2 Theoretical framework

2.1 Introduction

This study is about the extent of and reasons for the postponement of first birth in Japan, which, as already pointed out in the introduction, have not been determined and identified in a definitive manner yet. To identify these reasons, we intend to make use of a historical and comparative application of a multidimensional approach including an individual-level behavioural component. What this precisely entails will become clear by the end of this chapter. The latter aspect, namely focusing on a micro-level analysis of demographic behaviour, is common to a number of studies completed at the Population Research Centre - University of Groningen over the past few years (Hutter, 1994; den Draak, 1998; Padmadas, 2000).

In this study, starting with a discussion of key authors such as Becker (1981), Blossfeld (1995) and Liefbroer and Corijn (1999), we study the impact of increasing female educational attainment and labour force participation on the postponement of first birth in Japan, while recognising that this impact depends on the degree of (in)compatibility between work and marriage and motherhood. This degree of (in)compatibility in turn is driven by the cultural and structural aspects inherent in the underlying family system. And this family system is cohort-specific and society-specific, in other words, it changes over time and varies by country. We then propose to take a broader approach towards the family system and incorporate other elements by using the multi-dimensional Second Demographic Transition (SDT) theory (van de Kaa, 1987, 1988 and 1997; Lesthaeghe and Surkyn, 1988), and combine it, in line with methodological individualism, with an individual-level behavioural component. Finally, we apply this framework both comparatively and historically.

This chapter then essentially tracks in greater detail the development of the theoretical framework, which combines SDT theory with the process-context (Willekens, 1992; de Bruijn, 1999) and life-course (Giele and Elder, 1998) approaches. First, a description is provided of the Becker (1981) hypothesis, its testing in a number of countries – especially Japan – and the conclusions emerging from this empirical research, and the resulting changes to the theory suggested by Blossfeld (1995) and Liefbroer and Corijn (1999). Next, a rather detailed description of SDT theory is provided (van de Kaa, 1987, 1988 and 1997; Lesthaeghe and Surkyn, 1988) in which attention is paid to the demographic sequence and features characterising it, discussing the various explanatory 'dimensions' and factors proposed by the
theory and offering some critical reflections. Then follows a brief discussion of the concerns raised by Coleman's (1990) methodological individualism, namely the need to make macro-micro and micro-macro connections in the social sciences, which seem to be lacking in SDT theory. The last part of this chapter consists of a step-by-step explanation of the process-context and life-course approaches.

2.2 Are work and family compatible?

The reason why postponement of first birth occurs is complex. The scientific world is still trying to fully grasp and correctly understand this phenomenon. In the beginning of the 1980s, starting from the assumption that work and family are always incompatible (see Oppenheimer (1994) for a more detailed discussion of the assumptions underlying the Becker hypothesis), Becker (1981) hypothesised that the balance between the income effect and the price or substitution effect of educational attainment and labour force participation on marriage and motherhood is gender-specific. It is common in research testing the Becker hypothesis to take female educational attainment as a proxy for female labour force participation. By income effect “the effect on quantity demanded of a change in real income” is meant (Lipsey, et al., 1990, p. 544), while by price or substitution effect “a change in the quantity of a good demanded which results from a change in its relative price” is meant (ibid., p. 552). The income effect of educational attainment and labour force participation impacts positively on marriage and motherhood: “Thus, the income effect would lead one to expect a positive effect of educational attainment on the timing of family formation” (Liefbroer and Corijn, 1999, p. 47). In the case of women, for instance, according to Liefbroer and Corijn (1999), the income effect refers to the fact that highly educated women usually earn higher wages and will therefore be able to marry and have children earlier and in larger numbers than those with low education. Also, they argue, by referring to Oppenheimer (1988), that better prospects in the labour market will increase the attractiveness of such women on the marriage market. The price or substitution effect of educational attainment and labour force participation impacts negatively on marriage and motherhood: “The price effect implies that family formation incurs opportunity costs, because people will have less time to spend on wage labour. These opportunity costs are higher for highly educated people than for others, and thus, the price effect would lead one to expect a negative effect of educational attainment on the timing of family formation” (Liefbroer and Corijn, 1999, p. 47). While for men the income effect dominates the price or substitution effect, the reverse is true for women.

Social scientists have gone out to empirically test the Becker hypothesis, as will be discussed below. That is why any quantitative analysis of why women are postponing marriage and motherhood, or experiencing it less, focuses on the price effect of female educational attainment and labour force participation. Such empirical research, mostly in Europe and the US, has led to some of the following insights, as summarised by Liefbroer and
Corijn (1999, pp. 49-53). The effect of educational attainment is *event-specific*: the effect of educational attainment on marriage timing is usually less significant, while the effect of educational attainment on the rate of entry into motherhood is usually negative, both in the USA and in other Western countries. The effect of educational attainment is *age-specific*: the negative effect of educational attainment decreases with age. This means that by a certain age, once a certain critical age threshold is reached, women will try to get married and give birth anyhow, regardless of their educational attainment. The effect of educational attainment is *cohort-specific* and *society-specific*: the effect of educational attainment varies across countries and across birth cohorts within countries. An example of a study supporting the latter insight is that by Gustafsson, Kenjoh and Wetzels (2001) who conclude that educational effects are smallest and percentages of ultimate childlessness lowest in countries such as Sweden and East Germany before reunification, with policies that help women to combine work and family, while the strongest educational effects and higher rates of ultimate childlessness are found in Britain and the Netherlands, where such policies are not implemented to the same extent. Based on their literature study, then, Liefbroer and Corijn (1999) hypothesise that the effects of educational attainment are not only sex-, age- and event-specific, meaning that the negative impact of educational attainment matters more for motherhood than for union formation, but also context- (i.e. society and cohort) specific, and that this is so because what ultimately matters is the degree of (in)compatibility between work on the one hand and marriage and motherhood on the other hand, which varies across countries and birth cohorts. This point has been made repeatedly elsewhere (Livi Bacci, 2001; Kohler, Billari and Ortega, 2002; Stark and Kohler, 2000).

Determining this degree of incompatibility is what Blossfeld calls the ‘family system’: a country's "dominant cultural values, family and religious traditions, and family policies" (Blossfeld, 1995, p. 11). Blossfeld himself does not elaborate more on the concept, which is why Liefbroer and Corijn call it "a loosely defined concept" (Liefbroer and Corijn, 1999, p. 52). It is our understanding that here reference is made to all aspects of norms and policies that affect the combinability of work with marriage and motherhood. According to Liefbroer and Corijn (1999), the sources of incompatibility can be cultural (relating to broad ideologies, values, and norms concerning the role of women in society) and/or structural (relating to actual societal opportunities and constraints on the roles of women). Although these two dimensions often evolve together, according to Liefbroer and Corijn (1999), there can be sometimes a cultural lag (meaning that family values and traditions lag behind family policies) or a structural lag (meaning that family policies lag behind family values and traditions). The existence of a cultural lag, for instance, is repeatedly pointed out by scholars in the case of Japan (Retherford, Ogawa and Sakamoto, 1996; Retherford, Ogawa and Matsukura, 2001). Based on a study of family systems, Blossfeld (1995) makes a clear distinction between 3 kinds of societies: 'liberal', 'modern' and 'traditional' ones. In countries with 'liberal' family systems, work is combinable with marriage and motherhood, and the effect of educational
attainment is not that negative. It becomes more negative as one progresses towards 'modern' or 'traditional' societies, where a ‘conventional’ or strict gender-specific division of labour is commonplace.

All of the above shows that it is not enough to look at increasing female educational attainment and labour force participation in isolation. One also has to take a very close look at the cultural and structural aspects of a country's family system, because this family system to a large extent influences individual behaviour. In other words, one has to assess the degree of incompatibility between work on the one hand and marriage and motherhood on the other hand. The following questions have to be answered: “Is it acceptable not to get married?” “Is it acceptable not to have children?” “How should children be raised?” “Is it acceptable to put them in day care?” “Is day care available?” What this clearly shows is that a comprehensive and multidimensional approach is required. Specificity of society and cohort also clearly show the value of a historical and comparative approach which facilitates the identification of important issues. What is still missing from the above, however, and what Liefbroer and Corijn (1999) try to raise through their hypothesis on age-specificity and the importance of the life course but do not fully address is an element of individual choice.

Scholars have also attempted to test the Becker hypothesis in Japan and they have arrived at similar conclusions. A particularity in Japan, however, is that event specificity does not hold. Because of the still very close link in Japan between marriage and motherhood, the effect of educational attainment is almost as negative for marriage as it is for motherhood. Raymo (2003) finds that, in line with the Becker hypothesis, highly educated Japanese women postpone marriage more than less educated ones. This is mainly because of the duration of their educational career, but there is also an independent educational effect. And he points out that this is because in Japan work is incompatible with marriage and motherhood. But he also has to admit that these effects of education, however, are quite small compared to the increase in the postponement of marriage across birth cohorts independently from education, which is something the Becker hypothesis cannot explain. And he speculates that this is because of factors that have nothing to do with education, such as the decreased desirability of children (rather than marriage) across educational levels, or attitudinal changes (relating to premarital sex; sex-specific division of labour within marriage; divorce; etc.) at all educational levels.

Ermisch and Ogawa (1994) find that, in line with the Becker hypothesis, when distinguishing between two different cohorts, highly educated women give birth later than those who are less educated in both cohorts, and that the impact of educational attainment is larger in the more recent cohort. They also find, however, again not in line with the Becker hypothesis, that postponement increases across cohorts independently from the impact of education: “But both these analyses indicate that the trend toward later marriage and motherhood in Japan cannot be fully accounted for by improvements in women’s education.
and earning opportunities” (p. 418, italics mine). They therefore refer to the decline in traditional values.

