Chapter 3
Data and Methodology

3.1 Introduction

In this chapter we shall discuss the data and the methods that are used in this study. But before we go on to explain the data and methods, we discuss what cross-cultural research entails. In the following sections we shall also elaborate on how will the present cross-cultural research enables us to understand the impact of women's educational attainment on their lived and perceived reproductive life courses across generations of mothers and daughters hence influencing women's position in society. Cross-cultural research is a common research tool used by cultural anthropologists to understand people in different cultures and it is based on historical experiences. This method serves its purpose in presenting cultural differences by comparing cultures as well as pinpointing on the uniqueness of different cultures. The importance of cross-cultural research is underlined by Ember and Ember (2001: 2) who state that without cross-cultural comparison we are unable to talk or write about what may be universal and variable about human cultures or to discover why the variation exists. As comparisons constitute the basis of cross-cultural studies, Ember and Ember (2001: 13) identify four types of comparison in cross-cultural research: (i) comparisons based on geographical areas, (ii) comparisons based on size of the sample, (iii) whether the data used are primary or secondary, and (iv) whether the data on a given case pertain to just one time period or two or more time periods. The cross-cultural context in the present research focuses on two diverse cultural contexts of Karnataka, in India, and the Netherlands.

The research questions which have already been detailed in the introduction to this thesis (Chapter 1) are reproduced here to throw some light on the conceptual models developed for the quantitative and qualitative research. The broad research questions are as follows:

- How does educational attainment of women influence the timing of first birth and first union in Karnataka and the Netherlands across different generations?
- How does women's higher educational attainment influence their life course, as perceived by women themselves, across generations of daughters and mothers in Karnataka and daughters' generation in the Netherlands?
- How has women's position in the society changed across generations of mothers and daughters in the cross-cultural perspective?
- Which features of educational attainment and the timing of first birth and first union are universal and which are context-specific?

This chapter is divided into four broad sections. In section 3.2 we discuss the reasons for selecting Karnataka and the Netherlands to study the changing lives of women in both these societies. In this section we also explain why Bangalore – one of the urbanised cities in the southern state of Karnataka – was selected. The crux of the section 3.2 is its focus on universality in the cross-cultural contexts of Karnataka and the Netherlands, discuseed in detail in the subsection 3.2.1. Higher educational attainment of women has been considered to be a trigger enabling and capacitating change in women's lives. Hence subsection 3.2.2 discusses universality in the cross-cultural context through the role of education. The methodology of this research is part quantitative and part qualitative. Section 3.3 deals with the methodology for the quantitative research based on secondary data analysis of national surveys of

Karnataka and the Netherlands. This section is divided into 6 subsections. In section 3.3.1, we discuss the conceptual model developed for the quantitative research. In section 3.3.2, we describe the datasets used for secondary data analysis of Karnataka and the Netherlands. The two datasets are The National Family Health Survey-2 (NFHS-2, 1998-99) for the state of Karnataka and the Netherlands Family Fertility Survey (OG 98). Section 3.3.3, deals with the operationalisation of the variables based on the datasets that enable us to answer specific research questions. In section 3.3.4 we discuss the educational profile of the study population derived from the dataset. From the secondary data we have the information on the different educational levels of the study population. However there is no information on their age at graduation. Based on available information from the dataset we have imputed the age at graduation of women in the datasets. This method is discussed in section 3.3.5. Section 3.3.6, deals with the life tables as a tool for secondary data analysis. In section 3.4, we discuss the methodology for the qualitative research. This section has been further divided into nine subsections. In the subsection 3.4.1 we study why qualitative research was required to answer the research questions. The conceptual model developed for the qualitative research as well as definitions of the concepts are discussed in subsection 3.4.2. An overview of the two research settings Bangalore and Groningen where the in-depth interviews were conducted is provided in subsection 3.4.3. The process of conducting in-depth interviews is explained in detail in subsection 3.4.4. Subsections 3.4.5 and 3.4.6 focus on how the respondents were selected for the in-depth interviews and the profile of these respondents respectively. The semi-structured questionnaire with the list of questions and probes are discussed in the subsection 3.4.7. The reflections on the fieldwork are presented in the subsection 3.4.8, and the last subsection 3.4.9 deals with the response and quality of the data derived from in-depth interviews. Section 3.5 ends this chapter with some concluding remarks.

3.2 Reasons for selecting Karnataka in comparison to the Netherlands

A typical question that could arise in the mind of the reader is 'why compare Karnataka and the Netherlands when they are so diversely different?' The two cultural contexts are both distinctly diverse and unique in character. The differences between the two cultures are undeniable. However we are interested in exploring both the uniqueness as well as identifying the similarities between these cultural contexts. The two subsections that follow this section elaborate the reasons why Karnataka was chosen as a study area and used in comparison to the Netherlands. In subsection 3.2.1 universality as one of the important aspects discussed. Women's educational attainment is defined here as a universal feature which influences the timing of events such as marriage and birth of the first child. In the subsection 3.2.2 we examined the role of education that leads to changes in the lives of women irrespective of the social cultural contexts.

