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Dirk J. van de Kaa

Demographic Transitions

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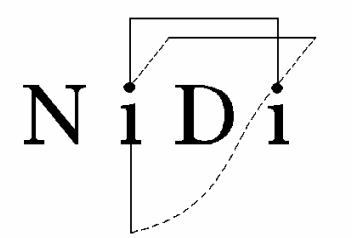

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Keywords

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Summary

In the history of mankind few innovations have been as important as that of the voluntary control of fertility. When in Western Europe in the late 18th and early 19th centuries its effects on the birth rate and population change first became apparent it was recognized as a truly revolutionary event. And indeed, in France it came to be called the 'demographic revolution'. Internationally that term did not find favour and was replaced by 'demographic transition'. This chapter discusses the classical, now First Demographic Transition (FDT) by tracing the history of the concept, by considering its determinants and its spread across the world. However, it also discusses the Second Demographic Transition (SDT), a further important change in demographic regime that appears to have started in the same part of the world just after the mid-1960s. That transition is also spreading to other regions and appears to affect populations that have reached high levels of socioeconomic development where contraception is perfect and where the close link between sexuality and procreation no longer exists.

As discussed in this contribution the determinants of both transitions are changes in the structure, culture, and technology of societies. But, there is a certain shift in emphasis. Socioeconomic development and a decline in mortality appear to have been prerequisites for the onset of the FDT although it has affected countries that differ widely in social structure, political system and economic system. Once started the FDT in a country usually continues. It may be aided by family planning programmes or government policies and occasionally stalls when countries began the transition when they already had low fertility relative to their level of development.

While the proponents of the idea of a SDT stress that the changes in economic and technological conditions (pill) remain important determinants of that transition they tend to highlight the role of ideational change. As explained in the paper ideational shifts appear to have changed people's attitudes towards marriage, childbearing, the responsibility for one's own health, and demographic change more generally. Since people highly value each individual's freedom of choice and seek self-fulfilment in work and relationships the level of fertility typically declines to very low levels.

1. Introduction

In the study of population the term 'demographic transition' is widely used. Every single demographer in the world is familiar with it. Whether everyone using it attaches the same meaning to it is a different matter entirely. For some there is, and will ever be, only one 'Demographic Transition'. Others see it as solely affecting fertility and equate it with 'fertility transition'. For others, again, it denotes a generic term that has not been particularly well chosen to boot, and that involves, at least in principle, all components of population change. An historical perspective is required to clarify the situation and to understand why knowledgeable scholars engaged in the study of population do not, as yet, see eye to eye on this vexing issue. I do, of course, also have a personal point of view on the matter, but in this essay will make the attempt not to be one-sided.

Nowadays two demographic transitions are commonly distinguished. The 'theory' of the classical demographic transition, here to be called First Demographic Transition (FDT), was formulated as a narrative describing the way in which, from the late 18th century onward, fertility and mortality in several European countries declined in response to changes in the economic structure, the technology and culture of these societies. It provided a very useful and persuasive generalization of the demographic experience in that region. It suggested that all populations and regions of the world would ultimately follow the same developmental path. That is to say that all would in the course of time trade in a near-stationary demographic situation characterized by high levels of fertility and mortality for one resulting from the combination of low fertility and low mortality. To describe that transition process more adequately four phases were usually recognized. During the first, fertility is assumed to have been sufficiently high to allow a population to grow slowly even in the face of a rather high level of mortality. However, periodic epidemics of plague, cholera, typhoid and other infectious diseases would in one or two years wipe out the gains made over decades. Over long periods of time there would, consequently, be almost no population growth at all. The second phase begins once epidemics are brought under control, their impact subsides, and once developments in society allow mortality to decline further: slowly but steadily. As fertility remains high at first, the excess of births over deaths increases and so does population growth. In time couples respond to the greater numbers of births surviving by voluntarily limiting their family size. Then the third phase begins. The excess of births over deaths diminishes and so does the rate of population growth. In the fourth phase mortality and fertility are in balance again, but now at low levels. Instead of averages of 6 or 7 children per family couples would, on average, have not much more than 2. And instead of a life expectancy of, say, 45 years people would typically have a life expectancy at birth of 70 or 72 years. Even though during the transition some surplus population would be siphoned off through emigration, the end result would be a much-enlarged population. But at the end of the transition process one could also expect a situation in which the population would no longer grow, where the population structure would remain almost constant, and where there would be neither the need for emigration nor for immigration.

Around the mid-1960s it turned out that this theoretical model had an important shortcoming in that fertility did not remain sufficiently high to ensure the replacement of generations. Under the catalytic influence of much improved and highly efficient contraception and further fuelled by the development of the welfare state and an important shift in preferences and tastes, fertility began to

decline again. Even when it reached levels much below that needed for replacement it showed no signs of returning. This implied that in due course the populations would start to decline! But that was not all. Numerous other important changes in demographic behavior occurred. Women were having their children at much higher ages, cohabitation became common, the close link between marriage and sexuality was severed, an increasing proportion of children were born out of wedlock, many different types of family arrangements were created, and leaving-home arrangements changed, while marriage became a much less permanent arrangement than in the decades before. Mortality at older ages declined more steeply than ever envisaged. And, instead of being a region that sent people to other parts of the world Europe became a region of immigration. This had a profound influence on the composition of the population of the countries concerned. They became culturally heterogeneous; a situation they found exceedingly difficult to deal with. It became more and more evident that this new constellation of demographic factors could not be explained as a temporary phenomenon. Hence the term: Second Demographic Transition (SDT) was coined to describe it.

In what follows the history, determinants and background of both transitions will be described in some detail. The way in which the ideas they embody were received in the community of population scientist will also be reviewed.

2. The First Demographic Transition (FDT) and its precursors

2.1 Early reactions to European fertility decline

The first ever-recorded sustained decline in fertility in the Western World occurred in France in the early 1830s. At first scholars and political figures were at loss about its significance. According to Louis Chevalier (1911-2001), when writing about that phenomenon around 1856 such well-known French economists/public figures as Hyppolyte Passy (1793-1880), Léonce de Lavergne (1809-1880) and Alfred Legoyt (1815-1885) found it hard to believe and could only confess their ignorance (Chevalier, 1946/1965). It was suggested that it was bound to relate to the general social and economic evolution; to the changes in the standard of living, for example, or, as Frédéric Leplay (1806-1882) assumed, to the inheritance system in force. It is also in francophone Europe that, a little later, the first suggestions for a structured explanation of the decline in the birth rate appeared. Writing on depopulation and civilization in 1890, Arsène Dumont (1849-1902) introduced a principle of population, which he called '*capillaritė sociale'* or *'l'attraction capillaire'*. In his view, the wish to improve one's position politically, economically, and in terms of access to education and culture, led to an excessive predominance of individual tendencies. And, while the principle of social mobility was a necessary condition for all progress, it had a detrimental effect upon the birth rate. As he formulated it '*Le progress de la natalité est en raison inverse de la capillarité sociale'* [The development of the birth rate is inversely proportional to social mobility]. Other French scholars of the same period, who were concerned about the decline in the birth rate, again stressed the role of mental factors. Writing in 1896 Paul Leroy-Beaulieu (1843-1916) argued that the decline was foremost a reflection of the moral order.

2.2 The concept of a 'rèvolution dèmographique'

Adolphe Landry (1874-1956) another French economist and political figure with an overriding interest in population issues, made an even more crucial contribution to the discussion. In 1909, when a young man in his mid-30s, he published a paper in a relatively obscure statistical journal *Scientia* in which he distinguished three different demographic regimes. Under the first regime, based on the ideas expressed by the Reverend Joseph Townsend (1739-1816), originally a physician and geologist, the population is assumed to ascend to the limits imposed by the means of subsistence. Under the second, derived from the writings of the economist Richard Cantillon (1680?-1734), the possibilities to subsist are also seen to be important but some elasticity between food and the number of people is assumed as the latter desire to maintain a certain standard of living and use late marriage and celibacy as regulating mechanisms. The third and 'contemporary' regime is, in Landry's view, entirely different as economic forces only indirectly affect population. Much more significant is that people seek to ameliorate their situation and use neo-Malthusian practices to limit family size within marriage in the expectation that this will give their offspring a better chance in life. He speaks of a theory *'en train de se constituer';* [on the way of being developed] a theory in which the increasing rationalization of behavior obviously is given centre stage in explaining fertility decline. He was convinced that people '*devenant plus raisonables, ils*

tendent par la meme à devenir plus moraux' [when becoming wiser also tend to become more moral]

In his paper Landry sees the last two demographic regimes succeeding each other. In all likelihood, he was the first scholar to do so. But his 1909 paper was published in an Italian journal; it may not have reached a wide audience. It is fortuitous, therefore, that he returned to the same population issues in a book of studies and essays published in 1934 under the telling title '*La révolution démographique'*. In Landry's view that 'contemporary' demographic revolution would seem to be '*proprement formidable'* [really formidable]. The fundamental underlying principle as he sees it, is best summarized as *'...la rationalisation de la vie'* [the rationalisation of life], with altruistic sentiments to let children achieve a higher status than their parents as the driving force.

Landry had strong political interests. He was a Member of Parliament and between 1920 and 1932 served as cabinet minister in a number of governments. As a result he may not have been able to take note of the paper on world population issues that Warren S. Thompson (1887-1973) contributed to the American Journal of Sociology in 1929. Had he seen it he might have welcomed Thompson's references to French demographic literature (Alfred Sauvy and Henry Bunle) and might have recognized a kindred spirit. On the basis of cross-sectional data Thompson grouped the countries of the world in three categories and placed great emphasis on the tremendous impact that fertility decline in category A, the countries of Western Europe and those 'countries largely settled by peoples emigrating from this area in the last three hundred years', would have. He does not speak of a transition or a revolution but the groupings suggest the probability of transfer from the categories with high fertility to those of low fertility. He notes explicitly that in this last '... part of the world a new era in population movements has begun…' The main focus of Thompson's paper was on the question how the land needed for the expansion and sustenance of the peoples in categories B and C would have to be provided and not on building a theory of fertility decline or demographic transition. Even so, to some extent his paper foreshadows Landry's much more elaborate and 'revolutionary' work.

One of the interesting aspects of Thompson's paper is that he attaches special importance to the effects of World War I on demographic behaviour. 'Of course, one cannot say that the war was the causal factor in increasing the absolute decline in the birth-rate which has taken place in the last fifteen years, but certainly it may be regarded as a turning point of very great significance'. In a way the same may be said of World War II. This is not simply a question of direct impacts, as those generated by war losses, refugee movements, and baby booms, but undoubtedly it also influenced the thinking about population issues and contraceptive practices in the population at large. Even more important for the present discussion is that it influenced thinking about population processes in the demographic communities at both sides of the Atlantic.