Retherford, Ogawa and Matsukura (2001) find that the postponement and decline of marriage are due to increased female educational attainment, increased female labour force participation, but also a malfunctioning of the marriage market, increases in premarital sex and changes in values: “The trend toward late marriage and less marriage has come about because of a confluence of interrelated economic, social, and cultural changes, including remarkable educational gains by women, massive increases in the proportion of women who work for pay outside the home, major changes in the structure and functioning of the marriage market, extraordinary increases in the prevalence of premarital sex, and far-reaching changes in values relating to marriage and family life” (p. 65, italics mine).

Retherford, Ogawa and Sakamoto (1996) argue that the main reason for lower fertility in Japan is the lower occurrence of marriage and later marriage, which themselves are due to increased educational attainment and labour force participation. They also argue, however, that value change is driven by economic and social development but that changes in values also have independent effects, meaning they can retard or accelerate transitions.

Tsuya and Mason (1995) argue that increased educational attainment and labour force participation lead to higher expectations concerning marriage, which, however, are not met by ‘traditional’ marriages. They reject as an explanation, among other things, the Inglehart hypothesis (of the causal relationship between post-materialist values and very low fertility; see, Inglehart, 1990), with one important exception, however: “Unless one posits the existence of structural circumstances that make it difficult for women to achieve a sense of belonging, esteem, or self-realisation while marrying or having children, there seems little compelling reason to think that post-materialist values will produce below-replacement fertility” (Tsuya and Mason, 1995, p. 141, italics mine). They question the automatic assumption that increased educational attainment and labour force participation result in lower incidence of marriage and motherhood: “Simply removing the normative pressures to marry and bear children need not result in very low levels of fertility. As long as women expect to gain satisfaction or material benefits from assuming the roles of wife and mother, they are likely to marry and have children. An important exception to the changes that have been occurring in families in most industrialised countries, however, is the relative lack of change in the traditional gender division of labour within families – indeed, in the relations between husband and wives in some countries” (ibid., p. 142, italics mine).

Atoh (2001b) considers that, in addition to technological and economic factors, cultural factors also have to be taken into account to explain the recent decline in fertility below replacement level in industrialised countries. He points out that in Japan, however, where like in other industrialised countries educational attainment and labour force participation are important, the role of technological and cultural factors is different. The pill, for instance, is clearly less important in Japan than elsewhere. And cultural change has only to
a small extent taken the form of changing attitudes towards religion and morality (secularisation, see also below in the explanation of SDT), which is different from the West (Lesthaeghe and Surkyn, 1988). Cultural change has undergone dramatic shifts since the 1980s in attitudes on sexuality, marriage, and divorce.

Summarising all of the above it can be said that in Japan increased female educational attainment and labour force participation are clearly important but they leave a lot of things unexplained. Most scholars refer to the unattractiveness of marriage for women in Japan, with and largely because of unchanged gender roles. But also values relating to premarital sex, cohabitation, divorce and singlehood play a role, as well as the ‘decreased desirability of children’, referring to the increasing financial and psychological costs of raising children, or a malfunctioning marriage market.

The testing of the Becker hypothesis then, both outside and inside Japan, clearly shows the need for a multidimensional approach, while it is clear that the above approaches take the issue of individual choice insufficiently into account. Therefore this study will answer our research question on the increasing postponement of first birth in Japan exactly through such a multi-dimensional approach including an individual level behavioural component, which then will be applied comparatively and historically.

The comparative aspect of our approach consists of, as discussed in Chapter 1, comparing developments in Japan with developments in the Netherlands. The choice for the Netherlands is driven by a number of factors. There are purely practical reasons relating to the author's affiliation with an institution in the Netherlands. Also important is the close comparability of mean ages at first birth between the two countries and that the conceptualisation of the SDT, which will be explained further on, has been done mainly on the basis of the Dutch case study. Even so, at first sight, a comparison between Japan and the Netherlands may not seem entirely appropriate. Looking at ‘family systems’, and based on Raymo (2003) and Tsuya and Mason (1995), Blossfeld (1995) would probably classify Japan as a 'traditional' society, while generally the Netherlands is often considered to be a demographic pioneer and one would expect Blossfeld (1995) to classify it as a 'liberal' society. Based on this argument one could argue that Japan and the Netherlands are just too different. But this perception is not correct.

The Netherlands is more 'conservative' than is often thought. In fact, Blossfeld classifies it as a 'modern' society, more conservative than a 'liberal' society. A number of authors provide evidence that supports this classification. Above, we have already explained what Liefbroer and Corijn (1999) mean by cultural and structural lags as far as countries’ family systems are concerned. They find precisely that the Netherlands is characterised by such cultural and structural lags. They find, for instance, that the Dutch actually hold quite conservative views, especially when it comes to raising children: they are less in favour of combining full-time employment and motherhood than, for instance, the Flemish and “this suggests that the cultural incompatibility of full-time labour force participation and family
formation is somewhat stronger in the Netherlands than in Flanders” (Liefbroer and Corijn, 1999, p. 56). On the other hand, they also find that there is less day care available in the Netherlands and that parental leave arrangements are worse there than in Flanders so that “the structural constraints on combining motherhood and employment are also stronger in the Netherlands than in Flanders” (ibid.). Gustafsson, Kenjoh and Wetzels who arrive at the same conclusion find that the Netherlands until the 1990s has “supported families according to the idea of a one-earner family, mostly by child benefits and tax credits” (Gustafsson, Kenjoh and Wetzels, 2001, p. 6) and “the view of the child’s need for a 24 hours a day attendance of its mother made it virtually impossible for mothers to combine work and family until fairly recently” (Gustafsson, Kenjoh and Wetzels, 2001, p. 6), and that change since the 1990s has been slow. A recent European Commission feasibility study on the availability of comparable child-care statistics in the European Union (2002) shows that in spite of the difficulties in gathering statistics one can say with certainty that great discrepancies exist in terms of child care among European countries. The report compares statistics on issues such as availability of child care by age, location, customer orientation and staffing. The report notes that as far as enrolment rates are concerned, the Netherlands is situated at a level comparable to that of Southern European countries, such as Italy, Spain and Portugal (20 percent), and lower than that of other countries, such as Austria, Belgium (Flemish Region), Denmark, Sweden and the United Kingdom, which all record rates above 60 percent (European Commission, 2002). This point has been made elsewhere (see OECD (2002) for country comparisons between Australia, Denmark and the Netherlands).

On the other hand, the historical aspect of our approach consists of making in our integrated explanation of the postponement of first birth in Japan (Chapter 5) a distinction between 4 different historical periods: (1) pre-war, war and reconstruction periods; (2) 1955-1973; (3) 1973-1991; and (4) the period of the 1990s. Each period is characterised by a particular economic structure (agricultural, industrial, post-industrial) and a particular family system (traditional household system, industrial household system, industrial household system under pressure, beyond the industrial household system). By family system we mean here both family norms and values and family policies pertaining to social security, taxation, day care, etc.

Below follows a detailed explanation of how we intend to fill in the ‘multidimensional’ and ‘individual level’ aspects of our approach. The former is addressed by discussing Second Demographic Transition theory (van de Kaa, 1987, 1988; Lesthaeghe and Surkyn, 1988), which tries to explain the transition from replacement level to below replacement level fertility by drawing on structural, cultural and technological factors. The latter is addressed by the process-context and life-course approaches.
2.3 Second Demographic Transition theory

Since the mid-1960s, significant changes have taken place in mainly Northern and Western European countries in a wide range of demographic indicators. These changes concern fertility and family formation, as well as mortality and migration. They are “dramatic, drastic, unexpected, unprecedented, most remarkable and revolutionary” (van de Kaa, 1988, p. 1). That is why van de Kaa and Lesthaeghe have called this phenomenon the ‘Second Demographic Transition’ (Lesthaeghe and van de Kaa, 1986; van de Kaa, 1987; van de Kaa, 1988).

The first demographic transition concerns the transition from high birth rates and high death rates to low birth rates and low death rates. In Europe, it started in the early 19th century and was completed by 1930. It was characterised by altruistic norms and attitudes, indicating concern for family and offspring. It was caused by industrialisation, urbanisation and secularisation. As the economic utility of children declined, their quality began to matter more than their quantity, and contraception became widespread, all of which led to a declining mean age at marriage, a declining number of people permanently single, and a declining number of children (van de Kaa, 1987).

The Second Demographic Transition concerns the transition to below replacement fertility. In Europe, it started around 1965. It is characterised by individualistic norms and attitudes, indicating concern for the rights and self-fulfilment of individuals (van de Kaa, 1987). The causes and consequences are not so easily summarised and will be discussed in detail below.

There is substantial discussion on the Second Demographic Transition. A first topic for discussion is the precise definition of the concept. Exactly what is meant by the Second Demographic Transition? Is it the transition to below replacement fertility that constitutes the core of the concept, or is it a more wide-ranging phenomenon? Often an endless series of demographic indicators is discussed within the framework of the Second Demographic Transition, going beyond fertility and family formation and including mortality, migration, etc. (van de Kaa, 1987).