3.2.1 Focus on universality

Demographic developments of these societies reveal the different stages that Karnataka and the Netherlands occupy in the process of demographic transition. Van de Kaa (1987: 18) clearly states that an important indication that a country has transited from the first demographic transition to the second is the extent to which the total fertility rate (TFR) has dropped below the replacement level. While the total fertility rate in the Netherlands has declined from a high 3.04 in the year 1965 to 1.51 in 1985, after a stable period it rose to 1.72 in the year 2000 (CBS 2001). In Karnataka, the TFR has declined from 2.9 children per woman during the NFHS-1 1992-93 survey to 2.13 children per woman during NFHS-2 1998-99 survey. In 1998-99 it stood at 1.89 for women aged 15-49 in the urban areas and 2.25 for similarly aged women in the rural areas (NFHS-2, 1998-99). Thus Netherlands has long achieved replacement level fertility and has been termed by van de Kaa in 1987 as one of the forerunners of the

second demographic transition. According to IIPS (2001), Karnataka is on its way toward achieving replacement level fertility. However, there is still an ongoing debate about the stage and phase of demographic transition in Karnataka. The decline in fertility levels leads to the decline in TFR. According to Coleman and Garssen (2002: 439) until the 1960s fertility in the Netherlands was higher than the European average while at the end of the 1980s fertility fell below the European average and at the end of the 1990s it hovered somewhat above the European average. In comparison fertility has continued to decline in Karnataka. Research by Rajan (2005) and Sekher et al. (2001) indicate that fertility transition has taken place in Karnataka. According to the authors, there has been a considerable reduction in fertility and NFHS-1998-99 illustrates that urban Karnataka has already attained replacement level fertility. According to the classification of total fertility rates drawn up by Bongaarts (2003), Karnataka with a TFR of 2.13 (IIPS 2001) belongs to the late transition stage.

The second demographic transition is characterised by the changes in marriage and family formation behaviour observed in the mid-1960s (van de Kaa 1987). A strong prevalence of unmarried cohabitation, union formation at relatively late age and a very late age at first birth was characteristically observed (van de Kaa 1987, De Jong Gierveld and Liefbroer 1995). The basic features of this transition involve four related shifts as summarised by van de Kaa (1987: 11). They are:

- Shift from the golden age of marriage to the dawn of cohabitation
- Shift from the era of the king-child with parents to that of the king-pair with a child
- Shift from preventive contraception to self-fulfilling conception
- Shift from uniform to pluralistic families and households

These shifts were facilitated by the developments in the structural, cultural and the technological dimensions of society that had an impact on individual behaviour. The structural dimension refers to modernisation, development of the post-industrial society and the welfare state. The cultural dimension refers to the silent revolution and value orientations of the post-modern society. The technological dimension refers to the second contraceptive revolution and the spread of televised information. At the same time women's emancipation became a key issue with changes observable both in the private sphere as well as the public sphere. Egalitarian relationships between spouses, joint responsibility of the husband and the wife in the household chores and balanced division of labour were observable in the private sphere of family life. Thus women's private role had changed from that of a housekeeper taking care of the home and hearth to that of a public role as women began taking up paid jobs to contribute to the family income. Structural change through increased educational attainment of women and their labour force participation enabled them to postpone union formation and birth of the first child (Liefbroer 1999). Women's participation in the labour force thus on the one hand enabled their economic independence and on the other hand it slowly began discouraging traditional marriage where women had to forgo their working career in order to take care of their children. Hence cohabitation as an alternative to marriage was more preferred due to the increasing need for flexibility, individual freedom and independence (Manting 1994). Liefbroer (1999) mentions cohabitation as being more preferable because gender roles in a cohabiting relationship are less well defined and ensure stronger position for women through increased autonomy. Technological change facilitated increased availability of contraceptives which decreased the risks of unwanted pregnancy, increased sexual freedom and allowed couples to determine the size of their families and resulted in an extended postponement of first birth (cited by van de Kaa 1997: 10; original from Moors 1974).

Higher Education and the Reproductive Life Course

The country of India is fast changing. The majority of women who are highly educated and residing in urban areas have working careers and are increasingly adopting a more individualised lifestyle. However, 'highly educated women' in the Indian context are small in number and uncommon. This group defies cultural stereotyping that exists in the different regions of the country as their lives tend to follow a similar course, irrespective of region. In the present research we focus on the state of Karnataka which constitutes one of the southern Indian states; the others being Andhra Pradesh, Tamil Nadu and Kerala. The states of southern India depict a picture of development as one of the driving forces of fertility transition and the prevalent gender systems that play a central role in explaining the pace at which fertility transition proceeds (Sathar et al. 2001, Bongaarts and Watkins 1996). Studies by Dyson and Moore (1983) and Mason (2001) show that women in South India enjoy more egalitarian gender relations because of a more decisive role within the family and outside it as compared to women in the northern part of India. This egalitarian gender relation tends to enhance female individual autonomy that plays an important role in determining patterns of reproductive and contraceptive behaviour (Sathar et al. 2001). Karnataka has been immensely affected by the convergence and the combination of the ongoing programmes to improve demographic, socio-economic and educational transition to achieve rapid population stabilisation. The state is also undergoing rapid urbanisation and industrialisation. The level of urbanization in Karnataka is higher than the national average. Industries in Karnataka have been increasing in importance over time as well. A large number of public sector companies have been established as well as a growing number of software companies that provide abundant employment opportunities. The cultural context of Karnataka can be described as traditional wherein tradition provides individuals with more or less clearly defined roles. It is largely patriarchal in nature and the life course of women follows a standard ordering of life events. Jejeebhoy (1995) classifies such a type of society which is patriarchal in nature as gender-stratified societies (see Chapter 2 for an elaborate discussion).

