these goals. From a Maslowian perspective, the life domains expected to contribute most to the realisation of goals or, at least, to the ones that are most salient to the individual given his or her level of aspiration, will have hierarchical dominance over other life domains. As such, a possible priority of a working career over a fertility career can follow from the economic necessity to secure an income, from the need to attain social status or from the pursuit of self-fulfilment. In non-Western societies, and especially in agrarian settings, the family is typically the central overruling social institution, as it by provides the individual’s prime avenue to land, work, income, status and security (Cleland and Wilson 1987, Davis and Blake 1956, Freedman 1987, Ryder 1983). Therefore, the family constitutes the dominant life domain and careers that initiate or maintain the family (such as the marital and reproductive careers) are the principal careers that structure individual life courses. In Western societies, individuals are members of many relatively independent groups, participate in more differentiated institutions and have many alternatives for personal commitment (Blake 1994, Freedman 1987, Ryder 1983, Mayer and Tuma 1990). Here, the family is no longer the all-encompassing social unit, and the life course tends to evolve relatively more around the social organisation of work rather than the family, although important gender differences can be observed (Kohli 1986, Hagestad and Neugarten 1985, see also e.g. Plath 1983). Nevertheless, the family, primarily the relationships with partners and children, remains a very important life domain and developments in this area are instrumental to the fulfilment of basic goals like affection, belongingness and emotional wellbeing.

6.3.5. A staging approach to fertility and family planning

Demographic studies that adopt a life course perspective commonly record the occurrence of life events, like job shifts, residential moves, change in marital status, births, et cetera. To a much lesser extent they also directly inquire into the specific meaning of these events, or into the reasons and mechanisms that underlie their timing and occurrence. These studies still lack the substantive frame of reference in their attempt to come to a full understanding of patterns and regularities. This concurs with the regular complaints that the available data and the analytical tools of the demographic discipline is not matched by its capacity for substantive interpretation (Freedman 1987, Livi-Bacci 1984a, McNicoll 1992, Schofield and Coleman 1986, Willekens 1992). To perceive the temporal causal relationships, the study of behaviour from a life course perspective should contain more substantive depth than can be obtained from just recording the timing of observed behaviour. Courgeau and Lelièvre (1989), for instance, conclude that their biographical representation of the interaction effects between the timing of life events requires a general foundation of theoretical and causal considerations. The issue here is what Sørensen et al., define as the underlying theme of their volume on multidisciplinary perspectives of human development and the life course: the when, where, and why of change and stability across the life span and the interrelationships across domains and
levels of analysis (Sørensen et al., 1986, p. xvi). Which particular domains are the most significant and which are of secondary importance, remains a problem of substantive interpretation and theoretical conceptualisation, and this cannot be assessed by descriptive statistics alone (e.g. Baltes and Nesselroade 1983, Elchardus 1982, Rindfuss 1991). The meaning of behaviour and various relevant careers and the temporal ordering of the life course depend on the specific cultural and socio-economic context, as well as on more individual characteristics and experiences.

An example of a general life course framework for the study of reproductive behaviour and family planning is provided by Forrest (1988). She defines a woman’s reproductive career in terms of onset, continuation and termination, thereby distinguishing five different stages. Each of these stages can be characterised by specific knowledge, childbearing motivation, contraceptive needs, autonomy, style of decision making, et cetera. A number of ESCAP studies adopted a slightly different staging organisation (e.g. Khan 1987). The five stages suggested by Forrest are:

1. **Menarche to first sexual intercourse.** This stage is characterised by the onset of the ability to bear children. In general, adolescents in this stage require an adequate understanding of the physiological aspects of the reproductive process and the risks of pregnancy. In many cultural settings, there may be opposition to educating young adolescents in this respect. The attainment of fecundity can denote a new status which may even imply the limitation of girls’ exposure to the outside world by withdrawing them from school or work in the fields, in order to guard their chastity or virginity (e.g. George 1994, Jeffery et al., 1988b, Khan and Singh 1987). In some circumstances, menarche may also denote girls’ readiness for marriage or the sign to commence the search for a marriage partner.