It is partially these definitional problems that give rise to another problem. There has been substantial discussion on the validity of calling the various changes since the mid-1960s the Second Demographic Transition. Cliquet (1991), for instance, asks whether the Second Demographic Transition is ‘fact or fiction’. He fundamentally raises the question as to whether really a new stage of reproductive and relational changes has occurred since the 1960s resulting from the weakening of the family as an institution. He argues that if the concept of the Second Demographic Transition is formulated on the basis of behavioural change then it should be called the third of perhaps even the fifth demographic transition. Livi Bacci (2001), in his discussion of current low fertility in Europe, points out that "demography suffers from an inflation of ‘transitions’ used as a synonym for ‘change’" (Livi Bacci, 2001, p.
He thinks that "there is only one ‘demographic transition’ in world history, although there have been many phases of deep and interrelated change" (Livi Bacci, 2001, p. 282). So what van de Kaa and Lesthaeghe call the Second Demographic Transition he would prefer to call post-transitional fertility.

For the purposes of this study, we accept that since the 1960s substantial changes have taken place as far as fertility is concerned and that these changes can be summarised with the term ‘Second Demographic Transition’. The section below describes the Second Demographic Transition theory. It starts with the demographic sequence of the Second Demographic Transition (section 2.3.1), followed by its four features (section 2.3.2) and the explanations for the Second Demographic Transition (section 2.3.3).

### 2.3.1 Sequence of the Second Demographic Transition

The changes in demographic indicators that took place in European societies from the mid-1960s onwards and characterise the Second Demographic Transition are linked with each other in a chain of causes and consequences. This chain then can be presented in the form of a so-called 'idealised' chronological demographic sequence. The sequence demonstrates the changes in marriage and family formation behaviour across different time periods. Table 2.1 explains the changes in the process, order and timing of partnership and fertility behaviour during the transition period.

Referring specifically to the demographic sequence of the Second Demographic Transition proposed by van de Kaa (1997) in Table 2.1, stages one to three constitute the initial stages of the transition. The postponement of first birth within the context of marriage is observed in stage four. This postponement comes after declines in the TFR and the mean age at first marriage. In stage five, an increase in divorce is observed. Later, in stage six, marriage starts to be replaced by cohabitation. Cohabitation becomes popular and couples only marry when a child is conceived. As a result, women postpone marriage and parenthood as long as they can. The boundaries between nuptiality and fertility become less clear, since cohabitation starts to replace marriage, and extra-marital fertility starts to show. At stage 11, the TFR is low for a while but slowly recovers, partially due to childbearing at higher ages. Later, the consequence of late motherhood is that a growing proportion of women remains childless, both voluntarily and involuntarily.
Table 2.1 Overview of demographic sequence during the Second Demographic Transition based upon observations in Western European countries in the period 1965-95

<table>
<thead>
<tr>
<th>Stage</th>
<th>Stage description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Decline in total period fertility rate due to reduction in fertility at higher ages of childbearing; decline in high order birth rates</td>
</tr>
<tr>
<td>2</td>
<td>Avoidance of pre-marital pregnancies and ‘forced’ marriages</td>
</tr>
<tr>
<td>3</td>
<td>Notwithstanding that the mean age at first marriage continues to decline</td>
</tr>
<tr>
<td>4</td>
<td>Postponement of childbearing within marriage, fertility among young women declines, lower order birth rates decline, this accentuates decline in total period fertility</td>
</tr>
<tr>
<td>5</td>
<td>Increase in judicial separation and divorce (when allowed)</td>
</tr>
<tr>
<td>6</td>
<td>Postponement of marriage largely replaced by pre-marital cohabitation, increase in age at first marriage</td>
</tr>
<tr>
<td>7</td>
<td>Cohabitation becomes more popular, marriage postponed until bride is pregnant, increase in pre-marital births, increase in mean age at first birth</td>
</tr>
<tr>
<td>8</td>
<td>Legalisation of sterilisation and abortion further reduce unwanted fertility; fertility at border ages of childbearing declines further</td>
</tr>
<tr>
<td>9</td>
<td>Cohabitation gains further support, is frequently also preferred by the widowed and divorced</td>
</tr>
<tr>
<td>10</td>
<td>Cohabitation increasingly seen as alternative to marriage, extra-marital fertility increases</td>
</tr>
<tr>
<td>11</td>
<td>Total fertility rates tend to stabilise at low levels</td>
</tr>
<tr>
<td>12</td>
<td>Total period fertility rates increase slightly where women who postponed births start a fertility career; increase in lower order birth rates at higher ages of childbearing</td>
</tr>
<tr>
<td>13</td>
<td>Not all postponed births can be born in the years of childbearing older women have left</td>
</tr>
<tr>
<td>14</td>
<td>Voluntary childlessness becomes increasingly significant</td>
</tr>
<tr>
<td>15</td>
<td>Cohort fertility appears to stabilise below replacement level</td>
</tr>
</tbody>
</table>


The sequence is not always literally applicable to all countries, nor is its timing precisely the same in all countries. Some countries may reverse, combine or skip stages. On the other hand, some countries initiate and move along the sequence earlier and at greater speed than others. These are issues also acknowledged by van de Kaa. He makes a broad distinction between 4 groups of countries, depending on where they are in the sequence: (1) Northern and Western European countries; (2) Southern European countries; (3) Eastern European countries; and (4) remaining countries (van de Kaa, 1987).

A particularly difficult problem is Eastern Europe, which somehow does not seem to fit into the Second Demographic Transition framework. Van de Kaa argues that Eastern Europe is ‘different’ or ‘behind’, but one could as well argue that Eastern Europe is ‘ahead’. If one takes Blossfeld’s perspective that fertility is determined to a large extent by the family system (Blossfeld, 1995), namely the combinability of work and family, then perhaps this was more the case in Eastern Europe under Communist rule than in Western Europe. This is also supported by Gustafsson, Kenjoh and Wetzel (2001): "Between the countries we compare Sweden and East Germany before reunification paid the most attention to the dual career family. It has not helped stopping postponement of maternity during the most recent decades. However, we found the smallest percentage of ultimate childlessness in these two countries
and the smallest educational effects" (Gustafsson, Kenjoh and Wetzel, 2001, p. 15). Whether the identified demographic sequence is applicable to the Czech Republic has recently been assessed via empirical sequential monitoring (Sobotka et al., 2003).

### 2.3.2 Features of the Second Demographic Transition

Underlying the abovementioned demographic sequence of the Second Demographic Transition are four basic features (van de Kaa, 1987), which are summarised in Table 2.2.

<table>
<thead>
<tr>
<th>Feature</th>
<th>Feature description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Shift from the golden age of marriage to the dawn of cohabitation</td>
</tr>
<tr>
<td>2</td>
<td>Shift from the era of the king-child with parents to that of the king-pair with a child</td>
</tr>
<tr>
<td>3</td>
<td>Shift from preventive contraception to self-fulfilling conception</td>
</tr>
<tr>
<td>4</td>
<td>Shift from uniform to pluralistic families and households</td>
</tr>
</tbody>
</table>

*Source: van de Kaa, 1987, p. 11.*

The first change concerns the content of marriage. Marriage in the old style requires the official approval of the engagement, sexual relations and family formation. Marriage in the new style takes on a new form, such as cohabitation, and does not aim solely at procreation anymore. Family boundaries become more ambiguous (Bumpass and Lu, 2000).

The second change concerns the shift from the 'era of the king-child with parents' to the 'era of the king-pair with a child' (van de Kaa, 1987, p. 11). In the former era, most of the attention goes to the children. In the second one, most of the attention goes to the relationship of the couple, while the attention going to their children becomes secondary.

The third change concerns the reasons for using birth control methods and contraceptives. The increased availability of contraceptives results in the separation of sexuality and reproduction. According to van de Kaa, this separation enables the individual to achieve greater self-fulfilment permitting greater sexual freedom and a higher quality of the partnership through childbearing or the realisation of one’s own potential (van de Kaa, 1988).

The fourth shift relates to changes in household patterns: from uniform patterns to diversified ones, from families consisting of married parents with children to those of different types and formats. The number of one-person households increases, as well as the number of same sex (or different sex) consensual unions and the number of one-parent households (male or female) with children. In the future, the ties between partnership, family status and living arrangements are expected to loosen further. Families may not always co-reside in the same household and the same can be expected as far as the partners of a couple are concerned. Married couples may not reside together, because of either work-related or other reasons.
Through both the demographic sequence and the four basic features, we identify a significant number of demographic indicators: type of partnership; quality of partnership; role of children; role of contraception and living arrangements. These will be used in Chapter 4 to compare the existence and nature of a Second Demographic Transition to low fertility in the Netherlands and Japan with regard to the postponement of first birth.

2.3.3 Explanations of the Second Demographic Transition

The previous two sections focused more on presenting the reader with indicators on the changes relating to the Second Demographic Transition in general and postponement of first birth in particular. The emphasis of this section lies more on the ‘reasons’ behind these changes. Earlier we explained already that while the first demographic transition was caused by industrialisation, urbanisation and secularisation, the causes of the Second Demographic Transition are not as easily summarised. A more comprehensive and sophisticated explanatory framework is required. This is the explanatory framework presented by van de Kaa (1988) mainly and supplemented by Lesthaeghe and Surkyn (1988), which will be used as a reference in Chapter 5 and to a lesser extent in Chapter 9.

An important distinction is first of all made between a number of ‘dimensions’: structure, culture, and technology. Following attempts made by Hoffmann-Nowotny (1987) to describe the future of the family, van de Kaa defines structure as “a system of positions of societal units (individuals, groups, organisations, countries, etc.)” and culture as “a system of symbols (values, norms, institutions, etc.)”. Van de Kaa adds technology and defines it as “the whole system of techniques for making and doing things” (van de Kaa, 1988, pp. 13-15).

Structure refers mainly to the process of modernisation, entailing the development of the post-industrial society and the welfare state. Culture refers to the ‘silent revolution’, which has affected a broad range of values. And technology mainly refers to the development of travel, communication, television and contraception. These dimensions are of course highly interdependent and interrelated (van de Kaa, 1988, p. 15).