From the preceding discussion we have an overview of the state of Karnataka and why it is relevant for cross-cultural comparison. Cross-cultural similarities and differences are identified with the help of quantitative data analysis as well as the qualitative data derived through in-depth interviews of women in Bangalore and Groningen. More about these research settings is discussed in Section 3.4.3.

In recent times there has been a surge in research on women and work in the IT industry as a substantial number of women have begun working in the IT industries. Kelkar (2004: 7) states that the IT industry has constituted the basis of the redefinition of traditional gender norms. Apart from women's participation in the IT labour force, work participation rate of women in Karnataka has increased from 29.4 in the 1991 to 31.8 percent in the year 2001 (Census 2001). Rapid economic liberalisation and growing industrialisation coupled with urban development have created a variety of opportunities for women with diverse educational and occupational skills. An already phenomenal increase in women's employment in the informal sector supports the above statement. The informal sector is the sector where women form a major part of the workforce. It becomes easier for a woman to work in the informal sector as labour is hired on terms that are flexible, time-bound and easily dispensable. In the year 2002, the proportion of women working in the informal sector increased from 92 percent to 96 percent according to the reports of the Second National Labour Commission 2002. This massive incorporation of women into paid workforce has marginally increased their bargaining power and undermined the legitimacy of men's domination as providers of the family. Research by Rajadhyaksha and Smita (2004) and Pande (2000) shows that in the recent times there has been an increase in the number of dual earner and dual career couples in India. Ramu (1989) observes in his research finding on dual earner couples in Bangalore that the traditional role of women as a mother and wife was very much dominant in the cohort 1949-1960 where women were not allowed to work outside the household domain. However, in the younger cohort of women the traditional

role of women has shifted from that of a wife and mother to a contributor in the household income through higher educational attainment (Ramu 1989, Chanana 1988). The authors mention that in the younger cohorts modern values reinforce the need for dual earner families for the better economic foundation of the family. In recent decades the higher educational attainment of women has enabled women in the urban, middle and upper classes to enter the labour force (Rajadhyashka and Smita 2004, Gothoskar 2000, Kelkar 2004). Marriage in the olden days used to bind women to undertake familial roles. However in the recent decades even married women from the urban middle and upper classes are increasingly seen as working women. This shift in the marital role of women from a housekeeper to that of a contributor in the household income can be perceived as the beginning of a change in the marital and family structures as well as in the status and position of women in the Indian society (Kelkar 2004). While changes in the married women's lives in Bangalore are a recent phenomenon, changes in the lives of Dutch women have come about since World War II.

Thus we observe the similarity and the differences that exist in the cross-cultural context. Social and cultural developments influencing individual behavioural change are universal phenomena. However, the pathways that have led to behavioural change have been different cross-culturally. Thus this study is not an outright comparison of the two different cultural contexts of Karnataka and the Netherlands but it sets forth to amplify the universal feature of educational attainment leading to changes in the lives of women.

3.2.2 The role of education

Both in Karnataka and the Netherlands, the educational attainment of women has increased over the past few decades. In the Netherlands, the female gross enrolment rate in secondary education increased from 68.8 per thousand women in 1970 to 126.4 per thousand women in 2000, while the female gross enrolment rate in tertiary education increased from 11.1 in 1970 to 56.8 in 2000, and the average years of female schooling from 7.5 in 1970 to 9.1 in 2000 (World Bank, World Development Indicators 2000). In India, the female gross enrolment rate in secondary education increased from 14.1 in 1970 to 40.1 in 1999, while the female gross enrolment rate in tertiary education increased from 2.2 in 1970 to 8.3 in 1999, and the average years of female schooling from 1.2 in 1970 to 3.7 in 2000. Over the same period, the illiteracy rate decreased from 81.5 percent to 54.6 percent (World Bank, World Development Indicators 2000).

The educational reforms and the increase in women's educational attainment can be observed from the increasing literacy levels in Karnataka. Results from NFHS-2 suggest that illiteracy of women still stands at 55 percent amongst ever-married women aged 15-49 in Karnataka in comparison to 58 percent of illiterate women for the whole of India. However it should be noted that the level of illiteracy has declined from 62 percent as observed in NFHS-1 (1992-93) to 55 percent as observed in NFHS-2 (1998-99). The level of illiteracy is found to decline with age i.e. from 61 percent at the ages 45-49 to 53 percent in the age group15-29. This suggests that there is an ongoing change in the higher educational attainment of women found largely amongst the younger cohorts of women in the NFHS-2 survey. However amongst the literate women the largest proportions are those who have completed primary school i.e. 5-7 completed years of education. There has been an increase in the proportion of women from 14 percent in NFHS-1 (1992-93) to 20 percent in NFHS-2 (1998-99) who have completed high school i.e. 10-11 completed years of education. Data from the same survey for the highest level of education show that amongst the ever-married women aged 25-29 at the time of survey, (belonging to the birth cohort 1970-1976), 12 percent of them had completed higher secondary education and above.