2. **Start of sexual relations to marriage.** The general concern in this period is to avoid pregnancies while preserving the reproductive capacity. If premarital sex is socially disapproved of or very infrequent, potential users of contraceptives will often want to avoid extensive preparation and external control in the form of visiting a clinic or doctor (Mosher and Bachrach 1987). Therefore, the greatest demand is for easily accessible, reversible, effective and safe means of preventing births. The knowledge and accessibility of these means is sometimes very limited, and even the possession of knowledge about family planning methods (or reproductive matters in general) before marriage is considered inappropriate (Basu 1984, Hutter 1994, Mathai 1989, World Bank 1991). Such circumstances are sometimes associated with relatively heavy reliance on abortion (cf. Ajayi et al., 1991, Barker and Rich 1992).

3. **Marriage to first birth.** In many developing countries motivation for immediate childbearing after marriage is high, due to the desire of acquiring status and security, besides establishing emotional bonds. Sometimes it is not the first birth, as much as the birth of the first son that terminates this stage (cf. Mahadevan and Jayasree 1989). The decision making power of young women with respect to pregnancy and contraceptive use can be very limited before they have proven their reproductive capacity (e.g. Koenig and Foo 1992, Khan and Singh 1987). Social pressure and individual motivation with respect to childbearing are in such cases often closely intertwined, resulting in minimal needs for contraceptives in this stage. If there is a motivation to prevent births, it is usually only in order to postpone the start of
childbearing because of temporary interests in other life domains, like the educational and professional career or considerations with regard to living arrangements (housing career). The boundaries of this stage may become blurred if more women tend to have children outside marriage or stable relationships, and more tend to remain childless.

4. *First birth to desired family size.* The ideal number of children that characterises desired family size need not be sharply defined. E. Van de Walle (1992), for instance, argues that ideal family size is a typically Western concept, which requires deliberate and conscious fertility decision making, an internal locus of control and a certain preoccupation with numbers. Cleland (1987), however, points out that there is abundant experience from the World Fertility Survey, and even more from the value of children studies, that even in non-contracepting societies, parents have no difficulty in discussing the advantages and disadvantages of large or small families (see also Khan and Singh 1987). He extends his argument to the idea that neither is it problematic for people to express a numerical preference, although he explicitly mentions Sub-Saharan Africa as an exception in this respect. People’s opinion about complete family size may also be adjusted in due course because of unintended or unforeseen events like marital disruption, child loss or undesirable fertility outcomes in terms of sex composition (Bledsoe 1995, Namboodiri 1983, Bongaarts 1984). Nevertheless, there is often a point in the life course where further childbearing becomes undesirable. The birth of the first child and further progressions in the marriage and fertility careers and generally in the life course and family cycle often provide women with a greater influence in reproductive decisions (e.g. Hollerbach 1983, Khan 1987, Koenig and Foo 1992). Moreover, knowledge about family planning methods and partner communication about additional children and contraception also usually improve in this stage (cf. Khan and Singh 1987). With regard to fertility regulation, motivation is likely to be higher during this fourth stage because of child-spacing considerations, and therefore women want to rely on reversible contraceptive methods to organise their reproductive career. The timing of successive pregnancies can ) among other things) be related to developments in the working career (e.g. Ní Bhrolcháin 1986a and 1986b) or to considerations about health of mothers or children (Isaacs and Fincancioglu 1989, Winikoff 1988).

5. *Family completion to menopause.* In this last stage, partners are increasingly inclined to accept sterilisation, as a final method, as well as abortion to avoid births, alongside reversible preventive methods.

This staging perspective is a valuable contribution to programmes aiming at family-building behaviour that are responsive to the desires of couples and individuals. As a basic strategy of reproductive health and family planning programmes is to provide specific target groups with the information and the means to regulate their reproductive career, a life course approach can help to identify the target groups at which differentiated programme efforts should be directed (cf. Khan 1987). The exact content of the information and the most appropriate channels through which to communicate it, as well as the supply of specific family planning methods, depend on the individual readiness to accommodate to them. This in turn can be associated with the stage of individual development. In many situations, for example, family planning services and information campaigns have neglected unmarried girls and women who were in need of reliable and safe contraception (ESCAP 1993). The Indian family planning programme was for a long time preoccupied with sterilisation, which did not suit those who were in the stage of wanting prevention without terminating their reproductive capacity (Soni 1983,
A life course perspective is also relevant if it is recognised that during their lives people are confronted with different others who exert important influence on their considerations with regard to childbearing and fertility control. In the first instance, for example, parents will occupy a prominent place. Later husbands or, in certain types of family systems, parents-in-law, especially mothers-in-law of young married women, may take over this central role (ESCAP 1987b, Koenig and Foo 1992). But it is also conceivable that, for instance, women themselves experience transitions in position: from being a mother-to-be, liable to influence of others, to a mother with an important information-providing role towards her own children (through both deliberate transmission of information and as a model), and eventually to a mother-in-law, which brings her in the situation of determining the decision making environment of her daughter-in-law. This recognition can help to define secondary target groups who can be provided with relevant information about the specific needs of those in the reproductive years (Isaacs and Fincancioglu 1989).