In the year World War II came to an end, Landry, then announced as *Président de l'Union Internationales pour l'Ètude Scientific des Problêmes de la Population,* succeeded in having a sort of demographic textbook published entitled *Traité de Dèmographie*, in which he collaborated with four other authors, Alfred Sauvy (1898-1990) and Henri Bunle (1884-1986) amongst them! Chapter V, executed so it would seem, '*principalement*' [mainly] by Sauvy contains a section (99) called '*La révolution démographique'* that must, surely, very much reflect the thinking and view of

the main author of the book: Landry. The section shows that the term revolution was not chosen accidentally. It notes that the French political revolution of 1789 was marked by a number of spectacular events and then observes that another revolution was hardly noticed when it started and was not accentuated by anything sensational. It began slowly and progressed almost unnoticeable. Even so, it was a revolution, for one should speak of a revolution when a change in regime takes place and this as well in demography as in other fields. There is no need for the regime change to occur suddenly. Thus there is every reason, so Landry argues, to stick to the definition and the term 'demographic revolution' when one considers the substitution of '*procréation limitée à la procreation illimitée'* [unlimited procreation by limited procreation]. In trying to clarify the role of contraceptive practices in the fertility decline the author resorts to a rhetorical device. The question posed is whether marital fertility would also have declined as strongly and generally if abstinence *(la continence*) had been the only means of contraception available? The obvious answer clearly is that the decline of marital fertility would have been very different from that observed and would no doubt only have been small (… *cette fécondité n'eût sans doute baissé que peu'*).

Another very interesting aspect of this section in Landry's book is that it notes that at the time marital fertility in France started to decline the level of mortality also commenced to decline. This latter decline is, again, characterized as *'… un très grand fait de l'histoire démographique'* [a very great event in demographic history], but it is considered to be of a somewhat different nature as the struggle to lengthen life appears to have been with us perpetually and is not the result of change in orientation as a consequence of a decision taken by the population.

2.3 The concept of a 'demographic transition'

After the establishment of the League of Nations, which held its first general Assembly in Geneva on 15 November 1920, the interest of American scholars and in particular those attached to Princeton University, in European population issues and history increased. They were interested in the demographic effects of the Russian Revolution, for example, and in Europe's population prospects. This work continued during World War II and resulted in a number of important publications towards the end and immediately after World War II. These were published either by Princeton University Press or the League of Nations. Dudley Kirk (1913-2000) who was personally involved in that type of work has rightly pointed out this research culminated in the formulation of what is now 'demographic transition theory'. Several members of the group contributed, for instance, to a book published by the League in Geneva in 1944 entitled *The Future Population of Europe and the Soviet Union: Population Projections, 1940-1970.* In addition to Kirk, Ansley J. Coale (1917-2002), Louise K. Kiser (1895-1954), Frank W. Notestein (1902-1983) and Irene B. Taeuber (1906-1974) are listed as contributors. Together they virtually shifted the centre of gravity of the discussion on 'demographic transition theory' to the United States. As a consequence its historical depth and ideational dimension diminished, while the process of modernisation and its economic aspects was emphasized more strongly. Population trends were seen mainly as a function of progress. To quote Kirk (1944): 'Rapid population growth and the subsequent slowing of growth arising from the control of family size are intrinsic elements of the nexus of cultural traits that are valued as "progress". Their development has not been haphazard. Within Europe, for instance, there has been a clear pattern of diffusion'. And further: 'modern education, improved health conditions, and economic advance are parts of the same cultural

complex, indigenous to the West'. He points to the role of industrial development, urban influences, and the advent of 'technological civilization'. One of his central conclusions is that 'in regard to demographic matters the different countries of the world may be considered as on a single continuum of development'. Another member of the group, Kingsley Davis (1908-1997), used the term 'demographic transition' in the title of an interesting essay published in 1945. It is not evident that they consciously rejected the term 'revolution' or that the term 'transition' prevailed because it had more international appeal and more scholars could easier consult American rather than French demographic literature.

2.4 The First Demographic Transition (FDT)

More than half a century after he wrote the paper quoted above, Kirk returned to transition theory and then notes correctly, albeit with a little bit of easily understandable envy perhaps, that although Notestein was 'by no means the first to state the essentials of the theory of demographic transition', his 'early formulation is conventionally accepted as classic' (Kirk, 1996). And indeed, his 1945 exposition of the matter is eminently lucid and readable. Although Notestein does not seem to have been aware of the 1929 and 1934 efforts of Thompson and Landry respectively, just as they did he grouped the countries of the world in three categories and derived generalisations of a process of population growth and decline from that. When he wanted to explain the reasons for the increase in population observed by Carr-Saunders for many parts of the world, he wrote: 'The essentials of the story are simple enough. Growth came from the decline in mortality'. He then describes its background and concludes: 'In short the whole process of modernization in Europe and Europe overseas brought rising levels of living, new controls over disease, and reduced mortality'. In turning to fertility Notestein observed that this determinant of growth 'was much less responsive to the process of modernization'. The reasons are 'clear enough in general terms. Any society having to face the heavy mortality characteristics of the pre-modern era must have high fertility to survive. All such societies are, therefore, ingeniously arranged to obtain the requisite births. Their religious doctrines, moral codes, laws, education, community customs, marriage habits, and family organizations are all focused toward maintaining high fertility'. When ultimately fertility starts to decline this is supposed to come about 'primarily through rational control largely by means of contraceptive practices. It does not follow that contraception can be viewed as the cause of the declining birth rate in any profound sense'. The methods were widely known before they came in general use. Their usage increased 'in response to drastic changes in the social and economic setting that radically altered the motives and aims of people with respect to family size'.

In cataloguing these changes Notestein mentioned specifically 'growing individualism', 'rising levels of popular aspiration developed in urban industrial living', the function loss of the family, the expense of large families, the freedom from 'older taboos, and 'promoting the health education, and material welfare of the individual child'. He concludes that 'the reduction of fertility requires a shift in social goals from those directed toward the survival of the group to those directed toward the welfare and the development of the individual'. In a speech delivered in 1964, Notestein seems convinced that the story he described in 1945 was universally applicable. Growth in the modern era 'has its source in universal differences in the ways in which normative orders of all societies impinge on human fertility and mortality' he then said. And also: 'Populations … entered the modern era with both the physiological capacity and social institutions required to elicit high rates

of reproduction'. 'Marriage customs, family organizations, property systems, the means of attaining status, the systems of community rewards and sanctions, educational processes and religious doctrines are all organized in ways to promote nearly universal and fairly early marriage and high rates of marital reproduction. These institutions, customs, attitudes and beliefs are deeply rooted in long traditions. They represent the moral code, the normative order, which provides the non-rational cement of loyalty that binds individuals into groups and binds the past to the present'. When controlling factors are no longer mainly institutional, but 'lie mainly in the area of rational choice by the couples involved' fertility will decline. The '… present period of population growth is mainly a by-product of a universal demographic transition arising from the nature of society and the modernizing' processes, so he concludes. From this it only was a small step to formulate a recipe for reducing the rate of natural population growth. 'Social-economic development, education and prosperity, will reduce the birth rate eventually by stimulating the practice of contraception'. But 'unless all our generalizations about education as a means of spreading innovative behaviour are wrong', the decline in the birth rate can be greatly speeded up in a climate of social economic development by public education and the provision of contraception, is Notestein's explicitly stated view.

The Office of Population Research in Princeton continued to be active in the study of European population for several decades more. From 1963 on it conducted a major research project, led by Ansley J. Coale, which involved a detailed historical analysis of fertility decline in almost all European countries. At the end of the project in 1986, Coale succinctly summed up his understanding of the transition process up as follows: 'The demographic transition in Europe, then, was a transition from approximate balance of births and death rates at moderately high levels to approximate balance at very low levels'. In line with the classification of countries and circumstances made by Landry, Thompson and Notestein that transition is commonly considered to have had three, and as sketched in the Introduction four, stages. Before the transition fertility and mortality are assumed to have been roughly in equilibrium but with mortality fluctuating widely due to epidemics of various infectious diseases. Thus, over long periods natural population growth in pre-transition populations will have been very limited. During the early part of the transition process mortality decline, typically preceding the decline in fertility, results in accelerating population growth rates. As fertility decline speeds up and mortality declines more slowly these rates of natural population growth slacken. In the post-transition stage, then, a long-term equilibrium is, again, achieved.

3. The Second Demographic Transition (SDT) and its precursors

3.1 The idea of a renewed transition

It would seem from their writings that both Thompson and Landry were somewhat concerned about what the outcome of the demographic 'revolution' might be. Thompson (1929) poses the rhetorical question whether people in the high growth regions 'will quietly sit by and starve' while those in the rest of the world 'enjoy the lion's share of the good things of the earth?' In his view the redistribution of the lands of the earth is the 'problem of problems we must face in the world today'. The question is 'can it be achieved peaceable or must it be achieved by war?' Landry is not quite so pessimistic but he wrote at a time when fertility in European countries had reached exceptionally low levels and felt that action might be needed. He noted, for example, that *'…ce sont surtout des motifs indubitablement egoïstes qui poussent á la restriction des naissances'* [it are above all clearly egoistic considerations that drive the limitation of births] or even at foregoing childbirth altogether. He further recognized that children cause expenses, can be a source of sorrow and concern (*peine et tracas*), and made it difficult for women to enter paid employment. But, as we have seen, Landry was a politician as well as a social scientist and concluded that to a certain extent the future would be what we wanted it to be ('… *ce que nous voudron qu'il soit').* The post-war Baby Boom did, of course, still the voices heard before and during the Interbellum warning for imminent population decline. Instead the view came to be established that the demographic transition would make a soft landing. It became commonly accepted that rapid population growth would not be more than a temporary phenomenon and would, in the normal course of events and in all parts of the world, come to an end once the inevitable fertility decline followed the decline in mortality. But in 1986 when Susan Cotts Watkins and Ansley Coale published their summary volume of the Princeton European Fertility Project, Coale was well aware that the prospect of a new balance between fertility and mortality, as his own succinct description of the transition process entailed, was rapidly fading. For a few pages after the definition quoted earlier he wrote: 'It is more likely…that if marriage remains a much less than universally chosen institution, and if women continue to gain their rightful equal opportunities for rewarding lives outside of the home, the TFR will continue well below two'. What Coale refers to in that sentence is that in European countries from the mid-1960s onward the high levels of fertility associated with the Baby Boom had disappeared as rapidly as snow in the sun and a new decline in fertility had set in.

Several comparative studies carried out in the framework of the Council of Europe in the late 1970s had alerted the demographic community to the fact that something special was taking place. Writing his preface to the volume *Population Decline in Europe* (C.o.E., 1978), Eugene Grebenik (1919-2001) noted that the decline in fertility had created 'a new situation' Different authors found that, just as their predecessors before the war, they could neatly group the countries in categories suggestive of historical stages (e.g. Roussel and Festy, 1979; Van de Kaa, 1980; Schmid, 1984). To these and other observers it was evident that not just a decline in fertility was involved, but that changes occurred in all attitudes and behaviour affecting the family. The age at marriage and the age at first birth of a child rose, cohabitation and divorce increased, extra-marital fertility became more common, the acceptation and use of modern contraception (pill, IUD) seemed to become

standard, homosexuality became more acceptable, voluntary childlessness increased and the number of children born per family reached exceptionally low levels. In their comprehensive report of 1979, also prepared for the Council of Europe, Louis Roussel and Patrick Festy proposed a typology of four patterns in this regard. The major characteristic of the first type, so they argue, is that for both men and women marriage theoretically marks the 'real beginning of regular sexual relations'. In the second model 'pre-marital sexual relations occur but marriage remains the threshold of a permanent shared existence'. In the third model marriage does not coincide with the beginning of cohabitation. 'Shared life may begin before legal union; marriage remains linked to fertility however, and couples try to avoid births occurring outside marriage'. In the fourth and final model 'fertility itself no longer appears linked to marriage'. The authors insist that 'all patterns exist in all countries' but ultimately argue that 'it would seem that the developments over the last 15 years could all be entered as different vectors in a single curve'. When concentrating on variety of trends in fertility and fertility behaviour in Western Europe Dirk van de Kaa noted in a paper presented in London (Van de Kaa, 1980) that there was a case to argue 'for the existence of a well-defined sequence of events' 'through which countries are moving at somewhat different speed'. About the same time the historian Philippe Ariès (1914-1984) put forward a remarkable proposition. He hypothesized that there were in fact two different motivations for the decline of the birth rate in the West (Ariès, 1980). While at first the concerns about the ability of parents to give their children a good start in life motivated them to reduce their number, now the interest of the couple took central stage. He saw the decline in the birth rate from the end of the eighteenth century '… unleashed by an enormous sentimental and financial investment in the child'. In his view the 'current decrease' was '… provoked by exactly the opposite attitude. The days of the child-king are over'. The younger generation was leading us into a new epoch 'in which the child, to say the least, occupies a smaller place'. An interesting contribution to the debate on the significance of the trends observed was, a few years later, made by Joseph Schmid (1984) in another study prepared for the Council of Europe. Just as Ariès he emphasized that having meaningful personal relations had become of prime importance in people's lives. Coupled with rising expectations and a desire for status goods, that phenomenon gave special significance to the sudden decline in fertility.