The developments in these 3 dimensions have a differential effect on different groups in society. Van de Kaa distinguishes between three societal units upon which these fundamental changes impact and which are relevant to the study of demographic processes: (1) individuals; (2) primary groups: “based on kinship relations” (van de Kaa, 1988, p. 15) and sub-divided into family and pair; and (3) secondary groups: “based on religion, political affiliation, socio-economic characteristics and the like” (van de Kaa, 1988, p. 15).

Table 2.3 highlights the structural, cultural and technological dimensions and their differential impacts on different groups in society, as they relate particularly to changes in marriage and family formation behaviour observed in Western European countries (van de Kaa, 1988, p. 14).
Table 2.3 An explanatory framework for the Second Demographic Transition

<table>
<thead>
<tr>
<th>SOCIETAL DIMENSIONS/ PROCESSES</th>
<th>SECONDARY GROUPS</th>
<th>PRIMARY GROUPS</th>
<th>INDIVIDUALS</th>
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<tbody>
<tr>
<td><strong>STRUCTURE</strong></td>
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</tr>
<tr>
<td>Modernisation, development of post-industrial society and welfare state</td>
<td>- development of broad middle stratum</td>
<td>- increased opportunity costs of marriage and childbearing</td>
<td>- individual quality, ambitions and training determine position and income</td>
</tr>
<tr>
<td>Increased:</td>
<td>- standard of living</td>
<td>- greater independence of partners, freedom of choice</td>
<td>- exposed to many demands, which are difficult to combine</td>
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<tr>
<td>- social security</td>
<td>- increased interdependence</td>
<td>- increased problems of combining societal roles of partner and parent</td>
<td>- necessity to remain flexible</td>
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<tr>
<td>- functional differentiation</td>
<td>- functional loss of political and religious groupings</td>
<td>- increased opportunity costs of marriage and childbearing</td>
<td>- partial integration</td>
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<tr>
<td>- structural complexity</td>
<td>- action groups emerge</td>
<td>- individual quality, ambitions and training determine position and income</td>
<td>- early independence</td>
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<td>- mobility</td>
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<td>- individualised security</td>
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<td>- education</td>
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<td>- female participation</td>
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<tr>
<td><strong>CULTURE</strong></td>
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<tr>
<td>“Silent Revolution”</td>
<td>- reduction in dominance of normative groups</td>
<td>- changes in balance of power between sexes</td>
<td>- reluctance to enter into long-term relations/commitments</td>
</tr>
<tr>
<td>Increased:</td>
<td>- reduction in degree of cohesion and normative control of these groups</td>
<td>- absence of strong guiding principles</td>
<td>- increased emphasis on self-realization</td>
</tr>
<tr>
<td>- democracy</td>
<td>- increase in cross-cutting affiliations</td>
<td>- need to establish own set of norms</td>
<td>- difficulty of establishing personal identity</td>
</tr>
<tr>
<td>- equality</td>
<td>- increased contest between the sexes</td>
<td>- parental role less clear and certain</td>
<td>- search for personal life style</td>
</tr>
<tr>
<td>- personal freedom</td>
<td>- increased contest between age groups etc.</td>
<td>- children/partner reduce freedom of choice</td>
<td>- female life course more independent</td>
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<tr>
<td>- value pluralism</td>
<td></td>
<td>- difficult to reconcile different life courses</td>
<td>- conflict of roles in different spheres of life</td>
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<td>- universalism</td>
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<td>- individualism</td>
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<td>- secularisation</td>
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<td>- higher needs orientation</td>
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<tr>
<td><strong>TECHNOLOGY</strong></td>
<td></td>
<td></td>
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<tr>
<td>“Second contraceptive revolution” and spread of televised information</td>
<td>- rapid spread of information and means</td>
<td>- information on job opportunities, wage levels, etc.</td>
<td>- contraception can be an individual decision</td>
</tr>
<tr>
<td>Improved:</td>
<td>- reduction in costs</td>
<td>- rapid spread of knowledge</td>
<td>- increased sexual freedom</td>
</tr>
<tr>
<td>- transport</td>
<td>- right to services through medical insurance</td>
<td>- possibility to contracept “perfectly”</td>
<td>- “mistakes” can be corrected through abortion etc.</td>
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<tr>
<td>- communication</td>
<td>- equal access for all groups</td>
<td>- not to contracept conscious decision</td>
<td>- greater individual responsibility</td>
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<td>- health care</td>
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<td>- medical technology</td>
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<tr>
<td>- contraceptive techniques and means</td>
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As is clear from Table 2.3, by 'structure' van de Kaa (1988) refers mainly to the process of modernisation. By modernisation the change from a manufacturing economy to a service economy is meant, characterised by automation and computerisation and an important role for knowledge and research. This process of modernisation has a number of important consequences, in particular the emergence of the post-industrial society and the welfare state. These are characterised by rises in living standards, the strengthening of social security, increased functional differentiation, increased structural complexity, increased mobility and an increased overall level of male and female educational attainment and female labour force participation. All of these characteristics, but in particular the strengthening of social security, have important consequences. They lead to a “loosening of structural ties” and a weakening of secondary groups. Trade unions are weakened because of white collarisation and the development of a middle class. The Church is weakened because of secularisation. And political commitment is weakened because of social mobility. The fact that survival is guaranteed by the state also weakens primary groups. Individuals have more choice. And also because of rising opportunity costs women in particular are less interested in marriage and motherhood. Finally, because of social mobility individuals have an interest in maintaining flexibility as long as possible in terms of both professional development and union formation (van de Kaa, 1988, pp. 16-18).

Especially the expansion of female educational attainment has important consequences. As Liefbroer (1999) points out, educational enrolment as such contributes to the postponement of union formation and childbearing in a direct way. A primary reason is that marriage and children can prevent particularly women from completing their studies. Second, students usually have very limited financial resources and are financially dependent on their parents. Together with the societal norm not to start one's own family before one has become economically independent this causes young couples to postpone union formation and childbearing until they have completed their education. The latter effect is stronger for marriage than for unmarried cohabitation because of the lower level of commitment unmarried cohabitation entails. A second indirect effect of increasing educational attainment pointed out by Tsuya and Mason (1995) is the impact it has on women's values and ambitions. It will increase their expectations regarding marriage (equalisation of gender roles, 'quality of the relationship', etc.) and motherhood.

As has already been pointed out before, it is equally important that, because of increasing educational attainment, the labour force participation of women increases. This has already been touched upon above, in our discussion of the compatibility between work and family. Female labour force participation impacts upon both union formation and childbearing but more on childbearing. Female labour force participation increases women's economic independence and reduces their interest in 'traditional' marriage, where they have to take care
of children and risk losing a great deal of potential income. This is even more so for highly educated women. The result is postponement of marriage and motherhood. Often unmarried cohabitation is preferred because of less well-defined gender roles and the stronger position of women (Liefbroer, 1999).

It is interesting to observe that van de Kaa and Liefbroer make completely opposite arguments as far as the impact of economic security derived from overall economic prosperity and social security is concerned. As explained above, van de Kaa (1988) argues that economic prosperity and the development of the welfare state have given individuals more choice to lead their own lives, making them less dependent on primary and secondary groups, and that this has led to postponement of marriage and motherhood. Liefbroer (1999), on the other hand, argues the reverse, namely that economic prosperity during the 1960s "helped accelerate the process of family formation" (p. 65), while the deterioration of the economic climate in the 1970s and 1980s "may have contributed to the process of postponement" (p. 65), something which would be in line with the Easterlin (1980) hypothesis, which says that the lifestyle acquired during adolescence will affect fertility behaviour during adulthood. A closely resembling argument is that the creation in many Western countries since the 1950s of a social safety net weakened the link between socio-economic circumstances and decisions about family formation and made it easier for young adults to start families but that the lowering of benefit levels and the reduction of welfare rights since the 1970s had the reverse effect and contributed to the postponement of family formation (Liefbroer, 1999).

To explain postponement of union formation and motherhood, Liefbroer (1999) also refers to the lagging behind of Dutch family policies before the 1990s. The potential of family policies to impact upon family formation has also been pointed out by Gauthier and Hatzius (1997).

Finally there is the increasing complexity of the economic structure characterised by part-time jobs and short-time contracts (Liefbroer, 1999). The latter point is also supported by Mills and Blossfeld (2003) who relate the postponement of family formation to increasing uncertainty resulting from economic and social developments driven by the process of globalisation. This uncertainty can be interpreted as being a direct consequence of the increasing prevalence of low-quality employment characterised by fixed-term contracts, part-time or irregular work hours and lower occupational standing.

Cultural explanations

Modern society puts great emphasis on personal achievement. That gives rise to competitive behaviour. And, as has been pointed out in Table 2.3, this requires equal chances and prospects, rational decision-making, and an orientation towards personal goal attainment. The keywords are achievement, individualism, egalitarianism and rationalism, and furthermore democracy, tolerance, personal freedom and individual human rights (van de Kaa, 1988). This
essentially represents the emergence of a post-modern value orientation as defined by Inglehart: "from maximizing economic growth to maximizing the quality of life" (Inglehart, 1997, p. 66; see also Inglehart, 1977). This process of 'ideational change' (Lesthaeghe and Surkyn, 1988) is also captured by the notion of the increasing importance of Maslowian higher-order needs: love, esteem, self-actualisation needs (Maslow, 1954).