In the state of Karnataka, Bangalore has the highest literacy rate for females amongst the other districts in the state of Karnataka (Census 2001 highlights). According to the 2001 census of India, the female literacy rate in urban Bangalore was 78.9 percent in comparison to 68.8 percent in the year 1991. The female literacy rate in the state of Karnataka for the year 2001 was 57.4, which has increased from 44.3 percent in the 1991 Census.

In the light of the preceding discussion it is evident that changes have come about in women's lives irrespective of the cultural context in which they are situated but still we need to further examine the dynamics. For the Dutch women, the changes in their lives have come about at an earlier point in time as compared to the women in Bangalore. However, as can be observed the role of education in the changing lives of women is similar in the cross-cultural context. Higher educational attainment marks a turning point in the life course of the individual women by making available a variety of choices and biographical decisions. This then leads to changes in the future life course of women. In order to understand generational changes in the timing, occurrence and sequencing of reproductive life events in the reproductive career of women in the cross-cultural context we have framed three hypotheses. Firstly, we hypothesise that demographic transition comes about as a ripple effect across generations of women in the cross-cultural set ups. It is a process moving from stages of massive differences to stages of convergence. This indicates a kind of universal pattern in the shifts in reproductive life course of women. Secondly, we assume that the older cohort of Dutch women might more or less resemble the younger cohort of Karnataka women in their reproductive career. They are hypothesised to resemble each other, as each cohort is considered the proponent of change in their own cultural context. Thirdly, what makes these shifts in the reproductive career of women a universal pattern is the assumption that higher educational attainment is an important characteristic that influences changes. This has been very clearly evident in the Dutch context with the support of abundant secondary literature. How higher educational attainment of women has influenced their lives in Karnataka needs to be outlined in this study. It is assumed that among this group of higher educated women, the timing of occurrence of reproductive life events in the reproductive career could show more overlap with the pattern amongst the Dutch women. Thus in the words of Giddens (1990), 'colonising the future' is an apt description of a universal social change in the lived and perceived reproductive life courses of women irrespective of the cultural context.

We have theorised higher educational attainment of women either as a strategy to delay the occurrence of events in their life course or as a gain which allows them to do many more things which would not be possible if they are less educated. We try to assess the benefits wwomen derive from their educational attainment. Is this gain similar cross-culturally? The gain could be either in the form of social status, achieved status or women's autonomy. How can these be linked to higher educational attainment? Generally speaking it can be presumed that the more years of schooling the more 'time' a woman has gained. While a higher educated woman has gained time through the number of years of schooling which would enable her better job opportunities, a lower educated woman has gained the social status of being a married woman and a mother much earlier than a higher educated woman. This gain of time then reflects the attitudes and behaviour of women according to their levels of education.

3.3 Methodology for quantitative research

In this section we present the methodology adopted for the quantitative research to answer the following research questions:

- How does educational attainment of women influence the timing of first birth and first union in Karnataka and the Netherlands across different generations?