Evidently several European demographers writing on fertility and the family sensed at an early stage that the renewed downturn in the birth rate represented more than a temporary fluctuation. That it was not followed immediately by expressions of great concern is not surprising given the direction of international and national discussions about world population growth at the time. Many demographers and population scientists had sympathy for the idea that developed societies should, ultimately, aim to become stationary or near-stationary populations. Understandably, the well-documented changes in contraceptive methods and practice played a crucial role in the search for explanations of the fertility decline. The striking simultaneity with which the birth rates came down in the countries of Western Europe, suggested a common cause. The availability of new, highly effective means of contraception had created a sort of 'second contraceptive revolution' as it was later called (Leridon et.al., 1987); it could obviously have exerted a major influence on the observed trends. Opinions differed in that regard. Some stressed its possible catalytic effect. Others, Ariès amongst them, argued that the improvement in contraceptive means and methods

was secondary; decisive was the change that had occurred in people's minds, since that determined their usage.

Schmid saw that fertility in the countries that had 'completed the demographic transition' had fallen well below replacement level and sought in vain for signs that this would only be temporary. His solution was to posit a 'fifth stage' of the first demographic transition, '… a stage not provided for in the traditional model'. Instead of reaching a new equilibrium, population decline might be the future. Clearly, like most other demographers active at the time he was aware that something very crucial had happened but found it difficult to conclude to a break with the past even though he specifically noted: '…the final separation between sexuality and reproduction.'

3.2 The Second Demographic Transition (SDT)

The first authors to conclude that a new demographic transition had taken place were Ron Lesthaeghe and Dirk van de Kaa. Both had already written on population change in Europe and were aware of the research activities and publications of their colleagues in the various parts of the continent. In a joint paper published in Dutch, their mother tongue, in a special issue of the sociological journal *Mens en Maatschappij* (1986) they identified so many changes in trends and behavior regarding family formation and fertility that they posed the question whether one should not speak of a 'second transition'. When shortly thereafter Dirk van de Kaa (1987) contributed an overview of the general demographic situation in Europe to the *Population Bulletin* of the Population Reference Bureau and presented a broad overview of demographic developments on the continent, he took up that theme again.

In keeping with Ariès, Lesthaeghe and Van de Kaa argued that the changes in population trends were the result of two successive motivations. Not solely with regard to having children but more generally with regard to the family. The two transitions appeared to be founded on different family models. The 'bourgeois family model' underlying the first transition apparently was giving way to the 'individualistic family model'. That important change was seen to affect the whole process of family formation, including the dissolution of unions (Lesthaeghe and Van de Kaa, 1986:19). In fact, while during the first transition the family became a stronger institution, the weakening of that institution was considered to be characteristic of the second transition. They identified the increase in divorce as the first manifestation of that weakening. The changed attitudes towards abortion, the increase in cohabitation in countries outside the Nordic region, the easy acceptance of modern contraceptives amongst the more orthodox sections of the population, and the decline in - higher-order - births were, however, also interpreted in that context. What appears to be a crucial element in the changes noted by the authors is that man-woman relations are increasingly appreciated as a means of reciprocal emotional enrichment, which may or may not be furthered by the birth of children. The personal value, dignity and freedom of the individuals involved in such relations are often stressed, as are the rights to self-fulfilment. The relationships are expected to be based on love and mutual attraction, are entered into freely and come to an end once they are lastingly disrupted, the latter independent of whether they have the form of a stable union or a marriage. Marriage as an institution providing economic security and as an essentially permanent arrangement aimed at reproduction and enabling the rearing of children is no longer universally felt to be necessary.

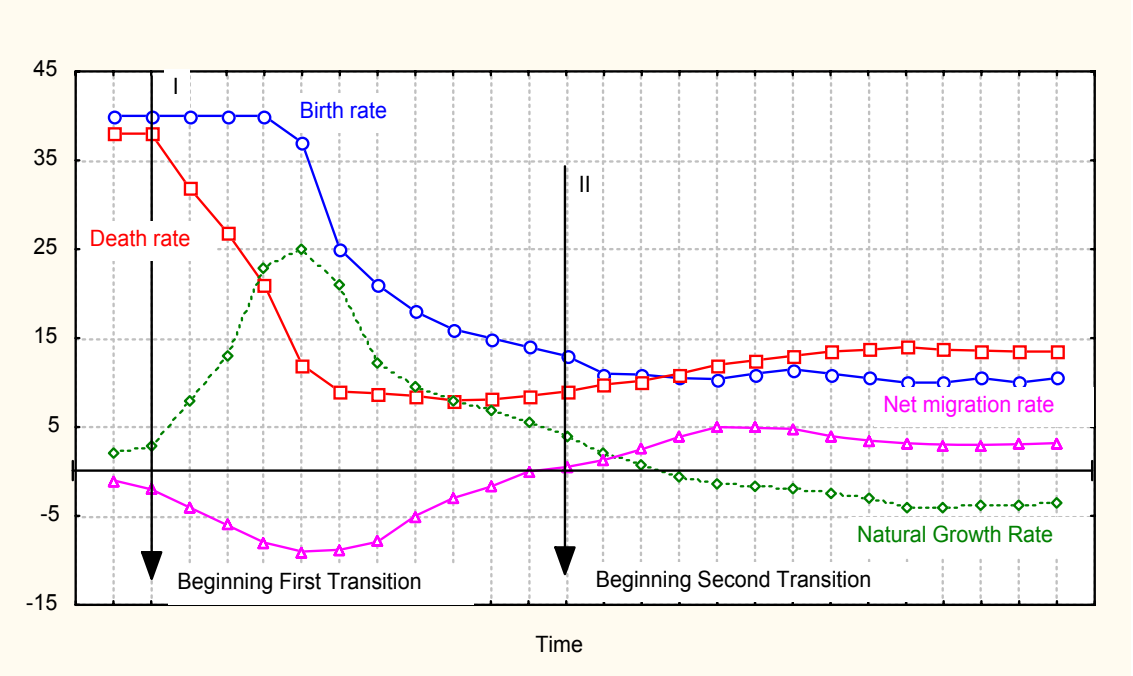
4. A schematic representation of the two transitions

As sketched before, the classical model of the FDT customarily only displays the interplay of two population growth factors: mortality and fertility. The third line in the standard graph then depicts the difference between the birth and death rates: the rate of natural population growth (see Chesnais, 1986, for a good example). As McKeown (1976) observed, this is '... consistent with the conclusion that the main restraint on population growth was a high level of mortality determined directly or indirectly by the available food'. In his article on the social control of human reproduction, Lesthaeghe (1980:528) expressed much the same idea when he described the force of mortality as the '... central factor in demographic homeostasis...' The assumption is that populations had built-in mechanisms, 'preventive checks' such as delaying age at marriage, to counteract the effects of declines in mortality. It is only after the decline in mortality resulted in an uncomfortably high rate of population growth that marital fertility became deliberately limited. It is understandable, perhaps, that in such a frame of mind mortality and migration were not immediately introduced as components in the concept of the Second Demographic Transition.

Later on Dirk van de Kaa did try to include these other variables of population growth. His reasons for doing so stemmed, according to the lecture he gave at the National Institute of Population and Welfare in Japan (Van de Kaa, 2002) from empirical observations of the trends in these variables. An unexpected rise in the life expectancy at birth, and more particularly at advanced ages, surprised demographers nearly as much as the decline in fertility had done. Evidently the life expectancy at birth for women could reach 80 years or more. 'And, as far as migration was concerned, there was the example of several Western European countries where guest worker schemes had been initiated in the 1960s and early 1970s. At first the movements were limited to the continent: labour from the south travelling north. But these streams dried up quickly once social and economic developments in the south gained momentum. Recruitment of unskilled labour in relatively backward areas of Morocco and Turkey followed. They were expected to leave upon completion of the contracts. Instead many guests preferred to act as a vanguard for their families and village. Family reunification and family formation generated a steady inflow while from the early 1990s onward asylum migration gave an important new dimension to the phenomenon of international migration towards the continent.' In the history of population development in Europe the second half of the 20th century apparently constituted an important divide and, in his view, this ought to be reflected in a more comprehensive graph.

This graph shows for the pre-transition phase mortality rates, punctuated as they were by epidemics, to be on average close to the birth rates so that natural population growth remained close to zero and at times could even be negative. When at the start of the first transition the death rates declined due to better health conditions, hygiene, level of living, and better insight into the cause of infectious diseases, the birth rate was slow to react and natural growth rates increased. Net migration then became mostly negative as surplus population was siphoned off to the 'new' European territories overseas (Hatton and Williamson, 1994). As the transition ran its course the mortality and birth rates grew closer together. Rates of natural population growth subsided so that for the post-transition years a new balance between fertility and mortality appeared to be in the

Figure 4.1. Schematic representation of the First and Second Demographic Transitions



Source: Van de Kaa (1999).

offing. But, as fertility dropped to a level close to or below that required for the replacement of generations, the birth rates declined further while, as a consequence of the ageing of the population, death rates increased. Natural population growth rates then become negative. The influx of migrants then partly compensates for the changed relation between births and deaths and is assumed to keep population numbers from falling, at least from falling dramatically.

It is important to note that while all the lines in the graph are continuous, the relationship between the variables is not. Mortality is conceived as the driving force of the FDT, fertility responds to it, with emigration acting as a safety valve. In the SDT fertility and mortality both decline as both are strongly influenced by normative changes in advanced industrialized societies. But it is the marked decline in fertility that is the driving force in making the natural growth turn negative, and migration turn positive.

The shift in value system just referred to stresses individual freedoms and personal choice. Campaigns emphasizing the responsibility of individuals in staying healthy and in preventing a premature death are relatively effective in societies where seeking self-fulfilment is the generally accepted behavioural principle. Its effect on death rates and the life expectancy at successive ages will, obviously, only manifest itself after a certain time. Hence the response of mortality to it is lagged in comparison with fertility. Both the renewed decline of the birth rate and the marked increase in survival at advanced ages, accentuate the ageing process already taking place in the industrialized societies involved. Reductions in the number of young people seeking entry on the labour market, and the changes in age composition of the population will, directly and indirectly,

already have led to an increased demand for foreign labour and a migration surplus of immigrant (guest workers) before natural growth rates fall below zero. And, as in the world as a whole high population growth is associated with a low standard of living and shortages of capital, the industrialized counties become ‘epicentres’ of migration as Mick Borrie (1913-2000) has characterized them. This is the more problematic to these countries because they are committed to the free movement of capital and labour, at least in principle if not in practice, and find it difficult to respond to the multiculturalism arising from the influx of migrants.