Aiming for these post-modern or higher-order values or needs is the 'individualised' individual (van Deth, 1995). This is in line with the conceptualisation by van de Kaa and Lesthaeghe that the first demographic transition is 'altruistic' while the Second Demographic Transition is 'individualistic' (van de Kaa, 1987). Feminism brought the message to women that it is self-evident to strive for self-fulfilment. We mention feminism under the cultural dimension but it is closely related to technological change (increased availability of contraceptives) and structural change (increased female educational attainment and labour force participation).

The 'individualised' individual is not an 'individualist' individual. According to Lesthaeghe (1995) individual autonomy has “nothing to do with individualism and egocentric behaviour. It simply means that the individual no longer takes externally supplied norms and morality for granted, and instead stresses his or her own freedom of choice“ (Lesthaeghe, 1995, pp. 22-23).

A key characteristic of the 'individualised' individual is that he or she makes rational decisions by him/herself. As defined by Liefbroer (1999) individualisation is “increased freedom of individuals to decide for themselves – without the intervention of others – how to organise their own life" (p. 67). It translates into "a highly rational view on life in which people rationally evaluate the options available to them and choose whichever option will contribute most to their individual happiness"(p. 68).

There are two reasons why the individual is now able to make rational decisions by him/herself. The first one is, as already mentioned above, the arrival of the welfare state. The second one relates to the weakening of secondary groups in terms of ‘membership’ and power to control ideas, and especially secularisation. Individualisation is closely related to the decrease in normative controls brought about by the secularisation process. In Western European countries, "churches systematically engage in the institutional regulation of individuals' lives through the collective assertion of norms that restrict individualism and the externalities that individualism may produce, and through the psychological internalisation of sanctions ranging in format from guilt to damnation" (Lesthaeghe and Surkyn, 1988, p. 13). However, the institutional role of the church in every person’s life has been decreased.

A result of this process of secularisation is that different kinds of behaviour now become acceptable. The decrease in normative controls leads to the acceptance of many issues considered controversial in the past: engaging in premarital sex, use of contraceptives, abortion, living together without marriage, cohabitation, children born out of consensual unions, divorce and serial monogamy, same sex unions. Both partners are allowed to combine
work and family but since this is not possible postponement follows. Divorce is on the rise as well. An interesting observation made by van de Kaa, which will be discussed later in this study, is that while norms have changed regarding partnership this is not the case as far as parenthood is concerned: “Even though the parental role may have become less clear than it was before, the principle that one should only accept or aim at parenthood if one is genuinely prepared to act responsibly in this regard, is quite generally accepted” (van de Kaa, 1988, p. 21).

A final consequence of the process of individualisation is that increased attention is paid to the quality of the relationship of the couple in the post-modern era. As already briefly discussed under the second basic feature, the search for individual autonomy and post-modern values is pursued at the individual level, but this search can create tensions with other individuals. Lesthaeghe refers to this characteristic of human relationships as the “quality of dyadic relations”. He says that “the quality of personal relationships in a dyad is intimately linked to ‘giving and taking’, i.e. to the mutual willingness of merging utility functions and hence to the partner’s respective positions and the presence or lack of reciprocated altruism” (Lesthaeghe, 1995, p. 22-23, italics mine). The relationship can be affected by a number of different factors and it can become unstable when this equilibrium cannot be achieved. When couples cannot achieve this “quality of relationship” and individuals cannot realise their own potential, then it can impact upon family formation. So the occurrence and timing of first birth is highly influenced by the quality of relationship.

For his cultural explanations, in particular for his description of the process of individualisation, van de Kaa heavily draws upon work by Lesthaeghe and others (e.g. Lesthaeghe and Surkyn, 1988). This issue merits extra discussion. It will allow us to introduce a number of ideas useful for the rest of this study and prepare for our discussion of the process-context (de Bruijn, 1999) and life-course (Giele and Elder, 1998) approaches in the following section. It will allow us to specify more clearly the relation between culture and structure and identify the need for an approach that is historical and focuses on cohorts, periods, education and cognitive schemes.

Lesthaeghe’s work can be considered a major critique of the New Home Economics, as represented by, among others, Becker. Economists tend to consider tastes and preferences as a black box. But Lesthaeghe introduces the existence of a hierarchy of needs, and of societies cohort by cohort moving up the ladder of the hierarchy of needs. He includes so-called Maslowian higher-order needs (love, freedom, self-actualisation) in the definition of ‘utility’: “First, we connect the Maslowian theory of the articulation of ‘higher-order needs’ to the classic economic utility theory” (Lesthaeghe and Surkyn, 1988, p. 3).

Lesthaeghe believes that what needs are aimed for (and become more important) change over time. The most important driver of the move up the ladder of the hierarchy of needs is the process of economic development: “Considered from the materialist angle, economic utility theory and its Maslowian extension essentially conceptualise shifts in value
orientations, preferences, and aspirations as resulting from affluence and economic growth” (Lesthaeghe and Surkyn, 1988, p. 4). Another mechanism of change, and one which will prove particularly useful in Chapter 9, where we make a distinction between respondents and their parents, is parents’ own frustration with existing institutions, which they communicate to their children: “political alienation, fostering counter-institutional ideology” (Lesthaeghe and Surkyn, 1988, p. 5) or “increased insecurity with their own idealized value system creates more latitude for the children in working out their own universes of meaning” (Lesthaeghe and Surkyn, 1988, p. 17).

Value patterns are cohort-specific. Each cohort forms during its socialisation period, its youth, a kind of collective view or map of the world, a kind of collective ‘cognitive scheme’ (see our discussion later of the process-context approach), which will stay with that cohort for the rest of its life and will determine its behaviour later on in life: “Many components of ideational ‘mindscaping’ and of the attached preference maps are already being brought into focus before the major decisions of subsequent adult life have to be faced. These ideational options are therefore better seen as a cohort-specific and presumably lifelong backdrop against which demographic and career decisions have to projected” (Lesthaeghe and Surkyn, 1988, pp. 22-23). A similar point is made by van de Kaa (1997), who, drawing heavily on work by Ryder (1965), argues that "birth cohorts can be subdivided into mental cohorts", "that these cohorts pave the way for each other", "that each cohort limits the options of the next and gives direction to its choice", and "that through perceptive or cognitive categorization the 'average man' of each period adjusts his behaviour" (van de Kaa, 1997, p. 7).

The cohort’s mental schemas are shaped by education in the broadest sense. And this education is of course influenced by the historical or period economic circumstances: “Economic circumstances affect the value orientations of the socialising generation,...” (Lesthaeghe and Surkyn, 1988, p. 39). It is also shaped “under a historically specific set of conditions by a unique set of parents, institutions and peers” (Lesthaeghe and Surkyn, 1988, p. 39). This sets the stage for the process-context and life-course approaches with their emphasis on context, cognitive schemes, periods and cohorts.

**Technological explanations**

By technological explanations, as Table 2.3 shows, van de Kaa (1988, pp. 22-24) refers first of all to the airplane, radio, television and other mass media, and information and communication technology (ICT), which increasingly allow people to obtain a wide range of information on different countries and cultures causing them to take a fresh look at and to question their own values. This influences people’s behaviour. Individuals respond to and make active decisions on the basis of this newly acquired information. Earlier studies show the impact of the mass media on fertility change in general (Hornik and McAnany, 2001) and
contraceptive behaviour and childbearing intentions in particular (Westoff and Bankole, 1997).

The second aspect has already been referred to above, under the third basic feature of the Second Demographic Transition to low fertility. It consists of the increased availability of effective contraceptive pills, as well as IUDs and sterilisation. Van de Kaa refers to the arrival of contraception, which allows people “to contracept virtually perfectly” (van de Kaa, 1988, p. 23). Therefore the era of the Second Demographic Transition is also sometimes called the era of “the second contraceptive revolution” (van de Kaa, 1997, p. 10), or of “the perfectly contracepting society” (Lesthaeghe, 1995, p. 19; original from Ryder and Westoff, 1977). This revolution decreases the risk of unwanted pregnancy, increases sexual freedom and allows couples to control the size of their families, and also leads to “an extended postponement of the first birth” (cited by van de Kaa, 1997, p. 10; original from Moors, 1974).

Van de Kaa finds that contraception goes beyond being a mere means to meet certain ends: “One does not simply deal with means, the freedom of unwanted pregnancy has led to a new contextual or mental model of sexual relations and of the connection between procreation and partner relations” (van de Kaa, 1988, p. 24).

2.3.4 Some reflections on Second Demographic Transition theory

Positive elements in this explanatory framework are that it is multidimensional, that the dimensions identified appear to be highly appropriate, and that the interrelation between the different dimensions is recognised. Some reflections can be made regarding SDT theory, however. Earlier in this section, we already referred to some of those. The definition of the concept is not very precise. It is also unclear whether the changes in various demographic indicators since the 1960s also deserve to be called the Second Demographic Transition. A further observation relates to the applicability of the sequence to the whole of Europe.

This brings us to a first reflection. If the applicability of the sequence to the whole of Europe cannot be taken for granted then its applicability to a non-European, non-Western society, such as Japan, has to be approached with still greater care.

Another comment refers to the fact that both van de Kaa (1988) and, for instance, Lesthaeghe and Moors (2000a) present a large number of interrelated potential explanatory variables, but that it is not clear what ultimately determines fertility. Explanations as given are not clear, and vary from society to society, as also, for instance, Bongaarts (2001) points out: “There is no agreement on which of these potential explanatory factors are most important in determining fertility trends” (p. 23).