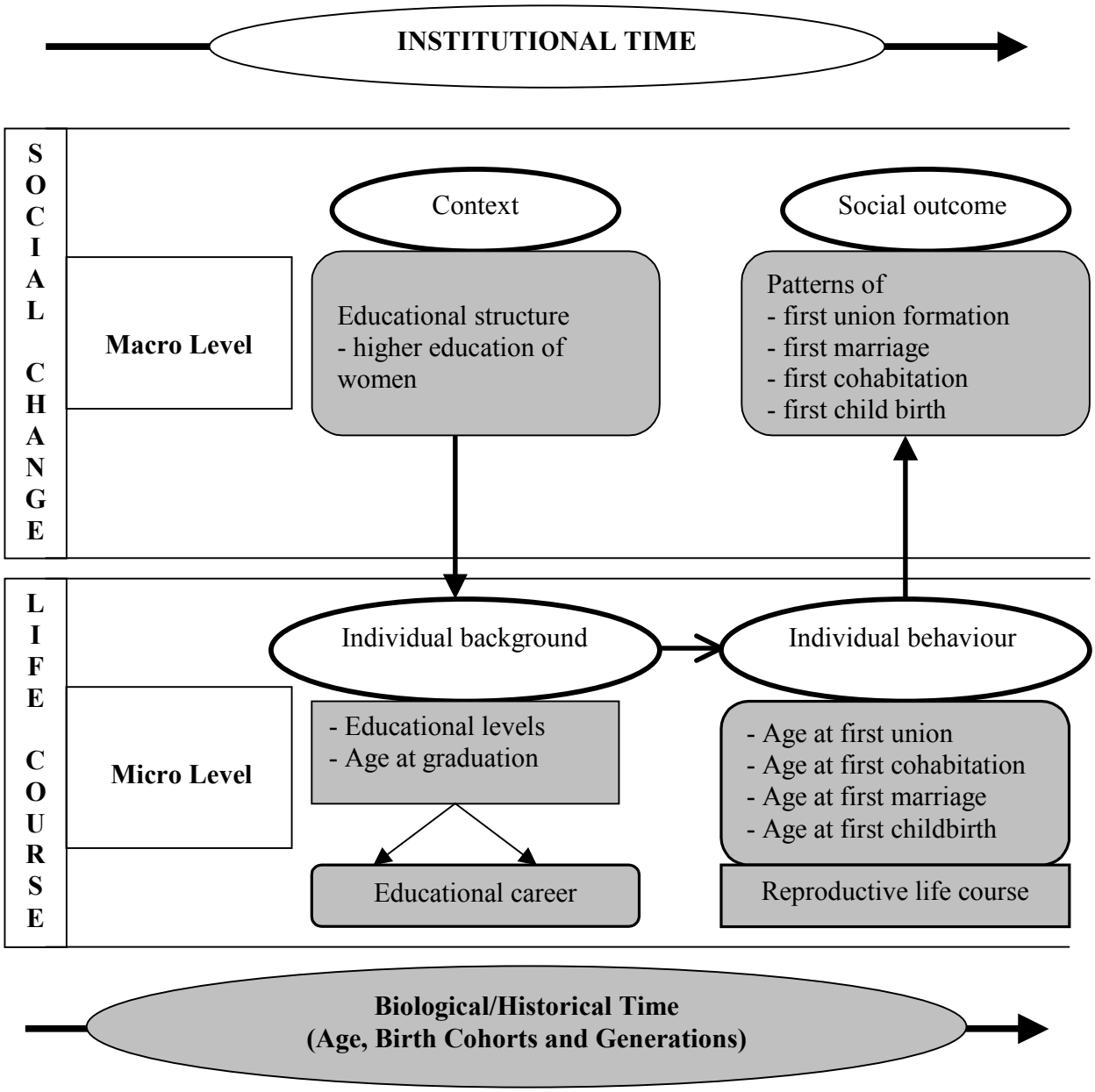
- Which features of educational attainment and the timing of first birth and first union are universal and which are context-specific?

These research questions are answered in chapters 4 and 5 which deal with the quantitative data analysis of secondary datasets of NFHS-2 for Karnataka and OG 98 data for the Netherlands. These research questions are also well represented in the theoretical framework (see Chapter 2) using the life course approach, the study of generations across historical time, and examines the impacts of modernisation and globalisation to identify the direct and indirect effects of educational attainment in women's lives.

3.3.1 Conceptual model for quantitative data analysis

The conceptual framework used for the data analysis is depicted in Figure 3.1 below. The figure illustrates the conceptual framework adopted for chapters 4 and 5 on quantitative data analysis using solely the social theory of Coleman (1990) as the background. The framework enables us to understand how higher educational attainment of women influences the timing of first union and first birth in the cross-cultural perspectives of Karnataka and the Netherlands. The context at the macro level is conceptualised by the educational structure and the educational expansion in Karnataka and the Netherlands. The democratisation of higher education and the reduction in the costs of education have resulted in accessibility of education for greater numbers of youngsters. Hence the educational structure influences individual educational careers as increasing numbers of women pursue higher education which results in prolonged enrolment in the educational arena. The longer the duration spent in education the greater is the delay in age at first marriage and first birth. Most of these effects are direct effects of educational attainment on the individual life course. However, there are several indirect effects of educational attainment contributing to the delay. These could be in the form of labour force participation of women and increased material and career aspirations of high educated women which often lead to role incompatibility. Hence as increased numbers of high educated women marry at later ages and attain motherhood at higher ages it results in a changing pattern of first marriage and first birth as a social outcome. The time dimension at the macro and micro levels gives the framework a dynamic approach. At the macro level we consider institutional time which enables us to understand the educational reforms in the cross-cultural context. De Bruijn (1999: 145) refers to the evolution of the various institutions that make up the social context. At the micro level we consider biological and historical time. Biological time takes into account the chronological age at the occurrence of first union and first birth while historical time relates to development and change across cohorts of women. Hence the macro-micro scheme of this conceptual model in Figure 3.1 enables us to understand the effect of educational structure (macro) on individual behaviour (micro) which leads to demographic patterns as social outcomes at the macro level.