5. Explaining the First Demographic Transition

To argue that both the FDT and SDT should be seen as being the consequence of social change is, obviously, a truism. At the heart of the matter can be nothing else than changes in the structure, culture, and technology of the societies experiencing the transitions. But what, precisely, is it that generated the demographic changes? What were the crucial factors involved? Both the ideas about the FDT and SDT have generated an enormous amount of research to clarify these questions. It would be unwise and incorrect to say that these efforts have provided all the answers sought. But the matter now is sufficiently clear to conclude that for the two successive transitions different elements should be emphasized by way of explanation.

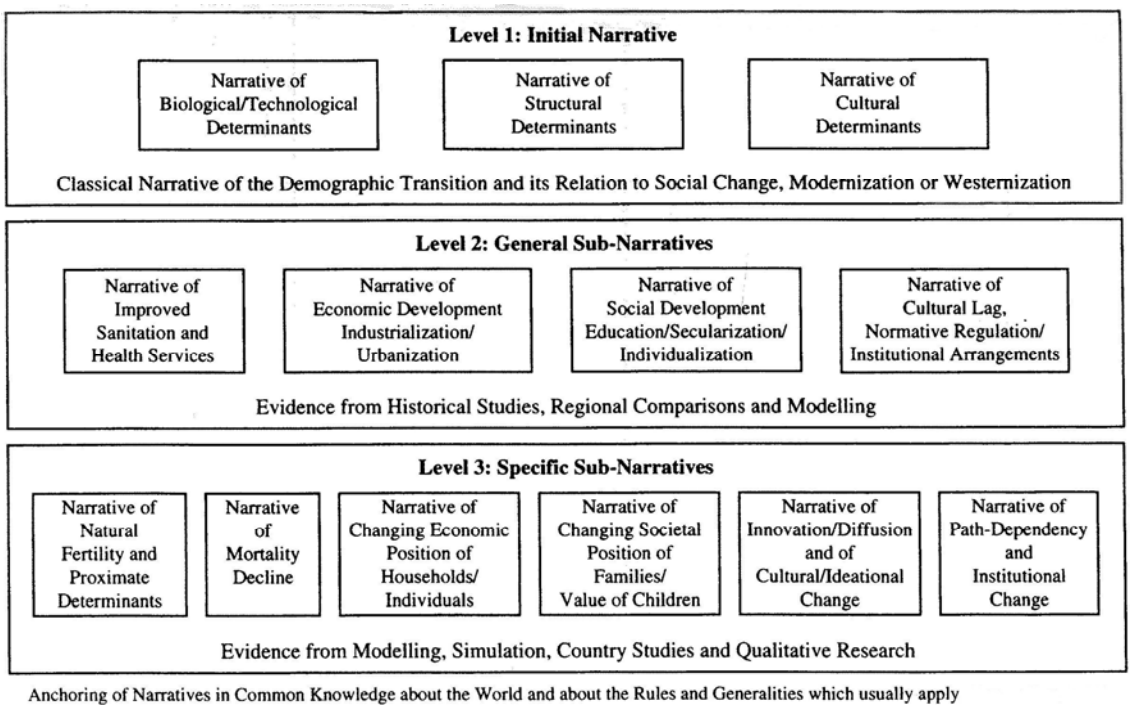
A number of large-scale projects have been devoted to the first transition. Of these the Princeton European Population Project has been the most important. But, since 1954 summary publications or proceedings of at least 30 major projects and efforts pertinent to transition theory have been published, and hundreds of scientific papers on the issues involved found their way to refereed journals. Interestingly enough the 50th volume of the well-known demographic journal *Population Studies* (No 3, 1996) contained two contributions providing an overview over a great deal of that work. The two authors, Dudley Kirk and Dirk van de Kaa, respectively, approached their allocated topic in much the same way. They review the literature by grouping it according to the direction of the explanation for the transitions and the declines in fertility. Not surprisingly the two authors used much the same literature and came to much the same set of topics. These cover a broad field and can be represented in the form of a hierarchical narrative structure (See 2).

However, for the present purposes it is more convenient to discuss these under three different headings, as shown below.

5.1 Biological and associated factors

In the early discussions about the FDT it was commonly assumed that in all societies 'natural fertility' prevailed before the onset of the decline of fertility. But what exactly, was that? Both research into the historical record and research of a methodological nature was undertaken to clarify the issues. Louis Henry (1911-1991) defined natural fertility as legitimate fertility in the absence of contraception and abortion. It is now generally understood to mean the pattern and level of fertility that results when couples do not adjust their behaviour depending on the number of children already born. It was found that even though family limitation was not practised and may not have been known to most of the population in the pre-transitional period, the average number of children born per family was not uniformly high A limitative set of eleven intermediate variables presented by Kingsley Davis and Judith Blake (1925-1993) in 1956, that all play a role in the chain of events that determine the exposure to the risk of conception and the outcome of a pregnancy, appear to be responsible for the variations in natural fertility observed. Later on Bongaarts (1976) collapsed the Davies and Blake variables in three categories —exposure factors, deliberate marital control factors, and natural marital control factors— and was able to identify the

Figure 5.1. Schematic presentation of the explanatory structure of transitions



Source: Van de Kaa, 1996

four most important 'intermediate' or 'proximate' determinants that determine the difference between the capacity to reproduce and the number of children per woman actually born. These proximate determinants are: the proportion married, the degree of non-contraception, abortion, and the duration of the nursing period (lactational infecundability). From the perspective of transition theory significant findings are that even in natural fertility regimes, fertility will always be lower than would be biologically possible. Where fertility is 'natural' the crucial proximate variables are the time spent in marriage or union and lactational infecundability. Deliberate control through abortion or contraception will have age specific effects and will first show up at the higher ages of childbearing. The modernization of a society where contraception is not practised will show a fertility response in two phases if reductions in the duration of the period of lactional fecundability and post partum abstinence precede the acceptance of contraception. Fertility will then first increase before declining. Once fertility starts to decline as a result of the acceptance of birth control it has proven to be an irreversible process.

Mortality decline plays a central role in explaining the FDT. It is seen as the driving force of that transition even though, curiously enough, its onset is commonly defined as a 10% drop or more in marital fertility without fertility rebounding thereafter. The validity of the proposition that during the FDT mortality decline drove fertility decline has been extensively investigated. The results show that, in order to be tested, the proposition needed to be refined and to be translated in concrete hypotheses. For, while intuitively very appealing there is, as Cleland (2001) argued after a review

of the literature, no mechanical relationship between mortality and fertility decline. In his view too many mediating factors obscure any mechanical dose-response relationship between probabilities of survival and fertility trends. Declines in fertility have been documented for a wide variety of social and economic settings. They were, when looking at small regions, not always preceded by a mortality decline. In itself that is not surprising as one must assume that it is only some time after families note that the number of surviving children is rising that they will respond to that. And even then reducing the number of children per couple through contraception may not be the first reaction in a population. Later marriage or increasing the proportion remaining celibate may be more acceptable ways of resolving an 'overproduction' of births in a society. Approached from a different angle one must accept the old argument that low fertility is not compatible with high mortality. And, indeed, no declines in fertility have been observed in the absence of mortality decline. But while mortality decline to a level of life expectancy at birth in the order of 50 or 60 years may be a necessary condition for fertility decline one should not conclude that it is a sufficient condition. Mortality is not the sole causal agent of fertility decline. Both mortality and fertility decline are likely to be responses to broad changes in society, such as improvements in standard of living, increased urbanization, rising aspirations and so on.

5.2 Economic and social factors

In the search for explanations of the FDT the economics of childbearing has been an important focus of attention. The general approach to that aspect has been that the impressive economic developments observed over at least a century and a half, have made having a large family a very unattractive proposition. While this idea was certainly present in early French writings the association between demographic transition and 'progress' or modernization came particularly strongly to the fore in the United States. In contrast to the early French authors the Princeton group assumed that pre-transitional fertility was rational and that as incomes rose limiting family size was a sound response. When in an industrializing and urbanizing society children will have to offer themselves on the labour market in order to earn an income having had a good education will give them a life-long advantage. Hence couples limit the size of their family to the number of children they can afford to send to school and have well trained. In the 'home-economics' theory expounded and expanded by Becker (1960, 1981) the demand for children is assumed to vary with income. Parents are free in their choice to maximize the utility they derive from their children by varying their quantity and quality. The utility from children can be compared to that from other 'consumer' goods. The more is voluntarily spent on each child the higher its quality because parents derive additional utility from that additional expenditure.

Numerous criticisms have been levelled against the pure demand theory of fertility. Cleland and Wilson (1987) have argued that models based on that theory have no future as recent demographic changes outside of Europe provide evidence to the contrary. Moreover, demand models do not give specific consideration to the supply side, nor to questions of tastes, preferences, or aspirations. The economic analysis has been extended into at least five directions: the treatment of children as 'commitment goods' or 'status goods', the consideration of investment in human capital, the allocation of human time to market and non-market activities, the household production function, and the conceptualization of the family and household as units which not only make decisions about the consumption of goods (including children) but also about their production. Efforts have

also been made to broaden their sociological and/or biological frame of reference. Richard Easterlin who in 1978 attempted to arrive at a synthesis of the demand and supply theories of fertility made the most important contribution to that. In his approach, as later elaborated in collaboration with others, the determinants of fertility and, consequently, of its decline during the first demographic transition, are seen as working through a family's preferences for consumption, children, and fertility regulation. And, through four constraints: (1) a budget constraint that reflects the limitations implied by the market prices of goods and services, the wage rates of family members, any non-labour income, and the time at the disposal of household members; (2) the household's technology which enables it to convert market goods and the time of family members into commodities; (3) a 'fertility production function' that expresses the number of live births as a function of frequency of intercourse, reproductive span of the household, fertility regulation practices, and the commodities, goods, and practices that govern the probability of conception; and (4) an (infant) mortality function that expresses mortality to adulthood as a function of nutrition and health conditions. The number of surviving children per family is assumed to depend basically on the 'demand' for and 'supply' of children, the monetary and psychic costs of fertility regulation, and the level of infant mortality. In a later study, aptly entitled *The Fertility Revolution,* Richard Easterlin and Eileen Crimmins again considered the basic components demand and supply for children and fertility regulation and its costs. Their theoretical model is relatively straightforward as its inserts supply, demand and regulation variables between the 'basic' determinants, which are influenced by modernization (education, urbanization) or reflect cultural and genetic factors, and the proximate determinants discussed above.

In early discussions about the FDT it was usually assumed, and frequently explicitly stated, that the provision of contraceptive information, services, and supplies would redress the 'irrational behaviour' of maintaining large families once mortality had declined. A proposition put forward by John Caldwell in 1976, however, is that the limits of economically rational behaviour are set by non-economic factors. It is these non-economic factors, the social conditions that prevail in society, which prevent fertility from falling below a floor when it would be economically rational to reduce fertility to an ever lower level, and which provides a ceiling when it would be economically rational to have ever more children. In Caldwell's view the fundamental issue in demographic transition 'is the direction and magnitude of intergenerational wealth flows or the net balance of the two flows – one from parents to children and the other from children to parents – over the period from when people become parents until they die'. Fertility decline will not occur, so Caldwell argues, before the wealth flows, which in traditional societies will go from children to parents, have been reversed. He does not expect that to occur 'before the family is largely nucleated both emotionally and economically'. The wealth flows proposition predicts that traditional familial production will be economically advantageous to high fertility. That production system is usually governed by rules that benefit the powerful – the older and male members of the family. It is only when a non-familial, commercial capitalist mode of production becomes important and the social function of the family changes, that fertility decline is likely to manifest itself. Then the transition will be a fact.