6.4. Personal development

6.4.1. Introduction

The life course is interpreted as a developmental process that contains various stages, each with its specific outlook on life, digested past experiences and promises for the future. A person’s position in the life course reflects a set of distinct abilities, relations with other people, motivations, responsibilities, duties, constraints and knowledge of the world. These emerge in various behavioural patterns or trajectories that can be identified over people’s lives in different contexts (Elder 1985a, Heise 1990, Mayer and Tuma 1990, Runyan 1982). A true developmental understanding situates behaviour and events in dynamic time, perceiving them as the function of earlier conditions in life. Reference to the role of age-related behavioural norms is insufficient in this respect. Although this locates behaviour in the life span (and as such it can be enlightening), it is a descriptive assessment rather than an explanation that relies on an understanding of behavioural evolvement over time (Bourdieu and Nice 1977, Collins 1993a, Sugarman 1986, p. 14). In a dynamic orientation, behaviour and its meaning change over the life course in accordance with developments in different careers. The task here is to conceptualise the mechanisms by which individuals receive information from personal and contextual sources, organise and process this information, give meaning to behaviour and gear different life domains and life phases to one another in the ongoing process of change and stability.

The field of developmental psychology addresses this search for a more substantive interpretation of life course development. A number of orientations in this field have come up with different conceptualisations of developmental mechanisms, each based on its own view of mankind, and with distinct methodology and testability and, also, different applicability in the area of demographic behaviour. Most developmental theories focus on the advancement
through childhood and adolescence. More recently, there is a growing recognition for the relevance of a developmental approach to behaviour in later stages of life, including the complex interactions among biological, psychological and social processes of aging (Abeles 1987). Today, adult development has a firm place in developmental psychology just as it has in sociology (see e.g. Hareven and Adams 1982). Cytrybaum and Crites (1989), for instance, attempted to demonstrate the utility of adult development theory (especially the work of Levinson) for understanding the process of working career adjustment. In gerontology and geriatrics, old age too has come to be interpreted in terms of separate phases of life with different developmental potentials (e.g. Lehr 1980).

The relevance of different approaches in developmental psychology partly depend on their position on the internal-external determination continuum (cf. Hjelle and Ziegler 1981). Several traditions in developmental psychology take inner mechanisms as the primary factors that command the unfolding of personal development. In these perspectives, development occurs through the activity of the actor and the environment merely inhibits or facilitates but does not cause development. In other perspectives, the role of social forces or other exogenous factors is emphasised as the main cause of development. Lastly, there are approaches which can be classified as ‘interactionist’ traditions, where development emerges from the interplay between internal and external determinants.

In the following sections (Sections 6.4.2 and 6.4.3), several major perspectives in developmental psychology are reviewed. The evaluations especially centre around the consideration of to what extent they can contribute to the theoretical approach adopted in this study. Of special relevance here is the applicability of the insight to development in adult life, the recognition of both personal and contextual influences, and the affinity with the cognitive approach and starting points of this study. The concluding section (6.4.4) provides a comparative evaluation and abstracts some notions that can serve as a behavioural underpinning of the dynamics of fertility behaviour.

6.4.2. Structuralistic development approaches: stages

Psychological studies on children yielded a rather general acceptance that universally during childhood and adolescence, lives are governed by common developmental principles. Freud’s control of emotions and inner drives and Piaget’s cognitively based interaction of biological maturation with the physical world are typical examples of mechanisms that generate a universal qualitative progression in personal development. Both cast development in terms of structurally different stages that contain a readiness or propensity for certain new behaviour, social relationships, skills or perception. Such structuralist approaches emphasise the qualitative difference between developmental stages and furthermore postulate a universal sequence of developmental periods, usually with an invariant order and each with particular relevance to the growth of the mature personality. In psycho-analysis this refers to the resolution of the emotional conflicts underlying one’s identity. In cognitive development theory it is the realisation of a state of equilibrium between assessment and organisation of information.