A further comment relates to the third dimension, namely 'culture'. We recognise its importance, also already in the first demographic transition (Lesthaeghe and Neels, 2001). But two observations can be made regarding culture. The first is that surrounding these concepts is a cloud of vagueness and confusion (de Bruijn, 1999, pp. 48 and 66). In other
words, culture must be defined more precisely. A second observation is that van de Kaa and Lesthaeghe define cultural change as change in values over time and do not discuss at all society-specificity and cultural differences across societies. We propose solving this as follows. As will be explained below, we propose a clear distinction. On the one hand, there is a shift in societal values or 'ultimate goals' from lower- to higher-order (see Maslow, 1954), from materialist to post-materialist, because of affluence and economic development. On the other hand, there are changes in norms and rules, which govern the ways in which these ultimate goals can be accomplished, which, in other words, govern which lower and higher instrumental goals are permissible. While the shift from lower to higher, from materialist to post-materialist societal values or ultimate goals may be shared across societies, the norms and rules on how to reach those ultimate goals, on permissible lower and higher instrumental goals, are highly society-specific and can be called 'cultural'. It is useful here to refer back to our earlier discussion of Tsuya and Mason (1995). These authors pointed out, correctly in our view, that a move to higher-order needs does not per definition negatively affect marriage and motherhood as 'instrumental' goals. And this is also reflected in the continued rather high fertility preference discussed by Backrach (2001) and Livi Bacci (2001).

SDT theory also stays too much at the macro level, at the context level, without making macro-micro and micro-macro connections, and this, according to Coleman’s methodological individualism (Coleman, 1990), prevents one from arriving at a real understanding.

Another important comment to make is that by only describing 'context' and not paying attention to choice processes at the individual level, SDT theory is also in a way denying that the individual makes choices. This is fairly ironic given the emphasis of SDT theory on individualisation and personal choice. By listing all factors which may have played a role in causing low fertility, the impression is given that the individual is confronted with a harmonised set of incentives and rules under which the choices to be made are self-evident. In reality, however, the individual is confronted with a state of chaos where different dimensions (structural, cultural, technological) can be in conflict with each other and where even within one dimension norms and rules can be in conflict with each other. This can mean, for instance, that women are receiving inconsistent signals from their mothers, partners, close friends, all of them giving very different advice or even strong messages on what to do. This calls then for a much more nuanced approach towards choice and for linking SDT with a theory of individual choice. Related to this is also the fact that individuals do not always make decisions based on a long-term planning in their life course. In real life, people also make choices under conditions of uncertainty. In other words, even when people make choices, the element of uncertainty still remains, an aspect that is overlooked or de-emphasised in academic studies.


2.4 Process-context approach

2.4.1 Methodological individualism

As has been discussed earlier, the purpose of this research is to understand the reasons for the postponement of first birth in Japan. In order to understand this “social outcome” (postponement of first birth at the aggregate level), it is important to understand behaviour at the individual level. This is what Coleman (1990) calls “methodological individualism”, illustrated in Figure 2.1.

![Figure 2.1 Micro and macro levels in social theory](source: Original from Coleman, 1990, cited in de Bruijn, 1999, p. 18.)

Figure 2.1 shows four basic components. These components capture the main concepts of the process-context approach developed by Willekens (1992) and de Bruijn (1999). Behaviour at the individual level is key (micro level). Individual behaviour takes place within a certain context (macro level). The context influences and structures individual action through certain mechanisms (macro-micro connection). Individual level behaviour is aggregated into a social outcome (micro-macro connection). Smith (1989) also theorises on the need to incorporate the observation of individual-level behaviour to understand fertility outcomes.

The key point therefore is that to understand social phenomena one has to study individual behaviour. It is not that the primary focus is on the individual but that the focus on the individual is needed to explain and predict the changes that we are interested in at the population level. That raises an important question: How does the individual come to make choices. This is reflected in the observation made by Willekens (1992), namely that “an adequate model of man should emphasize the increased freedom of choice and cognitive capabilities of man (ability to think)” (p. 273). A consistent view is presented by Preston (1986), who notes that “if we are to understand social changes, the things at work inside people’s heads, whether they are called ideas or social values or habits of thought, need analysis as much as the objective conditions that lie outside” (Preston, 1986, pp. 188-89, italics mine; also cited in Tsuya, 1994). As such greater attention should be paid to cognitive science, in particular cognitive anthropology.

Although applications of cognitive anthropology in the field of demography remain limited, there are a few exceptions. Hutter uses the approach to study the motivation for
individual reproductive behaviour in a South Indian rural village setting making use of extensive fieldwork research (Hutter, 1994, 1999; Hutter and Ramesh, 2003). Hutter and Ramesh (2003), for instance, find in their target population's cognitive schemes the key to understand why it is difficult to implement reproductive health policies. These cognitive schemes incorporate the Ayurvedic scheme on human health. The oral contraceptive pill is regarded by women as having a heating effect on the body that leads to extra bleeding, weakness and infertility. This causes resistance among the women against the government policy based on the schemes of the bio-medical model. In this way, cognitive anthropology identifies the individual schemas motivating contraceptive behaviour.

2.4.2 Main elements of the life-course approach

The analysis of "the things at work inside people’s heads" (Preston, 1986, p. 189) can be approached through 4 key elements that have been identified by Giele and Elder within the context of their life-course approach, as presented in Figure 2.2. So-called “human agency” constitutes the first and most important element of the life-course approach. “Human agency” or “individual goal orientation” refers to the fact that “the motives of persons and groups to meet their own needs result in their actively making decisions and organizing their lives around goals such as being economically secure, seeking satisfaction and avoiding pain” (Giele and Elder, 1998, p. 10). “Human agency” refers to a marker of individual development and is therefore related to age. The second element consists of “location in time and place”. It consists of the cultural, structural and technological context in which people live. “Location in time and place” is related to period. The third element consists of “linked lives” or “social integration”. It includes cohort effects, for example, effects of collective experiences at particular stages of life. The fourth element integrates human agency, the effect of location in time and space, and the effect of social integration. The means to integrate age, period and cohort is “timing” (ibid., 1998, p. 25). In order to understand, for instance, why a particular woman only gives birth at age 35, one has to take into account the things going on inside her head as they are affected by her particular age, as well as the history (period) she has lived through, and the people (cohort) she has been interacting with. This is the fundamental line of our research. What exactly is meant by period and cohort is explained later in this chapter.
2.4.3 Human agency

As already mentioned above, the concept of human agency refers to the fact that individuals actively make decisions and organise their lives around goals. And goals motivate behaviour. To understand how goals can motivate behaviour one has to introduce the concept of schema. D'Andrade defines a schema as “a conceptual structure which makes possible the identification of objects and events” (d’Andrade, 1992, p. 28). De Bruijn explains this further as “knowledge structures, variously labelled as schemes or schemata, mental maps, scripts or mental frameworks. Such cognitive schemes allow agents to interpret and construct ‘reality’, including themselves and their position in the environment” (de Bruijn, 1999, p. 87).
Especially the latter insight, namely that the schema or cognitive schemes represents one's understanding of one's place in the world, will prove to be key further on in this chapter.

Schemas include goals (d'Andrade, 1992). While not all schemas are goals, all goals are schemas. There are different levels of goals with the highest level being so-called ultimate goals or shared goals. A similar distinction between different levels of goals is also made by other authors. Maslow (1954) distinguishes between 5 basic needs, some of them of a lower order (physiological and safety needs) and some of them of a higher order (belonging and love, esteem, self-actualisation). Rokeach (1973) on the other hand, refers to 18 different instrumental values and 18 different end-states or terminal values. De Bruijn (1999) distinguishes between lower instrumental goals, higher instrumental goals and ultimate goals. A number of comments can be made here. First, one only aims for higher-order needs once lower-order needs are met. So aiming for higher-order needs necessarily is only made possible by processes such as industrialisation and economic development. Second, one may pose the question whether these goals, especially the ultimate ones, are universal. Various authors indicate that these goals seem to be somewhat universal but they allow for social or cultural specificity.

Goals motivate behaviour. This is stressed by Hutter (1999) who, drawing on work by d'Andrade, argues that "individual behaviour is the outcome of schemas which function as goals and have motivational force and instigate action" (p. 1). There is a discussion on how to measure the motivation for behaviour. According to Liefbroer (1998), motivation and behaviour are often measured independently. An attempt to measure them together is made by Wijsen (2002a) and Wijsen et al. (2002b), who make use of the expectancy-value model and the theory of reasoned action. They study the motivational aspects of childbearing by distinguishing between two aspects of the decision-making process on fertility: motherhood motivation and the orientation towards alternative life activities (work motivation). They consider the interaction of parallel careers to be important in understanding the timing of childbearing. A deficiency of this study is that these motivations were studied after the child was born (retrospective information), which already indicates that the motherhood motivations among these women were strong.

What does making a choice entail? It entails committing oneself to a certain course of action and investing time, energy and effort. Sometimes certain goals that can be instrumental in meeting higher-order needs (by instrumental goals, we mean, work or marriage and motherhood, see de Bruijn, 1999, p. 101) are closed to the individual, or reaching them takes too much time and effort. This is determined by the context in which the individual is situated. Linking back to the life-course perspective, the cognitive scheme is one's personal interpretation of the options one has, as determined by the context, consisting of both 'location in time and place' (period) and 'linked lives' (cohort). As will be explained below, the cognitive schemes of individuals are influenced by behaviour-guiding and meaning-giving rules, communicated to the individual by institutions, either directly (period) or via other
individuals (cohort). It is also shaped by the individual's age. It is precisely the way in which the cognitive scheme is impacted upon by the context, which is the main subject of the process-context approach: how does human agency connect to location in time and place, and linked lives: the process embedded in the context studying individual behaviour.