It is evident that the shift from a familial to a capitalist mode of production is strongly associated with the processes of modernization and/or westernization. If modernization is conceived as a gradual adjustment to changing local conditions, and westernization as a process of adopting

imported concepts and institutions, it follows that modernization is the central element in the transition in the historical West, while in the developing regions 'westernization' will be more important. The crux of the matter, however, is that in both cases socio-cultural developments (urbanization, education, types of occupation) change the relationship between the members of a family or household.

Caldwell's propositions have not gone unchallenged. The thought that fertility will start to decline once 'net economic advantages from children are no longer anticipated' is too deterministic. Children also represent socio-demographic and psychosocial values to parents. They help ensure continuity of generations, provide security, parenthood satisfactions, role motivation, happiness, affection, and the like. Extensive research into the value and disvalue of children has found support for the hypotheses that the vanishing economic roles of children, and rising aspirations of people, do stimulate fertility decline and, thus, the First Demographic Transition (Bulatao, 1980).

5.3 Innovation and institutional factors

Innovation and diffusion have long been seen as having had a major influence on the transition process. While initially few adopted the new practice of parity- specific birth control, others, seeing that it was advantageous, followed suit rapidly until a saturation point was reached. The results of the Princeton European fertility study lent support to that innovation theory in that the simultaneity of the start of fertility decline in Western Europe and the weakness of the relation to development variables such as infant mortality or degree of urbanization suggest that diffusion was at work. Cleland and Wilson (1987) have been very outspoken on the matter. They feel that the 'fact that family limitation in its modern form of parity-specific control was largely absent from traditional societies means that explanations of the transition must include innovation and the adoption of new ideas and forms of behaviour'.

Lesthaeghe for the presence of ideational/cultural factors in the transition in historical Europe has argued the strongest case. Alone or in collaborations with his colleagues in Brussels he has explored the underlying dimensions of fertility change in an important series of papers written in the 1980s. Statistical analyses in which declines in fertility were related to such factors as the proportion of voters for secular political parties, the proportion of the population absent from Sunday Mass, the proportion of the population in urban areas or engaged in agriculture, family farming, or cottage industry, and the ratio of divorced to married women, led him to formulate conclusions which stress the 'increasing centrality of individual goal attainment, that is, the individual's right and freedom of defining both goals and the means of achieving them' (Lesthaeghe, 1983: 429). The idea is that the moral and ethical acceptability of fertility control does not simply rely on socio-economic change, but is part of a broader ideological development.

The essential aspects of the concept of path-dependency are easy to understand. It stipulates that the probability of a specific choice being made will, at least in part, depend on the way previous choices of that type were made. The consideration and discussion of path-dependency and institutional change in relation to the first demographic transition has clarified that institutions relevant to demographic behaviour form an integral part of the ideological system, economic organization, daily life, and the political structure of a society. Material and ideological aspects are

intertwined. The institutional endowments of a society will reflect its unique history. As a consequence, the demographic response of a society to changing circumstances, in the probabilities of survival, in security risks, in sex roles, or in policies pursued by a government will in some measure be unique. Certain combinations of institutional endowments are likely to have been more conducive to an early demographic transition, while other may have impeded it. Over time sufficient material has been accumulated to conclude that path-dependency and institutional constellations may be mainly responsible for the regional flavour that can be detected in demographic transitions.

5.4 Ready, willing, and able

What does all this lead to? Is there any way in which the essence of the FDT can be summed up? Some demographers have attempted to do it and then have, understandably, focussed their attention on fertility decline. At this stage Ansley Coale deserves to be referred to here. In 1973 he argued that there were three preconditions for marital fertility to decline. These are:

- Fertility must be within the calculus of conscious choice;
- Reduced fertility must be perceived to be advantageous;
- Effective techniques of fertility reduction must be known and available.

This list has become know as the ready, willing, and able formula, which, indeed, is a very apt description.

6. Explaining the Second Demographic Transition

There is every reason to assume that the factors identified as having played an important role in generating the FDT are also relevant in explaining the SDT. But, given that many decades have passed between the onset of the first and second transitions one would expect significant shifts in emphasis.

6.1 Innovation and institutional factors

While always stressing that all elements of social change (structure, culture and technology) are involved, the story of the SDT as told by its proponents, is the quintessential narrative of ideational and cultural change. They highlight the significance of people's views on life, their social philosophy, and their ideological orientation on the actions they take. In a discipline that has always had an open eye for the power of religion and political ideas, and for the ideals people have, that emphasis is hardly new. But, what distinguishes the explanation of the SDT from that of the FDT is the overwhelming pre-occupation of the populations experiencing the second transition with self-fulfilment, personal freedom of choice, personal development and life style, and emancipation. It is that pre-occupation that one finds reflected particularly in family formation and dissolution, attitudes towards fertility regulation and motivation for parenthood. But, it is not limited to these determinants of demographic change and growth. It is a much broader, novel feature of many contemporary Western societies. Ronald Inglehart has described the change as 'a silent revolution'. He first used the term 'post-materialism' to characterize the shift, but in a later book (1997) uses 'postmodernization' when speaking of the cultural, economic, and political changes in the 43 societies he surveyed. Using data from the European Values Study 1981 Ron Lesthaege and Dominique Meekers (1986) carried out a detailed analysis to establish the relationship between family formation and value orientation in the countries of the European Community. As dependent variables they constructed five scales that measured value orientations with respect to family and procreation. As independent variables they included, inter alia, three scales measuring religiosity and several scales pertaining to Inglehart's dimension of materialism versus post-materialism and its political correlates. They conclude that family formation is essentially conditioned by long-term ideational changes, but that economic factors are superimposed on the ideational effects. After religiosity the Inglehart scale and its correlates proved to yield the best predictors. They also note that 'the meaning of parenthood is cast more in egocentric terms than in terms of social duty. 'Couples and individuals apparently become parents to satisfy their private needs …'

It is by no means accidental that the onset of the SDT in the countries of northwestern Europe coincided with the advent of modern highly efficient forms of contraception such as the pill and the IUD, and that in many countries legislation regarding abortion and sterilization became more liberal. With that the control over fertility became almost perfect and the traditionally strong link between sexuality and procreation was severed. 'Exposure to the risk' of childbirth declined and (semi-) permanent contraception within marriage and union became the standard. 'Perfect' contraception made postponing marriage and childbirth feasible. It is difficult to over-estimate the

societal impact of the changes in contraceptive technology. Instead of having to act deliberately at every intercourse to prevent conception, couples now deliberately had to interrupt contraception if a conception was desired. As the proponents have argued, there can be no doubt that the innovations in contraceptive technology that were introduced around the mid-1960s have acted as a catalyst for the many changes in demographic behaviour that constitute the SDT. Not that the relation between fertility decline after 1965 and the use of oral steroids as such has proven to be particularly close (Leridon, 2006) and that these as such were, to paraphrase Notestein, the cause of the fertility decline in 'any profound sense'. But just as Landry did in the early 20th century one may stress the point by posing the rhetorical question whether the remarkable changes in fertility and family formation observed since the mid-1960s would have occurred in the absence of vastly improved means and methods of birth control?

6.2 Economic and social factors

The SDT started in Western Europe some 20 years after the Baby Boom generated by the Second World War and after a period of very concentrated economic and social reconstruction and expansion. In fact, just as Thompson has argued with regard to the First World War it is not unreasonable to assume that the tremendous waste of life witnessed or experienced by the populations concerned did in itself influence their thinking about population issues much more profoundly than is commonly assumed. Making the gift of babies to the motherland or society is not appealing, one would think if people feel there is a good chance these might have to face serious upheaval, large-scale slaughter even, a few decades hence. Moreover, the war must have aided the spread of the condom amongst the military and the survivors and will have changed their overall attitude concerning the practice of contraception. But in the literature it is generally assumed that the tremendous increase in income per head of the population, and the concomitant development of social-welfare states has had a much more profound impact. It is a central 'enabling' factor in that it made people much less dependent on the wishes, whims and views of members of the family, and others. It changed the position of marriage and the family as institutions. And, as Ron Lesthaeghe and Dirk van de Kaa argued in 1986, it is precisely that change in the prevailing family model and its manifestations that are so characteristic of the period after the mid-1960s and the SDT.

Even so, economic changes also lie at the origin of new societal issues that, in more recent years, policy makers frequently perceive as problems and conflicts. The development of social security systems, for example, has created a safety net that assured people a reasonable existence even under adverse conditions. It made parents completely independent of the income of their offspring. This granted people much greater individual freedom in their personal relations, in organizing their life, and in choosing their own life style. The educational system could be expanded enormously. That enabled girls and young women to invest more in their own training and skills and increased their desire to be an active member of the labour force and aided their emancipation. The societal pressures to benefit more from the human capital embodied in that section of the population rose as the size of the new cohorts entering the labour market diminished. Authors such as Tomáš Sobotka (2004) and Magdalena Muszyńska (2007) have stressed the impact of the growing conflict between employment and motherhood on the postponement and level of fertility. This conflict has tended to increase the opportunity costs of having children while the direct costs of good childcare,

and the lack thereof, is thought to have depressed fertility. In the last decades the process of globalisation and the rigidity of the labour markets, so Hans-Peter Blossfeld and his colleagues have documented for European countries, appear to have made it difficult for young people to secure a permanent position. They have been described as 'the losers in a globalizing world'. Consequently it is thought that it probably takes the current generation a great deal of time before they feel sufficiently well off to found a family. All in all it would seem that economic developments, while greatly increasing the opportunities for self-fulfilment of individuals and while furthering the emancipation of women and under-privileged groups, have made becoming a parent in Europe, as John Hobcraft and Kathleen Kiernan have sketched (1995), a much less simple and much less attractive proposition than before. Some authors advocate greater gender equity as a means to redressing that and to stimulate fertility.

In the discussion about the SDT economic arguments do, similarly, play an important role in regard to international migration. Reginald Appleyard (2002) has concluded that globalization has had a multi-faceted and significant influence on the volume and direction of highly skilled migrant workers. 'Many governments, eager not to miss out on the benefits they perceive that globalization endows, have … deliberately relaxed restrictions on the entry of foreigners … who have skills'. He also has noted that information technology has made a major contribution to the internationalising of staffs and the creation of global outlooks. Moreover many of the factors identified by Douglas Massey in his synthesis of migration theories (2002) are at work in the advanced industrial societies. The six theories pertinent to the initiation of migration flows and the four theories leading to the persistence of the flows he and his colleagues distinguished in 1993 are nearly all of special relevance to the highly industrialized countries where the SDT was first recognized. Such theories will, no doubt, be described in some detail in another chapter. Suffice to note here that, for example, both the dual market and the world systems theory almost inexorably generate migration streams towards societies where a pre-occupation with personal self-fulfilment is common. Well before illegal migration became an issue of serious concern in these countries they introduced guest worker schemes to deal with labour shortages detected in certain sectors of the economy. The guest workers were meant to fill the gaps left by the local population as these considered that certain jobs did not give them the status in society they sought. That the guest workers came to stay and that, partly as a consequence of that numerous dependants and other economic migrants also sought entry came largely as an unwelcome surprise to the policy makers who had assumed they were simply solving a minor, temporary problem of labour supply.