*Psychoanalysis: in the wake of Freud and Erikson*
Freud and, later, Erikson are important exponents of a structural perspective on development from a psycho-analytical point of view. They understand development as proceeding by predetermined critical steps, each characterised by qualitatively different emotional considerations. For the propellant of change both (although Erikson less than Freud) rely importantly on the process of physical maturation as it brings along new possibilities and new problems that have to be harmonised within the social context.

Freud concentrates especially on the motivating role of psychosexual drives which are aroused at every new stage. Such desires become frustrated as their expression is constrained by the social environment. Subsequently these expressions are at stake in the inner and largely unconscious or subconscious battle between the psychic structures (Id, Ego and Superego) that mediate between drives and behaviour. An individual’s personality is basically the outcome of these conflicts, which Freud claims to be more or less decided after about the first five years of life. Although, in his opinion, later stages contribute to further differentiation and superficial behaviour changes take place throughout life, the underlying character structure remains largely unaltered (cf. Hjelle and Ziegler 1981). Behaviour in adulthood is basically the result of the struggle between the identity created during early childhood and the expectations and opportunities of society.

Erikson takes a more optimistic view: he considers the conflicts looming at every new stage as a challenge to the individual to look for his or her identity. Throughout life, a person is faced with a number of basic questions or crises about understanding and acceptance of the self in society. But Erikson suggests that in each stage in the life cycle, one of these questions is of overriding importance. These questions refer to the identification of the appropriate personal orientation on eight attitudinal dimensions characterised by two opposing qualities (Erikson 1980). The development into a healthy personality entails the resolvement of the tasks at a proper rate and in a proper sequence, since the readiness for the challenges encountered in different phases of life requires that the basic questions pertaining to the previous ones have been resolved (Erikson 1980, 1984). Depending on the manner in which persons resolve these crises, their personality development will proceed in one direction or another. More than Freud, Erikson emphasises the influence of the social environment on the duration and outcomes of the stages of development. In Erikson’s view, development is a function of personal and contextual factors. The changing individual is embedded in a personal network that embodies different expectations at each new stage. The theory’s social orientation is further demonstrated by the assertion that in a historical perspective, the repeated struggles to resolve the questions of life become institutionalised, and that, in turn, these social institutions influence the tasks and resolutions of people during their life (Erikson 1980). Within the boundaries defined by physical maturation, the variety and change of these contextual factors (ranging from family elements, peer groups, partner relationships, to schools, labour organisation, religion, law and science) differentiate the shapes of the life stages in various settings (Erikson 1979, 1980). Erikson fails, however, to define the processes by which the relevant social environment and the conflict that is most evident in a certain period yield

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2 The polar characteristics of these eight dimensions are: basic trust versus basic mistrust, autonomy versus shame and doubt, initiative versus guilt, industry versus inferiority, identity versus identity diffusion, intimacy versus isolation, generativity versus self-absorption, integrity versus despair.
recognisable behavioural patterns. Erikson also contends the Freudian view that personality patterns are already firmly set in the first few years of life. His perspective of development is one of a life-long process of ‘unfolding’ and differentiation (cf. P.H. Miller 1983, Hjelle and Ziegler 1981, Sugarman 1986). Notably stimulated by the later works of Erikson, developmental psychology in general has expanded its scope beyond the period of childhood and adolescence.

Havighurst (e.g. Havighurst 1972) presented a notion of structural development which corresponds to Erikson’s in several aspects. As with Erikson, the establishment of the person is not compressed into early childhood, but occurs throughout life. Similar to Erikson’s notion of basic questions characterising stages of life, is Havighurst’s concept of developmental tasks, whose achievement is similarly required for a happy and successful person with the prospect of fruitful further development. Havighurst’s developmental tasks, however, are more mundane and concrete than Erikson’s rather abstract psychosocial challenges. This has perhaps greater descriptive value, but reduces the interpretative value of the approach (Sugarman 1986, p. 95).

A useful contribution to developmental psychology by Havighurst, is the representation of three principal sources of the tasks that people encounter over the life course. He distinguishes the biological processes that determine physical maturation, socialisation processes through which a person learns the expectations of the social environment, and the emerging personal desires, aspirations and values (Havighurst 1972).