At any point in time, the individual has many competing instrumental goals. This is because the individual is active in many domains of life simultaneously, domains that are interdependent. The link between instrumental goals and life domains has been made by de Bruijn (1999, p. 101). Some of the domains relevant to the occurrence and timing of first birth are education, employment, partnership and fertility. In contemporary societies, women consider the fertility career as only one among many. The gradual strengthening of other life-course careers compared to the fertility career is enhanced by the weakening of societal norms (strict norms to get married and have children) and the increasing individualisation of values (searching for individual autonomy which may be incompatible with work and fertility). What choice the individual will make, in other words, which domain of the life course he or she will place the most emphasis on, depends on the goals and motivation of the individual. In this sense, the occurrence and the timing of first birth at the individual level is, therefore, the outcome of the individual’s choice between different competing life-course domains.

Co-ordination between/of different domains takes place through a process of ranking the different competing instrumental goals and establishing a hierarchy among competing parallel careers (Willekens, 1991). And an individual’s cognitive schemes at a particular point in time represent an understanding of the ranking of these goals and careers at that time.

At certain moments in time, a fundamental reordering of priorities and the ranking of the instrumental goals takes place as summarised by Willekens (1991). When a new situation arises, the individual reassesses the situation. These are so-called ‘transitional periods’ which also constitute fundamental reassessments of the cognitive schemes and require the individual to “summarize, evaluate and terminate the past and to start the future” (Willekens, 1991, p. 18, italics mine). The reordering of goals is also identified by Lesthaeghe and Moors (2000b) who empirically demonstrate the importance of both the “selection effect (values as predictors of later events)” and the “adaptation effects (events as determinants of changes in values orientations)” (ibid., p. 31) throughout the life course. Each transitional period is characterised by one or more so-called 'turning points' (see also discussion in Abbott, 2000). These are defined as "a time or event when one took a different direction from that in which one had been travelling" (Clausen, 1998, p. 202), or "a process involving the alteration of life path, a ‘course correction’"(Hareven and Masaoka, 1988; cited in Clausen, 1998, p. 202). The reordering of goals also entails a reordering of parallel careers. The way in which goals and careers are ranked and reordered is determined by time (historical, cohort, age) and developmental readiness.

This development or maturing of the cognitive schemes, because of regularly passing through different transitional periods and periods of reassessment, makes up the process of
human development. An individual's cognitive schemes at a particular point in time embody and recapture that individual's complete past life course and experience. And this maturing of the cognitive schemes and process of human development can also be interpreted as a search for identity (Erikson, 1980; cited in Willekens, 1991) or higher-order needs (Maslow, 1954).

The above aspect of human development also means that childhood experiences can have effects much later on in life, but these are filtered through and changed because of later life experiences. As Runyan notes “The effects of early experiences are mediated through a chain of behaviour-determining, person-determining and situation-determining processes throughout the life course” (1984, p. 212, italics mine; cited in Willekens, 1991, p. 15). An example is provided by Mulder and Manting (1994) who conclude in a study based upon three Dutch Housing Needs Surveys of the 1980s (1981, 1985, 1989) that the initial state one occupies in the household career (single, cohabitor, being married) influences to a large extent the household career pathway later on, for instance, the transition to marriage and parenthood. So whether the individual early on in the household career, at the time of young adulthood, remains “flexible” or takes a strategy of “settling down” is likely to determine the way in which the individual will go about his/her life later on. Mulder and Manting then conclude that those who prefer to remain flexible early on are likely to place more emphasis on the educational and occupational careers, while the others put more emphasis on settling down, namely a family career.

An important question is why the individual at certain points in time reorders the priorities and changes the ranking of the instrumental goals. The reason is that the individual believes or anticipates that the reordering of instrumental goals will have certain consequences (expectancy), which will maximise life satisfaction (Willekens, 1991, p. 18). However, a particular choice may not always lead to the desired outcome, and to 'satisfaction', partially because, as mentioned earlier, the individual makes choices under conditions of uncertainty and on the basis of imperfect information. So only looking at actual behaviour may be misleading, as pointed out by Willekens (1991) who cites Marini and Singer (1988, p. 378). One has to find out the ‘turning points’ which, as Clausen argues on the basis of Hareven and Masaoka (1988), constitute “perceptual road marks along the life course, representing the individual’s subjective assessment of continuities and discontinues in their lives“ (Clausen, 1998, p. 203) and can be captured retrospectively through qualitative research techniques such as the life-story approach. However, one has to take into account that one's memories of certain events are selective and coloured by one's experience since that event. The importance of capturing people's intentions is raised by Willekens (1991) on the basis of Marini and Singer (1988, p. 378): "Causal priority can only be identified by asking people about the causal processes at work. This, however, requires in-depth interviewing; records of the sequence and timing of overt behaviour are not sufficient" (p. 15). A consistent view is also echoed by de Bruijn (1999): "if quantitative data provide the skeleton of information, qualitative data add the flesh and blood" (p. 140).
2.4.4 Context

Context is in the first place multi-dimensional. Several approaches may be adopted to characterise the context. De Bruijn refers to physical and 'social' (in the broadest sense) dimensions. By social dimensions or the social context, de Bruijn means cultural, political, legal and economic aspects. He recognises that the social context is the more important one, more important than, for instance, the 'physical context': "The social environment, in all its differentiation is seen as the major contextual ingredient in the explanation of individual behaviours and the resultant outcomes at the societal level" (de Bruijn, 1999, p. 21). It is easy to see how de Bruijn's interpretation of context is in perfect harmony with the way SDT theory interprets it, namely as structure, culture and technology as we discussed in section 2.3.3.

The second major component of the process-context approach is then the link between context and individual behaviour, the so-called macro-micro connection as illustrated in Figures 2.1 and 2.3. This is done through the so-called institutional cognitive approach.

A first step in this process is to see the social context as consisting of institutions which convey information to the individual: "The context is understood as a structure of institutions which embody information about opportunities and restrictions, consequences and expectations, rights and duties, incentives and sanctions, models, guidelines, and definitions of the world" (de Bruijn, 1999, p. 21). Institutions embody or formulate rules which provide guidance to the individual through shared rules which constitute sets of relatively coherent rules that construct reality and provide behavioural guidance (ibid., p. 124).

There are different kinds of rules. Hargreaves (1980) distinguishes between 4 different kinds of rules: probabilistic, implemental/technical, normative and interpretive rules (de Bruijn, 1999, p. 125). Probabilistic ('habitual behaviour' – ibid., p. 125) and implemental or technical rules ('technical or procedural routines that must be applied to perform effectively' – ibid., p. 125) are not important. The most important rules are normative and interpretive rules, which de Bruijn (1999) calls behaviour-guiding and meaning-giving rules respectively and places within the ‘context’ as described in Figure 2.3.

Normative or behaviour-guiding rules largely correspond to social norms, conventions, and codes of conduct and can be more or less explicit: "These kinds of rules can be loosely and barely consciously specified (as, for instance with many moral rules), or associated with formal institutions and explicitly defined (such as for public law and traffic regulations)" (ibid., p. 125). Rules always have sanctions connected to them: “External reinforcements range from coercive power of the state, institutions or groups, to the sanctioning power of public opinion and the social coercion and persuasion of involved others" (ibid., p. 125). The issue of sanctions is very important to us as it will be demonstrated that the mechanism of sanctioning in Japan is different from that in the West and also more severe, which plays an important role in harmonising behaviour.
Interpretive or meaning-giving rules "involve the subjective information about definitions and classifications of actions, participants and situations as well as information about the relations between actors, objects and events and the conditions under which these are valid" (ibid., p. 126). These relate more to issues such as “What does it mean to be a woman?”, “What does fertility mean?”. De Bruijn gives an example of marriage and fertility: "The position of a married woman could be defined as belonging to her own family or to her family-in-law, according to the ruling marriage and kinship system. Gender rules and other socio-cultural rules could differently emphasise her identity as the mother of her children, partner in marriage or a participant on the labour market. Other interpretive rules may provide the basis to viewing children as 'acts of God' and spiritual approval or primarily as consequences of individual will and responsibility" (ibid., p. 126).

Let us give another example from a life-course perspective. Women may be expected to have an education and a job by a certain age. Institutions that encourage women to receive higher education that results in better jobs guide this age norm. Women are equally expected to have a partner and have children at the certain age. All of this means that at the individual level, the behaviour-guiding rules leave little freedom to women to space the completion of education, entry into the job market and motherhood. Japan then for instance is a particular case of a society where institutions impose certain behaviour around certain ages. Brinton (1988) points out that Japanese institutions strongly encourage a certain life timing and that this "leads to very low variance across individuals in the timing of life-cycle transitions" (p. 319). That limited freedom (perceived) then often leads to tension and frustration, as Chapter 9 clearly illustrates. In fact it is this frustration that Shirahase (2000) relates to the postponement of marriage and motherhood: "The more that marriage and childbirth are bound to a specific timetable, the further will young women distance themselves from the marriage state and the more likely that they will be forced into a situation where they will not have any children" (p. 63).