6.3 Biological and associated factors

Since World War II insight into the biological and biochemical aspects of human reproduction has vastly increased. Its influence on demographic thinking and behaviour has been very profound and its impact is continuing. The development of hormonal contraception by Gregory Goodwin Pincus (1903-1967) and his collaborators during the early 1950s has, as argued above, quickly changed the fertility control and family planning options available to individuals and couples in advanced industrial societies some 10 years later. The quality and or ease of use of other means of contraception (condom, IUD, spermicidal pastes) were much improved while hormonal contraception became available in different forms (e.g. injectibles). In the wake of, or simultaneously with these improvements in technology many countries adopted important legal

changes that increased access to abortion or sterilization that, in turn, stimulated technical improvements of the surgical and other techniques involved. More recently in-vitro fertilization (IVF) and other means of assisted reproduction have become a significant factor in the lives of sub-fertile couples. The same holds for individuals desiring to have a child without wanting to live with a partner, or for individuals living in a same sex union/marriage. Assisted reproduction is likely to increase in numerical importance as the age of mothers at first birth rises further.

Mortality as a topic in its own right will be dealt with in a separate chapter. Suffice here to point out that numerous important analyses have been published that highlight the very significant shifts in morbidity and mortality that occurred in highly industrialized societies in the last decades. The compression of morbidity and the way the mortality curve seemed to approach a rectangle have become well known topics. The same can be said of results showing exceptional longevity amongst populations that were highly selective as regards level of education and background (Fries, 1982; Manton et al., 1991; Kannisto et al., 1994). In any attempt to explain the Second Demographic Transition it is, clearly, desirable to keep in mind that by 1970 infectious diseases had been largely brought under control (Omran, 1971). A third phase in the epidemiological transition could then begin (Nizard, 1997). It is the phase dominated by individual prevention of disease. Stopping with smoking, eating a healthier diet, and taking more physical exercise will, as is now generally accepted, increase the chances of survival and thus longevity. Growing individualism and the desire for self-fulfilment, so characteristic of the second transition, are commonly assumed to have had a fairly direct bearing on people's fertility intentions and average family size. However, they must also be assumed to have positively affected the chances of survival and, particularly, the life expectancy at higher ages

7. Transitions in context

The ideas about demographic transitions as now sketched are difficult to grasp without understanding that they have been developed in a specific scholarly and intellectual context. The same is true of the discussions that have followed the launching of the 'transition' concept. And, some aspects continue to play a role in the ongoing debates.

7.1 Transitions, revolutions, regime change, 'compromises' and homeostasis

It is easily understood, and commonly accepted, that a reciprocal relationship exists between social change and changes in demographic behavior and, consequently, the structure and composition of a population. A decision to migrate may, for example, result from an oversupply of agricultural labour in one place and an increased demand for unskilled labourers elsewhere, while they may both be influenced by the process of industrialization and global shifts in the demand for specific products. There really is no limit to the number and range of examples that may be given. All that needs to be repeated here is that social change comprises changes in the structure (economy, environmental conditions, level of urbanization, etc.), culture (religion, value system, education, etc.), and technology (communication, means of family-planning, etc.) of a society. A branch of scholarship called 'human ecology', now no longer as actively pursued as in the 1960s, has used a lozenge or diamond to represent the relation between a population, the environment in which they lived, their social and familial organization, and their technology. Such well-known authors as Amos Hawley and Otis Dudley Duncan, both past presidents of the Population Association of America, characterized it as an equilibrium seeking system. The interrelationships between the four factors were seen to be dynamic and homeostatic: each change in one of the four variables would affect all and the equilibrium would differ between places and over time.

In the history of mankind one major shift in technology is usually recognized as having had a tremendous impact on the relationship between the elements of the lozenge. It occurred some 10 000 years ago and is frequently described as one of the most decisive developments in the entire history of our species. It caused the so-called 'Neolithic revolution' that began with the rise of farming at the end of the Stone Age. The Neolithic revolution enabled populations with 'new' stone-age techniques and methods to grow wild and domesticated grains such as einkorn, millet and spelt, to raise sheep and goats, and to become largely sedentary. That population pressure contributed to this particular revolution is not impossible but becoming sedentary most certainly had far-reaching societal and demographic effects. It allowed the establishment of larger population centers, the development of hierarchical structures and occupational specialization, and, even more important, it contributed mightily to subsequent population growth. In brief, it caused a major change in demographic regime.

In many instances changes in the structure, culture and technology of a society will have been sufficiently slow and gradual for the shifts in population trends to be hardly noticeable or will have only lightly affected one element of the demographic system. In that case simple terms such as 'upturn', 'drop', and rise' in a specific demographic measure would normally suffice to describe

what has occurred (Thornton, 2005). However, there clearly can and have been cases where the whole demographic constellation is affected and whereby a demographic regime that has functioned for an extended period of time makes place for the next that will again be in force for a longer period. It would seem to be not at all unreasonable to denote the period when one system is making place for the next as a 'period of transition'. Where a great reversal of conditions is involved, the situation is turned upside down, and the outcome is still uncertain, it would, perhaps be best to speak of a 'revolution'. In demography that fine distinction is not usually made. Transition and revolution are used interchangeably although the use of the first term is much more common than that of the second. In connection with the first 'transition' the use of that specific term is, however, probably more suitable than in connection with the SDT. The FDT clearly refers to a shift from one quasi-equilibrium demographic constellation to another. The outcome of the second transition or revolution is still in doubt. It may not result in a new balance although that possibility is not a priori excluded. Caldwell, who perhaps is skeptical about the degree of stability of 'regimes' recently introduced the term 'compromise' to characterize them. He sees both the FDT and SDT preceded, separated, and succeeded by 'compromises' (Caldwell, 2007). In a sense these compromises embody and reflect the complex relationship between demographic behavior and the structural, cultural and technological conditions prevailing in societies during a certain phase in their development.

It is quite evident from the literature reviewed and quoted before, that among the forerunners of the discussion about the demographic revolution/transition such as Thompson and Landry, it was common to think in terms of 'regimes' and 'equilibrium seeking' tendencies in populations. Even in the work of Notestein the influence of concepts applied in human ecology is clearly present. When during a conference debate in 2003 Van de Kaa tried to justify the use of the term 'Second Demographic Transition' he also argued that it was warranted given the crucial differences in the homeostatic, compensatory mechanisms at work. He wrote that in the late 18th century '… the decline in mortality led to an adjustment in fertility. Now it is the second natural growth factor, fertility that apparently makes reaching and maintaining a long-term population balance an unattainable objective'. And also: 'It is the unprecedented low level of fertility, coupled with the increased expectation of life at advanced ages, that exacerbates the ageing process and makes migration the obvious variable to provide compensation'.

The general reason why the prospect of fertility remaining below replacement level for an indefinite period of time is so unpalatable to many demographers, politicians, and policymakers may also be that they assume that an 'equilibrium' of sorts is the natural state of affairs. The prospect of long-term decline goes counter to the idea that homeostatis will always create a new 'balance' between the components of demographic growth. Many population specialists are convinced that, if necessary, every effort should be made to achieve and maintain such a balance. They consider it achievable provided appropriate policy measures are taken.

7.2 Transitions and the Developmental Paradigm

Given the variability in environmental and geographical conditions in the world the number of demographic regimes that has existed at any one time undoubtedly has been tremendous. The broadest cultural entity that covers a people's overall way of life and that, very typically, is a reality

of an extremely long duration, is the civilization. It is easily understood that because of their environments and cultural heritage different civilizations have had different demographic histories and experiences. For the contemporary world Samuel Huntington (1997) distinguishes the Sinic, Japanese, Hindu, Islamic, Orthodox, Western, Latin American, and —possibly— African civilizations. Each of these covers a major portion of the earth and each is endowed with a different demographic history and tradition. It should be noted that, as was discussed before, the demographic revolution/transition concept has been developed largely on the basis of assumptions made about the early population history (e.g. Landry) and the more recent experiences documented for one of these civilizations: the Western civilization. It has, more particularly, been the observations made in the countries of Northwestern Europe and their comparison with descriptions about the situation and traditions in other cultures that led to the formulation of the 'demographic transition' theory and concept (e.g. Notestein and colleagues). There it was found to be closely associated with the process of social change and, thus, with economic, cultural and technological development. It is not surprising, therefore, that the concept of a 'transition' through which these countries were all passing, bears a fairly close relationship to the conceptual framework usually denoted as the developmental paradigm. Scholars from the region used this paradigm until at least the mid-1900s. It assumed, as Arland Thornton (2005) put it, 'that individuals, organizations, and societies necessarily go through natural and uniform sequences of change'. It is also 'teleological in that it presupposes a natural and irresistible force moving societies… to some end state. At any one time some country or region will be closest to that end state and will, consequently, have reached the pinnacle of development. For obvious reasons European scholars of the time had no problem in locating that pinnacle in their own region.

The common practice of 'reading history sideways', as Arland Thornton has called it, has similarly exerted a profound influence on 'demographic transition theory'. As shown earlier, a frequently used device in demographic studies was to group countries according to a certain number of characteristics and then to read a sequence of stages of a single process into that cross-cultural pattern. That principle was applied within the region as well as between regions. Small wonder that literature about fertility and demographic change frequently, though mostly implicitly, assumed that trends documented in the 'most advanced parts' of the European continent would spread wider and wider. To paraphrase Thornton, the developmental paradigm was, and is, also used to 'read the **future** sideways'. This is both understandable and sensible as the paradigm may give much more directionality to developments than one would otherwise expect. For, the more general the support for the developmental paradigm the greater the likelihood that individuals, governments, and the world community at large will join forces in seeing it fulfilled. And indeed, successive world population conferences have adopted plans of action aimed at speeding up social and economic development and through that the demographic transition process in all parts of the world.

7.3 The Third World and the European experience

The transition concept contained the implicit assumption that, given time, other regions of the world were bound to follow Europe's route. One may now conclude that the idea that the FDT would be a universal phenomenon in human populations has proven to be correct. Quite probably aided by broad support for the developmental paradigm the decline in mortality and fertility in the world has become general. To quote Susan Cotts Watkins' phrase of 1987 'Fertility declines –

completed or in progress- span the globe.' Writing in 1996 she and John Bongaarts noted that 'Over the past three decades, rapid fertility transitions have been observed in a majority of developing countries'. And by 2001 John Casterline could write of Asia, Africa, and Latin America that '… only a few countries that in the aggregate make up a very small fraction of the population of these regions have not yet begun fertility decline'.