Clearly inspired by Erikson’s and especially Havighurst’s life-cycle approaches, Levinson and colleagues distinguish several phases when they relate occupational and family considerations to personal development in adulthood (see also Cyntrynbaum and Crites 1989). They consider a person’s tasks, activities and relationships to be re-evaluated time and again, and to be differently interpreted and shaped as life experiences, responsibilities, needs and expectations change during the lifetime. Adult life is understood to be composed of recurrent periods of transition in which the way is cleared for a reformulation of self and the world in a subsequent stable period of developmental tasks and understanding life (Levinson et al., 1978, Levinson and Gooden 1985). Levinson and his co-workers, as well as Havighurst, do not restrict the potential grounds (such as cognition, biology and personality) for the creation of a new life stage, but concede to the overall content or meaning of information that is addressed by the individual (cf. Smedslund 1977).

Cognitive development: Piaget

Piaget’s developmental theory also focuses on internal structural changes and equally portrays development in terms of an succession of distinct stages (e.g. Piaget and Inhelder 1969). Piaget claims that these stages are universal and, furthermore, that their sequence is functional and invariant. But instead of drives and emotions, Piaget put forward the role of cognitive adaptation in development.

According to his theory of cognitive development, children think and act on the basis of a coherent mental organisation. Piaget uses the concept of schemata to represent the cognitive organisation at a certain moment. These schemata refer to the symbolic representations that organise knowledge about the world and behaviour into structured and coherent systems and that reflect particular ways of interaction with the environment (Piaget 1975). This Piagetian notion of schemata can be encountered in cognitive orientations in various behavioural disciplines, such as the sociology of knowledge (Berger and Luckmann 1966), institutional
economics (North 1994, O’Driscoll and Rizzo 1985), social learning theory (Bandura 1977b, 1986, Bower and Hilgard 1981), and cognitive anthropology (D’Andrade 1995). The mental organisation can be considered as a stage of equilibrium in a process of adaptation or ‘equilibration’ (Piaget 1975) which encompasses two complementary processes. The first is a process of assimilation through which information from the physical and social environment is matched to one’s existing cognitive frame of reference. The second is an accommodation process that adjusts this cognitive organisation in the face of new or discrepant information. An adjusted mental structure, in turn, prepares for a better assimilation of information. The processes of adaptation can be perceived as efforts to reduce inconsistencies between the internal organisation of knowledge about the world and information from the surrounding world (cf. Bandura 1991).

Although the processes of adaptation operate continuously and change itself is supposed to be incremental, cognitive development theory also distinguishes stages of development. According to Piaget (1975), the potential to understand the world develops through a series of discrete states of equilibrium of the processes of assimilation and accommodation. The distinction between developmental stages is based on the conception of a qualitative change in the underlying mental structure and is consequently more related to how rather than what people think. If adaptation processes can be perceived as efforts to reduce mental inconsistencies, the progression over developmental stages represents the improved cognitive equipment or competence to remove such incongruities. Whereas this qualitative change evolves from the cumulating experience with the environment, it also crucially depends on physical maturation.

The stages of development identified by Piaget span the period of childhood and adolescence. In his view, development has gained its full potential at the point of adulthood. Although he acknowledges that the capacity for formal reasoning (characterising the last developmental stage) matures well into adulthood, he claims that by then, cognitive structures have become fully integrated and coherent systems. Schemata will continue to develop as new information becomes available, but only in terms of content, not in terms of a qualitative reworking. In this respect, the continuous exposure to the outer world takes a central position in theory of Piaget. However, attention for the function of the social context in this respect remains scant, since the theory is particularly based on evaluations of experiences with phenomena from the physical environment and the understanding and application of such principles as object permanence, causality and conservation. Although Piaget recognises the importance of the social-cultural and educational environment (Tudge and Winterhoff 1993), it has not received corresponding attention. Neither has the social aspect of development in terms of interpersonal relationships received as much attention as physical and logico-mathematical development. Even if other cognitive scientists in the Piagetian tradition have developed the social aspects of development, the issue of how learned and organised knowledge is translated into actual social performance remains underrepresented (P.H. Miller 1983, p. 98). Lastly, and partly related, Piaget’s theory virtually neglects motivational aspects of development.