Figure 3.1 Conceptual framework for the quantitative data analysis



3.3.2 Description of Karnataka NFHS – 1998-99 and OG 98

In order to answer the research questions specified in section 3.3, secondary data from NFHS- 2, 1998-99 for the state of Karnataka and OG 98 for Netherlands have been analysed. In this section we describe the two datasets used in the present research:

- The National Family Health Survey – 2, 1998-99 for the state of Karnataka, implemented by the Ministry of Health and Family Welfare, Government of India, New Delhi and
- Netherlands Fertility and Family Survey (Onderzoek Gezinsvorming) of 1998, implemented by the Central Bureau of Statistics in the Netherlands

National Family Health Survey-2, for Karnataka (1998-1999)

The National Family Health Survey (NFHS) 1998-1999 is the second round of an earlier successful survey conducted in 1992-1993. The survey was funded by the United States Agency for International Development (USAID) through the Opinion Research Corporation Company (ORC) Macro International. Additional support for the nutritional components of the survey was provided by United Nations International Children's Emergency Fund (UNICEF). Technical assistance for the survey operation was provided by the ORC Macro and the East-West Centre, Honolulu. The Ministry of Health and Family Welfare, Government of India (MOHFW) in New Delhi appointed the International Institute for Population Sciences (IIPS), in Mumbai as the nodal agency for this project on the whole. This survey was a household sample survey covering a sample size of 90,000 ever-married women in the age group 15-49 living in 26 states of India. The overall sample size comprised more than 99 percent of India's population.

Houselisting and data collection for the state of Karnataka was done by the Population Research Centre in the Institute for Social and Economic Change (ISEC) Bangalore. Along similar lines as the first round of the survey held in 1992-93, the second NFHS's principal objective was to provide information on state and national estimates of fertility, the practices of family planning, infant and child mortality, maternal and child health and utilisation of health services provided to mothers and children. In addition, the survey also provides indicators of quality of health and family welfare services, women's reproductive health problems and domestic violence and includes information on the status of women, education and the standard of living.

Karnataka is one of the states of India situated in the southern part of India. The NFHS 1998-1999 for this state was conducted in the period 22 March 1999 to 8 September 1999. Information was collected from 4,273 households out of which 4,374 eligible women in the age group 15-49 were interviewed. The overall sample size for Karnataka was 4,000 completed interviews including the eligible women. The sample was designed to provide estimates for the state as a whole and for its rural and urban areas separately. The required sampling rates for rural and urban areas were determined by allocating the sample proportionally to the population of the two areas.

The state was divided into urban and rural areas and within each domain of place of residence the sample was selected in two stages: the selection of Primary Sampling Units (PSUs) which are villages (in rural areas) or census enumeration blocks (in urban areas), with probability proportional to population size (PPS) at the first stage, followed by the selection of households within each sample area so as to achieve a

self-weighting sample of households with each domain (i.e., so as to give every household in the domain equal chance of being included in the survey).

Data was collected through three types of questionnaires: the village questionnaire, the household questionnaire and the women's questionnaire. The *village questionnaire* collected information on the availability of health care and education facilities, availability of amenities for electricity, telephone connection, road and rail connectivity, bank, post office and other related facilities synonymous with development. The *household questionnaire* listed all usual residents in each of the sample household along with any visitors who slept in the household the night before the interview. For each listed person the household survey collected basic information on age, sex, marital status, relationship to the head of the household, education and occupation. The eligible women from household sample who were identified were asked questions from the *women's questionnaire*. However, not all eligible women from the household sample were included in the women's sample. While 4,621 women were identified as eligible in the household sample only 4,374 women were included in the women's sample. The non-response rate involved 247 cases and these women could not be interviewed primarily because of their unavailability at home in spite of the repeated household visits and 0.4 percent of the eligible women refused to be interviewed (IIPS 2001). Thus the women's sample selected concerned only ever-married women in the age range of 15-49 at the time of the survey.

Amongst the eligible women selected for the women's sample, information was collected from them through the women's questionnaire. The questionnaire can be divided into 9 subsections. They are as follows:

a) Background characteristics that included questions on age, marital status, education, employment status and place of residence. Questions were also asked about the background characteristics of the women's husband.
b) Information on women's age at the birth of their first child and subsequent births, complete birth histories and pregnancy histories. Information was also collected on the total number of children ever born by sex, live births, still births and abortions.
c) Questions specific to quality of care were also posed to the respondents. They included visits by the health care worker and the health services utilised by women.
d) Information on knowledge and use of contraceptives.
e) Sources of family planning
f) Antenatal, delivery and postpartum care
g) Breastfeeding and health
h) Reproductive health and
i) Status of women

According to IIPS (2001: 10-11), the survey succeeded in achieving a high overall response rate of 92 percent for the whole of India. The response rate was 90 percent in urban areas and 93 percent in rural areas. Non-response at the individual level was primarily due to eligible women not being at home despite repeated household visits while only 0.4 percent of eligible women refused to be interviewed. Sample weights were adjusted for the differential non-response in different geographical areas used for both households and women who were interviewed.

The women's sample that was interviewed with the women's questionnaire included only ever-married women. However, for our analysis in order to understand the impact of educational attainment on events

such as marriage and birth of the first child we wanted to include never-married as well in the sample. One way of doing this was by merging the household file which includes both ever-married and never-married women with the women's file which includes only ever-married women. The household file gives us information about the union status of women at the time of the survey, but it does not provide any information about women's age at first birth and birth histories. This information has been collected through the women's questionnaire and is present in the women's data file. An attempt to merge the two files proved futile as not all ever-married women in the household sample were included in the women's file. However, as the household file includes never married as well as ever married women, it proved useful in giving us information on the number of women who were never married by age and across birth cohorts. This information enables us to observe the cohort changes in the age at marriage and first birth by adjusting for the proportion of unmarried women.