Thus, there is no doubt that all populations of the world will indeed experience a transition that sees high levels of mortality and fertility replaced by much lower levels. But, what is particularly interesting is that fertility declines have, as Watkins formulated it '…begun in countries that differ widely in economic arrangements, social structures, political regimes, national histories, and culture, and they have begun in disparate national contexts.' To her it appeared that the change in economic circumstances had not been as rapid as the change in reproductive behavior. She therefore felt that the pervasiveness of the fertility transition was not comprehensible unless '… some degree of diffusion —either of new ideas or of new techniques— 'was assumed. She argued that there is no reason why ideational change could not be at least as rapid as economic change and saw in the fact that once begun fertility declines inevitably continued a sign of profound changes in values. Later on systematic analysis involving 69 developing countries over the period 1960-1990 has revealed that the level of development at the onset of a fertility transition had a significant influence on the rapidity of the fertility decline. Countries that entered the transition at low levels of development moved much more slowly towards lower levels of fertility than countries starting the process at higher levels of development. This presumably because in the latter group of countries unwanted childbearing had already reached a higher level so that there was an unmet need for contraception. It was also found that the diffusion concept was too narrow. Bongaarts and Watkins (1996) have suggested that 'diffusion' be replaced by 'social interaction'. In regard to fertility this involves the exchange of information and ideas, the joint evaluation of their meaning in a particular context, and the social influence that constrains or encourages action. In this case the exchange of information would, of course, refer to techniques of fertility control. The evaluation would involve discussing with friends and relatives whether their use would be beneficial under the circumstances prevailing in the community, village or family. Social influence, finally, is exerted on the behaviour of individuals by what they assume to be the degree of approval their behaviour is likely to meet amongst their peers or relevant others. Social interaction will not only occur at the local level, it will also take place at the national and global levels. Within regions countries tend to follow one another and countries that are more involved in global matters tend to see more international information about population problems and issues, and about the advantages and disadvantages of family planning, disseminated in their population. So, in many respects Bongaarts and Watkins follow the theoretical framework of the classical FDT narrative in that they consider socio-economic development a very important underlying force. They conclude, however, that '…development alone is insufficient to account for observed variations in the timing of the onset of transitions or in variations in their pace and that social interaction should be taken into account'.

Understandably, the degree of social interaction about a specific societal issue can be influenced by government policies. These may hamper or stimulate the exchange of information and the social interaction process. Increasing the awareness about the consequences of rapid population growth and the provision of family planning services have been important means used by governments in developing countries to speed up the demographic transition. According to Bongaarts (1997) they

have done so with considerable success. His estimate is that strong voluntary family planning programs can reduce the level of fertility by about 1.2 births per woman. Particularly in Asia there are examples of governments that have played a crucial role in lowering the level of fertility in national populations in a relatively short time or of considerably increasing the pace of the transition (Japan, China, Korea, Thailand).

The rule that social and economic development furthers the demographic transition does not always apply. Several papers mainly dealing with sub-Saharan Africa suggest that very adverse conditions may also have the effect of stimulating the transition. Such crisis-led transitions may be fed by wars and conflicts, but also by structural adjustment programs that lead to deterioration in the social sectors, in the fields of education and health care, for example. Hardship then forces people to limit their family size. However, there are obvious limitations to this effect. If family planning programs and female schooling suffer such setbacks that it dampens people's aspirations and hope for a better future opposite effects may emerge (Ekouevi and Adepoju, 2006; Lesthaeghe and Jolly, 2006).

There are, similarly, exceptions to the rule that once started transitions inevitably continue. A number of cases - Bangladesh, Colombia, Dominican Republic, Ghana, Kenya, Peru and Turkey – have been documented where the decline in fertility stalled. Typically they showed a leveling off in a number of determinants of fertility, including contraceptive use, the demand for contraception, and the number of unwanted births. A common trend in socioeconomic determinants could not be observed but it was found that at the onset of the transition these countries already had relatively low levels of fertility given their level of development. It can reasonably be assumed that the stalling will not be permanent and that the duration of the stall will depend on the future pace of socioeconomic development. If development also has leveled off the stall of the transition will be longer than when it is still continuing (Bongaarts, 2006).

How can the findings regarding the global fertility and, more broadly, demographic situation best be summed up. John Casterline (2001) in a research paper focussing on the pace of the fertility transition in the world since 1950, had this to say: 'The key historical development is the spread through a population of the conviction that achievable economic aspirations are undermined by continued childbearing. This conviction might occur in the presence of rapidly escalating aspirations that outstrip the growth in economic opportunities, or conversely, in the presence of economic contraction that threatens the achievement of existing aspirations. Either circumstance can set in motion a calculus that quickly shifts against childbearing. Nevertheless, the multi-dimensional costs of birth control also stand as a powerful and parsimonious alternative explanation for variations in the pace of decline.' While not as succinct, perhaps, as Coale's formula for the onset of fertility transition it shares its basic elements.

7.4 Regional flavors

As shown before the classical demographic transition concept was developed on the basis of observations made in Western Europe, a part of the world that belongs to the western civilization. Just as the other civilizations distinguished by Huntington, the Western civilization has had a long and checkered history. In Huntington's view the Western civilization as now defined emerged in

Europe between 700 and 800 AD. In the meantime it also covers the 'offshoots' in America and Oceania, but not that part of the Eurasian continent centered on Russia for which the Orthodox civilization is characteristic. In present day Europe old dividing lines between the earlier civilizations and cultures are frequently still traceable. Also within the Western civilization in its broadest sense important cultural differences have developed. Those that exist between the United States and Europe are, in fact, frequently referred to in explaining demographic differences between the United States and Europe, for example.

It has long been assumed that at some time in the past a great family transformation had taken place in Europe whereby the nuclear family replaced the extended family system of several generations living together in one household. This idea may have been based, at least in part, on the writings of anthropologists and explorers reporting on what they perceived to be the situation in other civilizations or other parts of the world. If it had occurred it would have given Europe a certain degree of uniformity in terms of family structure that would have distinguished it from other parts of the world. Arland Thornton, who researched this issue, found in the historical record no signs of such a major family transformation and concluded that, if it occurred at all, it must have been before the 1300s.

All this, obviously, leads to the issue of the uniqueness of the transition experience in the different parts of the world. For, just as Europe all other civilizations listed by Huntington have long histories and, as a result, their own cultural endowments. At the very least it must be assumed that these will make their presence felt and will, even if a certain process is common to the development of human societies, determine to a certain extent the way in which that process unfolds. A whole series of edited volumes has been published in which the transitions in Asia (Leete and Alam, 1993), sub-Saharan Africa (Locoh and Hertrich, 1994) and Latin America (Guzman et.al., 1995), have been reviewed in some detail. From such reviews it has become clear, for example, that in African countries were prolonged breastfeeding was the rule, socioeconomic development could initially increase fertility because it eroded the dampening effects of prolonged breastfeeding and postpartum abstinence on childbearing. As against that the pace of decline in Asia and Latin America tended to be so rapid that several countries now experience below replacement level fertility. Adrian Hayes (1994) has made a plea for including culture in demographic analysis. And indeed, when studying demographic transitions in the Sinic, Japanese, Islamic, or other civilizations it is advisable to keep in mind the cultural origin of the transition ideas as well as the specific cultural heritage of the population one is dealing with. There is ample evidence, for example, that even within the Western civilization cultural effects are so persistent that they influence demographic conditions to this day (Reher, 1998). In Belgium the differences between the French and Dutch speaking populations have been well documented by Ron Lesthaeghe in the framework of the Princeton fertility studies. And, Gianpierro Dalla Zuanna and Guiseppe Micheli have recently published a book highlighting the continuing importance of different traditional family systems in Italy (2004). In the same vein it cannot come as a surprise that, so far, the idea of a SDT is more warmly embraced and has been more extensively studied in highly secularized Western Europe than in the United States. For certainly in Northwestern Europe large sections of the population share a post-materialist or a so-called 'reflexive' modern view of the world and have displayed exceptionally low, frequently called 'lowest-low' fertility for some time.

8. Criticisms and support

8.1 Theories or generalizations?

When Landry developed his ideas about a demographic revolution he seems to have had the feeling that he was developing a 'theory'. Neither Notestein, nor Lesthaeghe and Van de Kaa used that term. Rather, they appear to have thought in terms of presenting a conceptual framework in which observations could be placed to make them meaningful and to understand their interrelations. Even so, 'transition theory' still is frequently defined and taught as being the only 'theory' in demography. But as early as 1959 Philip Hauser (1909-1994), also a former president of the Population Association of America, and Otis Dudley Duncan referred to the first transition as a 'non-theory'. In their view it was a generalization that could be applied to one historical era only; that is to the modern era. They felt that it contained little more than vague suggestions about the factors likely to govern population growth in the future and that, consequently, it was not a theory in the strict sense of that term. What their reaction would have been to the concept of a SDT will remain unknown. Presumably, they would have characterized it as a generalization applying only to the era alternatively characterized as 'late-modern', 'reflexive modern', 'post-modern' or 'post-industrial'.

A further criticism of the transition ideas is that the processes described in much of the literature appear to refer almost exclusively to fertility and that the relation to mortality and migration has remained somewhat tentative. For that reason John Caldwell prefers to speak of fertility rather than demographic transitions. In fact, an overwhelming part of the international literature on transitions deals with changes in fertility and family formation and leaves migration and mortality aside. Whether that is a weakness of the ideas or a shortcoming of the authors is a moot point.

The question of the universality of the transitions discussed earlier has also been raised frequently. Chris Wilson and Pauline Airy (1997) have gone so far as to argue that 'universalist theories, which ignore the uniqueness of each society's transition, cannot be helpful. In their view each transition is 'a unique, path-dependent process of adjustment'. No doubt that is overstating the case. But, as argued above, it is unwise to expect full conformity to a single pattern when going from country to country or from region to region. In fact, if certain ideas and practices reach populations with different cultural endowments at different points in time and do so at different stages of social and economic development of these societies full convergence is unlikely.

8.2 Criticisms and support: regarding the First Demographic Transition

Regarding the FDT it has, more specifically, been noted that while mortality decline is conceptualized as the motor of that transition, and hence as preceding fertility decline, the historical record does not always confirm that sequence. At the regional level numerous instances have been found whereby the onset of the fertility decline appeared to precede the decline in mortality. But then, as stressed before, it probably is not the decline in mortality as such that brings people to

limiting their family size, but the increase in the numbers of children surviving to adulthood and hence the increase in the size of successive generations.

A 10% decline in marital fertility without a renewed increase thereafter is customarily taken as marking the onset of the FDT. This is not ideal if the transition is conceived off as being generated by mortality decline. If fertility is simply responding to mortality decline it should be considered to be the dependent variable. The circumstance that no sustained declines in fertility have been recorded in the absence of mortality decline is indicative of its crucial importance. Ideally one would, thus, have used some measure of mortality change to determine the onset of the FDT.

A further criticism relates to the use of 'natural' fertility as a benchmark. Gigi Santow (1995) has questioned the soundness of the underlying assumption regarding the relation between natural fertility and contraception. Based on an extensive search in literature she has argued that there may have been more continuity with the past. This in the sense that a simple technique as *coitus interruptus* may have played a role in birth spacing before reducing fertility became the primary goal of this practice. Karen Oppenheim Mason (1997), similarly, has argued that if the continuity between pretransitional and transitional populations is recognized one is in a much better position to understand why populations begin limiting their number of children before their births occur.

While the first transition may still not be perfectly understood and in the course of the decades many critical observations and comments have been made about it, there is a general recognition amongst knowledgeable scholars that it has proven to constitute a very powerful description of a crucial, and almost certainly universal, process in the development of populations. To paraphrase Paul Demeny, the really important thing one can say about it is that it works.

8.3 Criticisms and support: regarding the Second Demographic Transition

The situation regarding the second transition is different. Even though the concept has begun to play a central role in discussions about Europe's demographic future and already has been the focus of interest in many studies, there is, at least as yet, no consensus about its universality and intrinsic value. That transition is an ongoing process.