6.4.3. Social learning theory

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3 Piaget distinguishes four main stages (the sensimotor, pre-operational, concrete operation and formal operations stages) and a number of sub-stages.
Modern social learning theory, as elaborated by Rosenthal and Zimmerman (1978) and, especially Bandura (1977b, 1986), particularly elaborates on the connection between the social environment and personally held information and on the mechanisms which link this knowledge and actual performance. Representing a cognitive approach, learning theory has definite links with Piaget’s theory of development. Both emphasise information, cognition and the development of conceptual structures or schemata. But where Piaget (and for that matter Erikson and Havighurst) focuses on structural change and assumes a certain inherent direction in life, social learning theorists focus on processes of change and largely refrain from assertions about the content or goal of individual development. Development is considered to be a continuous and accumulating process without a clear end state. Like Piagetian theory, social learning theory emphasises knowledge and cognition, but it tends to include more prominently moral and emotional considerations (e.g. Bandura 1986, p. 185, Bower and Hilgard 1981, p. 467). Thus, cognition is understood in the broad sense of subjective and associative processes of interpretation and representation of the world, and not in the narrow sense of objective intellectual activity.

Bandura and other scientists within the social learning tradition start out from the idea that cognitive processes play a prominent role in acquiring behavioural patterns and in the formation of behaviour. The nature of persons as cognitive agents is defined in social learning theory in terms of a number of basic capabilities (Bandura 1986, p. 18 ff.). One is the symbolising and generalising capability which bears some close relationships to Piaget’s intellectual inheritance. Another is the vicarious capability that permits people to learn by observation rather than necessarily through personal experience. A third is the capability to anticipate likely consequences of actions by representing foreseeable outcomes symbolically. With respect to the symbolising and generalising capability, Bandura goes along with Piaget in understanding that on the basis of information, people mentally construct schemes and restructure them to accommodate new information (Bandura 1986, p. 89). Through the construction of these schemes, they try to create a coherent and functional view of the world which allows them to infer judgemental rules that are retained over time and generalised to new situations (Rosenthal and Zimmerman 1978). In this respect, social learning theory agrees with Piaget that the pursuit of a balance or equilibrium between information and existing cognitive schemata is an auto-motivator of learning and a basis for behavioural change (Bandura 1977b, p. 38, 1986, p. 89). These symbolic conceptions serve as ‘cognitive maps’ (Abeles 1990) or ‘recipes’ (Berger and Luckmann 1966, Schutz 1976a) that guide future action, give meaning and create expectations and standards by which performance is judged (Bandura 1986, p. 18, Wyer and Gordon 1984, p. 74). The capacity to use analogy and to generalise from the particular to the general (characterising Piaget’s stage of formal reasoning) is part of the restructuring process. It is this capacity that is the source not only of creative thinking, but also of the ideologies and belief systems that underlie the choices humans make (cf. D’Andrade 1995, North 1994).

A second basic point in Bandura’s concept of the person is its capability to learn by observation (the vicarious capability). Social learning theorists distinguish four important sources of information: personal experience, observational experience, verbalisation by others or otherwise communicated instructions, and emotional arousal (Rosenthal and Zimmerman 1978, Bandura 1977b, 1986). Whereas Piaget concentrates cognitive development and understanding of the world mainly in personal experience, social learning theory claims that most human behaviour is learned by information extracted from observing modelled examples.
The capability to learn by observing others enables people to acquire knowledge and experience, and to transform these into symbolic representations without having to form them gradually by tedious trial-and-error. According to Bandura, this is a major addition to earlier learning theories and Piaget’s cognitive developmental theory which cannot easily account for the prompt conversion to complex behaviour patterns (Bandura 1986, p. 90, 211). Another major merit of this contribution is that it situates individual behaviour explicitly and clearly in social and cultural contexts. Through the observation of various models and generalisation, the working of different institutional rules is trans-mitted to new members of society. Verbalisation provides an additional link to the social environment, not only through communication within personal networks, but also through the mass media. On the other hand, the other two sources of learning (arousal and personal experience) reflect the individual-level background of the cumulative experiences encountered over the life course.

Bandura’s third basic capability (the ability to represent foreseeable outcomes symbolically) has an important motivational implication. Although social learning theory acknowledges the role of physiological motivation, it claims that most human behaviour is regulated by forethought as a motivator of or a temporary antecedent to performance. A second source of motivation distinguished in social learning theory operates through goal setting and self-regulated standards. These motivation mechanisms have been elaborated in relation to the concept of choice in Chapter 4 (Section 4.3.3).