Thus first marriage and first birth patterns among the ever-married women in the women's data file gives us information based on partial observation. A delay in marriage and first birth is not noticeable if we observe only ever-married women. The background information of women in the household sample derived from IIPS (1998: 40) clearly indicates that the proportion of unmarried women among younger cohorts has increased substantially. Since first childbearing follows closely on the heels of marriage in Karnataka and cohort change is almost negligible amongst married women, it is important to take unmarried women into account. This information is derived from the household file which includes all women (never-married and ever-married) by their union status at the time of survey, their current age and age at marriage for the married women. Thus we get a frequency distribution of number of women married and not married, 15-49 years of age at the time of the survey (see chapter 4 Table 4.1). NFHS-2 includes only ever-married women aged 15-49 at the time of survey in the woman's file. Hence the adjustment of information on unmarried women in the women's file which includes only ever-married women enables us to observe cohort changes in first marriage and first birth behaviour across birth cohorts in Karnataka. We use this analysis to depict cohort changes in marriage and first birth in Karnataka in chapters 4 and 5. Apart from using the information on proportion of unmarried women by age across cohorts no other information from the household file was employed for any other analysis in this research. Hence for all the other analyses, the women's file was solely used to analyse the impact of education attainment on the timing of first union and first birth across generations.

Netherlands Fertility and Family Survey (Onderzoek Gezinsvorming 1998)

The purpose of the Netherlands Fertility and Family Survey (OG 98) is to collect information on background characteristics, partnership and family formation behaviour in the Netherlands. This information is collected to complement the associated population statistics already available. The survey is conducted once in every five years. The last survey before OG 98 was conducted in 1993. OG 98 was conducted in the period February to May 1998 by Statistics Netherlands (Central Bureau of Statistics Netherlands) (de Graaf and Steenhof 1999: 35-36). The target population of the survey included Dutch men and women aged 18-52 years as on 1 January 1998. There were 4.2 million Dutch men and 4 million Dutch women aged 18-52 at the time of the interview and born in the period 1945-1979. The sample population was taken from the Municipal Population Administration (Gemeentelijke Bevolkingsadministratie or GBA), which is also the main source of statistical information on Dutch population from different municipalities of the country. Sampling was random and was done in two stages. Firstly, the municipalities were selected according to the structure of the Dutch population. Out of the total 572 municipalities, 262 municipalities were selected. In the second stage, men and women were drawn out separately from the 262 municipalities based on the 14,000 addresses. All women who were

included in the survey were born in the period 1945-1979. Of the selected married women, their husbands were also interviewed regardless of their age. The same holds for those cohabiting but not married women whose children have been officially recognised by the male partner. The male partner in this case was interviewed. Thus a total of 5,450 women and 4,717 men were interviewed by means of a structured questionnaire.

The face-to-face interviews made use of electronic questionnaires by the CBS fieldworkers. The electronic questionnaire was run by a computer programme BLAISE. The fieldworkers were instructed beforehand about the purpose of the survey and the possible problems that might arise. The respondents were notified in advance by mail (letter) about the visit by the fieldworker. The fieldworker made at least 3 visits per address in the event of absence or unavailability of the respondents. All respondents who participated in the interview were given a telephone card worth €1.3 euros (NLG 2.5) for their cooperation.

With the help of the structured questionnaire, information was collected on background characteristics of the respondents, living arrangements, intentions and behavioural outcomes of family formation and extensive information on cohabitation and marriage (Matsuo 2003: 45). The questionnaire was divided into 10 subsections as listed by Matsuo (2003: 46):

a) Residential preference (Woonwens)
b) Partnership and partnership formation (Relatievorming)
c) Children: females (Inventarisatie kinderen [vrouwen])
d) Children: males (Inventarisatie kinderen [mannen])
e) Societal position and time allocation (Maatschappelijke positie/tijdbesteding)
f) Work and children (Werken en kinderen)
g) Fertility and birth expectations (Vruchtbaarheid en toekomstverwachtingen kinderen)
h) Attitudes (Attituden)
i) Background (Achtergrond)
j) End of the interview (Besluit interview)

Sample weights were employed to ensure that the sample population was representative of the population of the Netherlands. It was carried out separately for men and women. The background variables that were used for weighting were year of birth, marital status, position of the respondent in the household, country of birth, type of city/village and the number of inhabitants per municipality. The number of live born children was additionally included for weighting the women's sample.

OG 98 survey also faced non-response and sample errors like all surveys. The response rate of the survey has not been documented. Matsuo (2003: 46; based on correspondence with drs. A de Graaf 2003) states that the response rate is not possible to provide and CBS used a sophisticated sample design for the survey. However, de Graaf and Lodewijckx (2000) report that the public willingness to participate in surveys in the Netherlands is lower than in other countries. The authors also mention that in OG 93, the response rate at the household level was 48.5 percent whereas at the individual level it was 90.3 percent. Matsuo (2003: 46) states that the rate of response to OG 98 can be assumed to be close to those figures. This is the reason why the results of OG 98 should be interpreted with caution as it does not fully represent the population in the Netherlands.