In fact, several authors consider the idea of a second transition inappropriate. Massimo Livi Bacci (2001) for example, has written that 'There is only one "demographic transition" in world history'. This, no doubt, is correct in the sense that there will in all likelihood never be more than one instance where the combination of high mortality and high fertility is replaced by a combination of low fertility with low mortality. Robert Cliquet (1991) and David Coleman (2004), who also see more continuation than deep-seated changes, support him in this approach. Based on their insights in demographic processes Zdenek Pavlik (1998) and Alexander Vishnevsky (1991), similarly, are inclined to speak of a single 'demographic revolution'.

The emphasis the proponents of the concept of a second transition have placed on the power of ideas in shaping human behaviour has not gone unchallenged. Some critics argue that structural factors remain of over-riding importance. They are not convinced that the power of ideas is sufficiently great for it to play a major role in changing a demographic regime. In contrast Eva

Bernhardt (2004) has observed that in order to be fully convincing the concept of a second transition should more explicitly have incorporated the impact of new ideas about gender issues in its cultural context. The improvement in the status of women that resulted from it may, indeed, have been of great importance in bringing about a demographic regime change.

As against all that others have characterized the demographic changes in Western Europe after the mid-1960s as truly amazing indeed. Gerard Calot (1934-2001) has compared it to a bolt of lightning from a clear blue sky. Louis Roussel and Jean-Claude Chasteland (1997) have, in fact, re-used the term 'révolution' in the edited volume they produced on the basis of the submissions to a scientific conference at the National Demographic Institute in France (INED) and devoted to the state-of-the-art in the study of population. And, in his presidential address at the General Conference of the IUSSP in Tours in 2005 Jacques Vallin stimulated members to read up on the concept if they had not already done so. The previous president, John C. Caldwell, now has a paper in press it which he appears to accept the idea of a second transition but argues that the concept can best be understood if it is broadened to include the first. His argument is that when measured as the total fertility rate (TFR) fertility levels in Europe have become largely stable after the 1980s. Thus he sees 'three settled periods preceding, separating and following the two fertility transitions'.

That the proponents of the idea of a second transition have not indicated a logical end-point of the transition is by some seen as a weakness. It immediately leads to the question what the future of European fertility is expected to be. Some find it easiest to equate the concept simply with fertility falling and remaining below replacement level. While that outcome cannot be excluded the essence of the regime change as regards fertility obviously is that its level will in future always depend on how people perceive that having children, or having an additional child, affects their end goals in life. And, mutatis mutandis, on the many other considerations that play a role in lifetime decisions that entail long-term personal commitments. Terminology is of great importance here. Transitions are commonly assumed to bridge the gap between two well-defined states. As against that the outcome of revolutions is always uncertain and will only become evident after a time. So, after all Landry may have made the best choice when he opted for '*révolution'*. Tomás Sobotka (2007) has recently presented a paper that does pay specific attention to the question when the SDT could be considered completed. He observed that even in the Nordic countries the process of change was still underway. There the numbers of births to older women, to couples in second unions, to single mothers and the like are significant. If men and women have offspring in successive unions this will contribute to bringing fertility sufficiently close to replacement level to allay fears of significant population decline. This then leads to the question whether 'lowest-low' fertility (TFR< 1.3 per woman) should not be interpreted as a sign that the society concerned is not, as yet, sufficiently advanced along the path of the second transition? Posing that question presupposes in conformity with the developmental paradigm that all countries are on a common path of demographic development. This could well be the case if, as noted earlier the force of the paradigm itself would give direction to change. While that may be true it cannot be taken for granted. Hideko Matsuo (2003) sees it as another weakness of the concept of the SDT that its proponents have not suggested a simple measure that would mark the onset of the transition. As the focus of the proponents is on shifts in a series of demographic and behavioural measures rather than on a single index, the measurement issue is, indeed, fairly complicated (See: Sobotka, 2007).

The issue of universality has also been frequently addressed in relation to the SDT. At first the question was, for example, whether the concept would apply equally well to Southern-European countries, such as Spain and Italy, as to the countries in the northwest of the continent? The issue then arose whether the demographic developments in the former communist countries of Central and Eastern Europe after 1989 could be placed in the same framework? The very specific developments in Japan also drew attention. And, further, why didn't the United States show the same 'second transition' and, in particular fertility rates below replacement level. An even more general issue is, obviously, whether all societies in the world achieving comparable standards of living and degree of individual choice are bound to experience a similar second transition.

Not all such questions can or have been answered as yet. But some progress has been made. Time series suggest that Southern European countries largely experience the changes documented for Western and Northern Europe, albeit with variations. In a conference volume edited by Polish demographers Irena Kotowska and Janina Jóźwiak that zooms in on Central and Eastern Europe, Dimiter Philipov (2003) notes that in Eastern Europe economic and ideational explanations dominate the abrupt decline in fertility after the political changes of the late 1980s. He argues, however, that discontinuity, disorderliness, and anomie have also played a role as these 'enforce the impact of economic hardship' by creating insecurity. In Japan measures were taken to stimulate fertility control after World War II; it became an important feature of post-war developments. Japan really was trend setting from that perspective. Marriages are now 'late and less'. However, cohabiting unions and extra-marital fertility remain rare. The reason is not that a value change in 'reflexive modern' direction did not occur, or because the age at sexual initiation did not decline. In fact, one finds such shifts documented in the recent literature. It is, as Retherford, Ogawa and Matsukura (2001) convincingly argue because under current circumstances marriage is not a very attractive proposition to Japanese women while a non-cohabiting relationship offers a good alternative (Iwasawa, 2001).

For several years now the European Association for Population Studies (EAPS) devotes a special working group to the second transition. The group has held several meetings: the most recent in Vienna. That meeting dealt with fertility postponement. The Vienna Demographic Yearbook 2006 contains a selection of papers presented at that conference. The current chairmen of the working group Francesco Billari and Aat Liefbroer, writing together with Philipov conclude that 'a sequence of stages' listed by Dirk van de Kaa as resulting in postponement 'seems to correspond empirically to current developments in Europe'. In other parts of the world where fertility has dropped below replacement level, such as a variety of countries in Asia, Central and Latin America, it is precisely the sequence of changes in reproductive behavior that is different from that observed in Western Europe even if the underlying trends are comparable.

In a recent paper Ron Lesthaeghe and Lisa Neidert discuss the demographic situation in the United States from an SDT-perspective. By looking at two dimensions of family formation in 50 US states they were able to establish the best correlates with selected political, socioeconomic, and cultural measures. They characterize their results as showing bi-polarity in the USA. There is a substantial part of America where features of the second transition 'have been emerging in much the same way as in Western Europe and Canada'. However, elsewhere and mainly in the Midwest, the Great Plains, and the South, that is not the case. One might say that the demographic situation there is

'exceptional' when compared with Europe and, one might add, with Australia and New Zealand. Recently Caldwell (2006) has forcefully argued that Europe should not be considered in isolation from the 'Western Offshoots'. He feels that if one studies the fertility history of the Western civilization as a whole from a chronological perspective it becomes evident that there '... appears at present to be a demographic equilibrium in spite of justified complaints by mothers and, to a lesser degree, fathers about balancing labour-market and domestic work, …'. As the fundamental reason for the second decline in fertility he does not see a growth in individualism but the increasing number of mothers working'. In his view that decline was transient. And, contrary to Sobotka's findings referred to earlier, he considers it to be, in fact, largely over.

Whether the SDT will prove to be as universal as the FDT is impossible to say with any certainty. There is mounting evidence that it will be. It is, in any case, not at all unlikely that populations faced with similar conditions in their lives will chose the same behavioral options. But the final verdict on this and certain other issues concerning the Second Demographic Transition is still out. In the meantime many in the demographic profession have found it a useful concept in teaching, to summarize the exciting, rather abrupt and complex demographic shifts since the mid-1960s, and a valuable framework in designing their research.

Glossary

Demographic homeostatis — the tendency of population systems to redress imbalances.
Intermediate or proximate determinants — the factors that determine exposure to the risk of conception and the outcome of a pregnancy.
Natural fertility — the level of fertility that results if couples do not change their behaviour depending on the number of children already born.
Post-partum abstinence — custom of not again having sexual relations with a woman until a long time after she has given birth to a child.
Unmet need for contraception — occurs when demand for contraception and services outstrips supply.
Unwanted fertility — indicates a situation where more children are being born than couples want and have planned.

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Sobotka, T. (2007), *Second Demographic Transition and Low Fertility in Europe: Does Persistent Low Fertility Threaten the Future of European Populations?* MS.2007. (Based on a paper presented to a colloquium held in Brussels in honour of R. Lesthaeghe) [A carefully documented paper that gives a full description and analysis of current trends in Europe]

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Biographical Sketch

Dirk J. van de Kaa is Honorary Fellow at the Netherlands Interdisciplinary Demographic Institute (NIDI), The Hague, The Netherlands. He studied Social Sciences at the University of Utrecht and obtained a Ph. D. in Demography from the Australian National University in Canberra. During the early part of his career he worked first in *Nederlands Nieuw Guinea* and then in Papua-New Guinea. He published extensively about the demographic situation in both these territories.
He returned to The Netherlands in 1971 to become founding director of NIDI, a task he fulfilled until his appointment as director of the Netherlands Institute for Advanced Study in the Humanities and Social Sciences (NIAS) at Wassenaar. During the years he directed NIDI and NIAS he had to devote time to a great many other tasks. During 1972-1977 he served as Scientific Secretary to the Royal Commission on Population and drafted its final report. He was, *inter alia*, Professor of Demography at the University of Amsterdam (1978-1998), acted as Project Director of the World Fertility Survey (WFS) in London, as President of the Arts Division of the Royal Netherlands Academy of Arts and Sciences in The Netherlands, and as Vice-Chairman of that country's National Science Foundation. He was also active internationally and helped found the European Association for Population Studies (EAPS).

After his return to Europe in 1971 he published mainly on the population issues of that continent. A number of his most influential articles are listed in the references added to this contribution on Demographic Transitions.

List of NIDI Working Papers

2007/1 Frans Willekens, Multistate model for biographic analysis and projection. January 2007.

2007/2 Dirk J. van de Kaa and Yves de Roo, The Members of the Royal Netherlands Academy of Arts and Sciences: 1808 to 2000. A demographic view. January 2007.

2008/1 Dirk J. van de Kaa, Demographic Transitions. March 2008.

This Working Paper comprises the draft of a contribution to the demographic volume of the Encyclopedia of Life Support Systems (EOLSS) prepared for the UNESCO under the editorship of Professor Zeng Yi. In its final form it will be published and accessible on the internet.

The chapter reviews two transitions which have had, and still have a tremendous impact on the growth and development of human populations. The classical, now usually called First Demographic Transition (FDT) was truly revolutionary in that unlimited procreation became replaced by the voluntary limitation of childbirth within the family. The Second Demographic Transition (SDT), similarly, marks a very profound shift in the development of mankind. The strong link between sexuality and procreation came to be severed and children no longer are born almost exclusively to men and women in marriage or, at least, in a stable union.

The Working Paper discusses the concept of a transition, the origin and history of the two transitions, their complexity, determinants and consequences, and also reviews the criticisms leveled against them and the support given to them.

The Netherlands Interdisciplinary Demographic Institute (NIDI) is an institute for the scientific study of population. NIDI research aims to contribute to the description, analysis and explanation of demographic trends in the past, present and future, both on a national and an international scale. The determants and social consequences of these trends are also studied.

NIDI is a research institute of the
Royal Academy of Arts and Sciences (KNAW).