The explicit incorporation of motivation is one of the main advantages of Bandura’s social learning theory over the cognitive development theory of Piaget. This solves to an important extent the issue of how learned and organised knowledge is translated into actual social performance (Bandura 1986, p. 81 ff.). Since not all information that is learned is transformed into actual behaviour, social learning theory breaks down the concept of learning into four constituent processes: attentional, retention, motivation and production processes (see Chapter 4). While Piaget does address attention and retention, he virtually ignores the motivational mechanisms and the actual implementation of intentions. A favourable course of each of these processes is required to bridge the gap between potentially available information, personally held knowledge and actual performance. In another line of research, Bandura developed the concept of self-efficacy as a cognitive mechanism that conditions actual behaviour (Bandura 1977a, 1982, 1991; see Section 4.3.5). As with motivation, self-efficacy is a dynamic feature in behaviour formation and is similarly acquired by learning through verbalisation, arousal, modelling and, particularly, personal experience. Lachman’s results from analysis of the Michigan Panel Study of Income Dynamics, for instance, suggest changes over the life course in the sense that personal efficacy declines in early middle age, levels off in the forties and fifties, and increases in later life (Lachman 1985, cf. Rodin 1990).

6.4.4. Evaluating developmental theories

Developmental psychology offers various theoretical perspectives on changes in the life course. Although several theories seem to involve complementary insights, a true integrated framework on personal development has not yet emerged (cf. P.H. Miller 1983). In order to substantiate the organisational device of the life course and this study’s conceptual framework with the mechanisms underlying the dynamics of behaviour, notions from different theoretical
Whereas developmental theories diverge in their views about the causes of development and the sources of change, about what develops and which periods of life are concerned, most of them have one aspect in common: the biological basis of development. But even here, the function ascribed to biological maturation is different. In many perspectives it is associated with reproduction, either via the tasks set in some stage of life (e.g. those of Erikson, Havighurst and Levinson), via the implication of sexuality (Freud) or via some (emotional-) cognitive interpretation of fertility behaviour (social learning theory). Piaget and to a lesser extent social learning theory on the other hand, emphasises the biological conditions for development of cognitive capacities.

One aspect where Freud’s psycho-analytical, and Piaget’s cognitive development theory are found wanting is the incorporation of a view on development in adult life (Filipp and Olbrich 1986, Runyan 1982). Both consider what they understand as development (character formation and growth of cognitive capacity, respectively) to be concluded before adulthood. This severely limits the relevance of these developmental theories for the understanding of reproduction, since behavioural changes related to fertility are importantly located in the span of adulthood. The comprehension that the quality of cognition and how people think remain stable in this period, does not contribute much to the understanding of progression and turns in the life course and of changes in what people think. Nor is Freud very illuminating with his notion that whatever changes occur after childhood rely on an otherwise stable underlying character structure (cf. Hjelle and Ziegler 1981). Erikson on the other hand, even though he represents the same psycho-analytical tradition as Freud, emphasises the challenges facing people at different stages and interprets development as a process of ‘becoming’ throughout their whole lives. A similar distinction can be made between Piaget’s developmental theory and social learning theory. Both occupy the realm of cognitive psychology, but learning theory engages much more in explanation of the dynamics in adult life.

Another weak point in Freud’s approach, at least from the perspective of social rather than psychiatric theory, is the absence of an explication of the role of the social environment. Freud’s psycho-analysis requires too much introspection and is too idiosyncratic to allow any reliable structural inference on people’s behaviour in social life (e.g. Lindenberg 1990b, cf. P.H. Miller 1983). Furthermore, his concern is more with unconscious drives and instincts, rather than with the individual’s reflection on his or her position in society. In their treatment of social context too, there are certain parallels between Piaget and Freud. Piaget explicitly lists social experience as one of the factors underlying cognitive development, but he gives much more attention to experience with physical objects. The internal stimu-lators to which psycho-analytic and cognitive developmental theories refer cannot adequately account for the variety of behavioural patterns and shifts in behaviour under differing situational circumstances (Bandura 1986, p. 2). The contents and structure of contextual information, in the sense of rules and expectations, are required to identify the external sources and to interpret the directions of change. To a certain degree this is incorporated in Erikson’s theory and, more concretely, in the approaches of Havighurst and Levinson. Social learning theory adds to this the mechanisms of verbalisation and particularly observational learning, through which the social context influences individual behaviour. The concept of observational learning (together with the constituent processes of attention, retention, production and motivation) is probably
the most important single contribution of social learning theory to studies of individual
behaviour and development.