As indicated in Figure 2.3, rules are communicated to us not only by institutions directly, but also by individuals around us. As repeatedly mentioned, the central focus of this research is the human agent or individual. So, how is the behaviour of the individual guided by the context? As already discussed, institutions have maintained the characteristics of contemporary factors (period) and historical factors (cohort), which influence the cognitive schemes of the human agent. Situating individuals in this paradigm is in line with what Willekens (1992) notes in theorising human behaviour: “A model of man should include a model of the social interactions and relationship (bonds) between individuals” (p. 273).
2.4.5 Life history and life story

The life course – the process of human development – consists of “the development related to the sequence of experiences and events in various life careers, and the concurrent development of the individual’s mental representation” (de Bruijn, 1999, p. 252). It comprises two parts: (1) “the sequence of experiences and events in various life careers”, and (2) “the concurrent development of the individual’s mental representation”. Therefore, events can be described in objective terms (e.g. age at event, situation before the event, situation after the event) and subjective terms (meaning given to event, that is the interpretation of event in a broader context). In the life-course approach, the former is taken care of by the life-history approach and the latter by the life-story approach. While the first one focuses on ‘mapping’ (the life sequence), the second focuses on ‘understanding’ (the underlying causality). It is very important to understand that merely having an insight into the sequence of events does not give one insight into the underlying causality. In other words, the life-history approach by itself cannot give one insights into causality. Knowledge of sequences of events can indicate association and may point to causal links. It is not however sufficient to identify causality. One needs the life-story approach for that. One needs to make use of the life-history approach and the life-story approach jointly. The reason both approaches need to be adopted jointly has discussed already.

The life-history approach is a quantitative approach. It focuses on “objective” issues, basically sequences of events, capturing time in an objective manner. It works on the basis of third-party reports and documentary evidence. It mainly uses survey data for analysis and therefore deals with a large number of individual life courses. Usually, as in this study, fertility surveys are used, but any other type of survey that records individual information on events and their timing can also be employed. The information included in these surveys can
be both retrospective and prospective. Because the information is particularly based on the events and the timing of those events, this information can reveal the structure and sequences of events (states) of the individual in the life-course perspective. Depending on the duration of the observation window, discussed in Chapter 3, life history can provide a fairly good idea of the structure of the individual life course.

The life-story approach is a qualitative approach. It focuses on “subjective” issues, the individual’s mental schemas, experiences, and emotions. The life-story approach can capture the dimension of time in a qualitative manner. Among the four dimensions of time mentioned below, the life-story approach can capture historical, social and developmental time. The dimension of time can be interpreted from the individual point of view, and through this interpretation one can identify the stability and the changes in human behaviour, in other words, the "inner logic of lives" (Laub and Sampson, 1998, p. 228). Concrete research methods, which can be used within the life-story approach, include personal or focus group interview, as well as an analysis of textual data, such as life stories and biographies and autobiographies. In summary, the life-story approach relies on qualitative information provided by the individual.

**Life-course concepts**

We discuss here a number of relevant concepts to be used within the context of the life-history approach in Chapters 6, 7 and 8, and the life-story approach in Chapter 9. This discussion is mainly based upon work by Willekens (2001 and 2003) and Blossfeld and Rohwer (2002). We start out with the core element of our analysis, which is the concept of human agency, or the acting individual. An individual can be described by a set of attributes. An attribute – for instance, marital or educational status, attributes that we will make use of in our analysis – can remain constant over time (e.g. sex) or change over time. Attributes then capture the personal background, as described in Figure 2.3. An attribute changes as a result of the occurrence of an event. To give an example, a never married person becomes a married person through the event of marriage. Attributes are associated with the different domains of life. Examples of domains of life that are relevant for our purposes are work, partnership and fertility. The range of different values that an attribute associated with a particular domain of life can take constitutes that domain's state space (see Chapter 3 for more detail on states and state spaces).

The occurrence of an event results in a transition from a state of origin to a state of destination. Examples of events are 'leaving home', 'first union', 'first marriage', 'birth of first child', 'death of first spouse', and 'death'. So events are the basic units of the life course. They can be measured. And that is what life history does. Life history records “a lifetime chronology of events and activities that typically and variably combine data records on education, work life, family and residence” (Scott and Alwin, 1998, p. 100; originally cited
from Elder, 1992, p. 1122). Such event history data record the precise timing of entry into a particular state and exit from a particular state.

The period during which an individual occupies a specified state is called an *episode* or *spell*. The time spent in a state is called *length of episode*. A clear distinction must be made between state and episode. It is possible for an individual to experience more episodes than there are defined states in the state space. That is because an individual can occupy the same state on multiple occasions. For instance, while 'married' can be the defined state the individual can experience a marriage of the first order, the second order, etc. The length of each episode then is determined by the date of each marriage and each divorce or death of partner.

In the life-course perspective, a *sequence of states from birth to death* constitutes a career. A career is always related to a particular domain in life. The partnership career, for instance, consists of 'first cohabitation', 'first marriage', 'first divorce', 'second marriage', etc. The work career, for instance, consists of 'first job', 'unemployed', 'second job', etc. A pathway is a part of a career. It is a sequence of states or events resulting in a particular event. In this study, for instance, we are interested in the pathway of states or events resulting in 'first birth'.

**Timing**

A key concept in making the transition from the concept of life-course approach to its operationalisation is time. Four dimensions of time are important: (1) biological time; (2) historical time; (3) social time; and (4) developmental time. Both biological and historical time are interpreted as chronological or calendar time. Biological time refers to a person’s age, such as age at marriage, age at first birth, age at death, etc. Historical time is interpreted as the effect of historical events – e.g. the Great Depression or WWII – on the individual’s life. A good example here is an earlier work by Elder (1974), which clearly shows the influence of the Great Depression and WWII on the adaptation of the adolescent and adult life patterns of children born at those times. Social time refers to social norms and values with regard to particular life events: the “right” age to get married, for instance, or the “right” age to have a child. These norms are reflected in the schemas that are represented in the individual’s mental map. In Chapters 5 and 9, we will give a few examples for Japan, where norms on ideal ages for marriage and motherhood are quite strong. Developmental time, finally, relates to the developmental process and the rate of change at a given stage in life. It also refers to the number of life events already experienced in actual chronological time (Dykstra and van Wissen, 1999; Willekens, 2001). The developmental process of the individual can be studied through the accumulated life events of the individual. This is a unique perspective, which in particular the life-course approach can offer. The biological and developmental time are associated with the human agent and historical and social time are related to context.
life history can more effectively capture biological and developmental time (see Chapters 6, 7, 8), life story captures historical and social time better (see Chapters 5, 9).

**Exposure and risk**

The probability of an event occurring is determined by exposure and risk. Just to be able to experience an event at all, the individual first of all has to be characterised by a particular attribute or 'risk indicator'. So the risk indicator is the minimum condition required to experience an event. For instance, only fecund women are at risk of conception, only married women at risk of divorce.

Once the individual is characterised by the correct 'risk indicator', the likelihood of actually experiencing the event is increased by the presence of certain recognised 'risk factors'. The likelihood of fecund woman experiencing conception is increased by the lack of use of contraceptives. The likelihood of a married woman experiencing divorce is increased by the incidence of domestic violence. And the likelihood of a person suffering from heart disease is increased by eating fast food every day.

One has to make a clear distinction between the duration of exposure/risk and the duration of observation. The duration of observation only takes up part of the duration of exposure/risk. For instance, a fecund woman is at risk of conception between age 15 and 49, but a fertility survey will only observe the woman during the observation window. Therefore the observation is said to be censored.

**2.5 Conclusion**

In this study, we propose to find the reasons for the postponement of first birth in Japan by making use of a historical and comparative application (with the Netherlands) of a multidimensional approach including an individual level behavioural component.

In this chapter, we first of all established the fact that demographic behaviour is context-specific. Becker (1981) in a way argued that demographic behaviour is universal in his contention that the price effect of increasing female educational attainment and female labour force participation always negatively affects marriage and motherhood. After empirically testing the Becker hypothesis, Blossfeld (1995), Liefbroer and Corijn (1999) and a substantial number of Japanese and other demographers working on low fertility in Japan concluded that demographic behaviour is cohort-specific and society-specific. They concluded that this is because demographic behaviour is determined by the context, which is period-specific and society-specific. And they interpreted the context as a society's family system. We then proposed to attach a broader meaning to the context by referring to a theory which exactly explains changes in fertility over time through changes in the context over time. SDT theory explains changes in fertility since the mid-1960s through reference to changes
from lower to higher-order needs and to changes in the structural, cultural and technological dimensions.

We then explored how the context precisely impacts upon individual behaviour. On the basis of the process-context approach we were able to argue that the context determines individual behaviour via institutions and surrounding individuals, norm and rules and cognitive schemes. And through the life-course approach concept of 'location in time and place' we were able to argue that as the individual ages he/she moves through different historical contexts. On the basis of Ryder (cohorts) (1965), Easterlin (socialisation hypothesis) (1980), Lesthaeghe and Surkyn (mindscapeing) (1988) and van de Kaa (mental cohorts) (1997), we were then able to argue that of fundamental importance for the rest of an individual's life is the context during the phase of socialisation, i.e. during the individual's youth. At that time the individual builds up an interpretation of norms and rules, an interpretation of his or her place in the world, through his or her cognitive schemes. But decisive in forming the cognitive schemes are not only the context at that time but also the impact of the parents and the cohort members. The cognitive schemes then develop and mature after one's youth by ageing, moving through different historical contexts and continuously interacting with cohort members (linked lives). As the individual ages the same cohort members remain an important point of reference for the individual (linked lives). The cognitive schemes include goals. At the centre of our theoretical framework is the acting individual formulating goals. At any point in time the individual is confronted with many competing goals and many competing careers in different domains of life. The individual deals with this by ranking them. When something changes in the individual's situation the individual will reorder his or her goals in so-called transitional periods or turning points.

The above process is captured through the life-history and the life-story approaches. While the life-history approach is quantitative and focuses on mapping actual behaviour the life-story approach is qualitative and focuses on understanding the causality underlying this behaviour. For a full understanding both approaches are necessary. Life history represents the state transitions and sequences of states in a quantitative manner. On the other hand, the life story takes care of the mental process of the individuals’ personal development reflected in their goals, motivations and schemas. Time is the crucial component in the life-course approach. The occurrence and timing of first birth are therefore studied through the age of the individual.