Motivation is a critical part of social learning theory, but it is virtually ignored by Piagetian
theory. Although Piaget’s pursuit of balance, or equilibrium, can be considered an auto-
motivator of cognitive change, additional motivational considerations are required to produce
actual performance. In Bandura’s cognitive perspective, these considerations are con-
sequences of processes of goal setting through comparison (with others and with one’s own
past level of performance) and, importantly, of processes of anticipation of consequences.
These anticipations refer to the cause-and-effect structures in people’s cognitive schemes,
which, in a Piagetian way, are outcomes of the mutual adjustment of existing knowledge
frameworks and new information derived from observing others or own experience.
These cognitive schemes not only involve motivation structures, but equally self-efficacy
considerations and may also be perceived to concern styles of decision making. The
interpretation of such schemes as processes of adaptation provides the dynamic perspective for
these different aspects. Therefore, the acknowledgement of schemes, which social learning
theory has in common with cognitive development theory and most other cognitive approaches
in behavioural science, can be considered to be the major mechanism of personal development.
6.5. Towards a dynamic conceptual framework

At the outset of this chapter, different aspects and dimensions of time were addressed which were considered relevant for the introduction of a dynamic perspective in the conceptual framework of fertility. The focus was directed at development at the individual level, which was understood to involve social, individual and biological aspects of time and development. Subsequently the life course approach was identified as an appropriate interpretative and organisational principle for behaviour over time. Lastly, the attention turned towards a number of developmental theories in order to search for the underlying processes and mechanisms of life course development. The central consideration in this respect pertained to the question of which theoretical perspectives could substantiate individual development in correspondence with the starting points of the conceptual framework. In this respect, social learning theory seems to hold the best potential to account for the dynamics of behaviour. Several other perspectives, notably in the line of thought of Erikson, Havighurst and Levinson, contribute additional valuable notions on personal development.

The cognitive approach of Bandura and other social learning theorists concurs very well with the central position attributed to information and cognition in the conceptual framework (and has indeed been a principal guidance in this respect). The major strengths of social learning theory are that it links individual behaviour and development to the social context, and that it bridges the gap between developmental and decision making theories. Many choice theorists regard the interpretation of the origins and change of individual beliefs, expectations, preferences, goals, causal frameworks and the definition of the situation as one of the fundamental challenges confronting choice theory (e.g. Ajzen 1991, Ajzen and Fishbein 1980, Brennan 1990, Elster 1983a, Esser 1993, Friedman and Hechter 1991, Schutz 1973b, H.A. Simon 1987). Modern learning theory locates them in physiological processes, the evolutionary social environment and in the individual experiences. Thereby, it identifies cognitive appraisal and the various processes involved as the main organising principle of behaviour across life domains and over the life course.

The cognitive interpretation of the life course is regarded as the dynamic individual-level background of behaviour and choice. It extracts the meaning of the experiences that are synchronically and diachronically organised in different life careers, including the baseline of biological development. This ongoing appraisal of personal history is a major determinant in the construction of mental schemes underlying people’s decision making. The schemes are, therefore, not static givens, but constructs that develop over time with life course progression. Although the individual life course is a personal source of information, it remains firmly socially embedded, not only because the interpretation of people’s histories depends on socially constructed rules of meaning, but, importantly, also because life course organisation reflects the impact of the particular social context that prevailed during its progression. In this respect, the individual history as represented in people’s mental representation bears the imprint of two basic time dimensions: institutional time and individual time. Figure 6.1 reflects these time-related influences of institutional rules and the dynamic organisation of the individual life course. Personal considerations that underly decision making are time-dependent in the sense that they relate to people’s evolving (and partly cumulating) mental schemes and to the impact of the context as represented of experienced rules of present social institutions. These mental schemes are represented in Figure 6.1 as being dependent on the synchronic and diachronic
structure of the life course, which implies that the organisation and contents of people’s information is constructed on the basis of the current life course position, but also on earlier mental constructions as derived from previous life course developments (as well as on relatively stable personal endowments). Furthermore, this complex of life course structure and development of mental schemes is influenced over time by the changing (path-dependent) force and contents of the institutional environment.

Figure 6.1. Dynamic backgrounds of choice