The Scientific Statistical Agency (Wetenschappelijk Statistich Agentschap or WSA) of the Netherlands Organisation for the Scientific Research (Nederlandse Organisatie voor Wetenschappelijk Onderzoek or NWO) has made the data available as a public use file.

Matsuo and Willekens (2003) created a subset of the original OG 98 dataset made available by the Statistics Netherlands (CBS). This subset of the original OG 98 dataset is referred to as MWOG03 in our research (see Section 3.3.5). The dataset created by Matsuo and Willekens (2003) converts the Public Use Data File of the OG 98 for female respondents into an event history data structure which facilitates event history analysis. The new dataset created highlights events related to leaving the parental home, cohabitation, marriage and childbearing. These events are ordered and sequenced into an event history data structure as required in event history analysis, i.e. each event should have an origin state, a destination state and the dates in which these events occurred (Matsuo and Willekens 2003). The dates were recoded into century month codes for more accuracy in event history models. The event history dataset also identified inconsistencies in the data, incorrect ordering of events and missing events specified in the original OG 98 dataset. For example, as Matsuo and Willekens (2003: 3) state, 'particular sequences of events may not be possible like the birth of second child before the first or certain plausible events like marriage before leaving the parental home. Events may be missing such as second marriage is reported while information on first marriage is missing'. In the present research this dataset by Matsuo and Willekens (2003) is used for the secondary data analysis for the Dutch context.

3.3.3 Operationalisation of the variables

In this section we shall discuss how the different concepts presented in the conceptual model in Figure 3.1 have been operationalised for Karnataka and the Netherlands. The operationalisation of variables is also based on the available information about these concepts from the datasets used for the secondary data analysis.

The timing of *first birth* is one of individual behaviour at the micro level. The first birth marks the transition of a woman into motherhood. Hence motherhood stands out as an altogether new role in the women's life course. This variable is operationalised by the age of the woman both in months and years when the event of first birth took place in the woman's life course. Century month codes are the measure of number of months since the beginning of the century (Mills 2000: 86). January 1 1900 is termed as the beginning of the century (Blossfeld and Rohwer 2002). CMC of any event can be calculated if we already have information on the month and the year of the event. It is calculated through the following formula:

$$\text{CMC} = (\text{Year of the event} - 1900) * 12 + \text{Month of the event}$$

For example, January 1900 is CMC 1 [(1900-1900)*12 + 1)] and January 1990 is CMC 1081 [(1990-1900)*12 + 1].

Both the surveys – Karnataka NFHS 1998-99 and OG 98 – are event history structure files which give us information about the CMC date of first child birth for all the respondents and the CMC date of birth of the respondent in the dataset. This facilitates calculation of the age at first birth. The data analysis for the cross-cultural context includes within its purview only women who have had the event of first birth before the survey ended. Those women who did not experience first child birth before the survey ended were considered as right-censored cases. Out of the 3,567 women (women born after 1976 are not included in the sample) considered in the present analysis from NFHS-2, Karnataka, 3,382 women had experienced

first birth before the survey ended. This constitutes 95 percent of the women considered in the analysis. Whereas, out of 4,230 women considered in the Dutch context (as women born after 1965 are not included), 3,269 women had experienced the birth of their first child by the date of the survey. This constitutes 77.3 percent of women considered in the analysis. It is noteworthy to mention the number of women included in this study who did not experience the event of first birth before the survey date in Karnataka and the Netherlands. It shows that 185 women (5.2 percent) out of 3,567 women in Karnataka did not experience their first birth, while for the Dutch context 961 women (22.7 percent) out of 4,230 women considered in the analysis did not experience the event of first birth.

First union formation in the Karnataka context is operationalised by the age at consummated marriage. In the first round of NFHS i.e. in 1992-1993, age at formal marriage and age at consummation of marriage were treated differently. This was largely due to the prevalent social practice of marrying off a girl at an early age and only after she attained puberty she was allowed to co-reside along with her husband. However the NFHS-2 in 1998-1999, presents statistics on age at formal marriage as well as age at consummation of marriage (IIPS 2001). This depicts the gap between formal marriage and the time when the wife starts residing with her husband. This difference according to IIPS (2001: 41) is negligible in both rural and urban areas. They also mention that 'prastha', 'gauna' or similar practices that introduce a lag between marriage and cohabitation are not important in Karnataka or they usually take place at the same time as the marriage' (IIPS 2001). For an explanation of these terms see Chapter 5 and Chapter 8. Hence the age at marriage in NFHS-1998-99 is also the age at consummation of marriage. In the Netherlands, first union formation is associated with cohabitation and marriage. The sub set of the original OG 98 dataset created by Matsuo and Willekens (2003) records the CMC of first union (cmfunion) as well as carries information on first marriage (cmcma1) and first cohabitation (cmcco1).

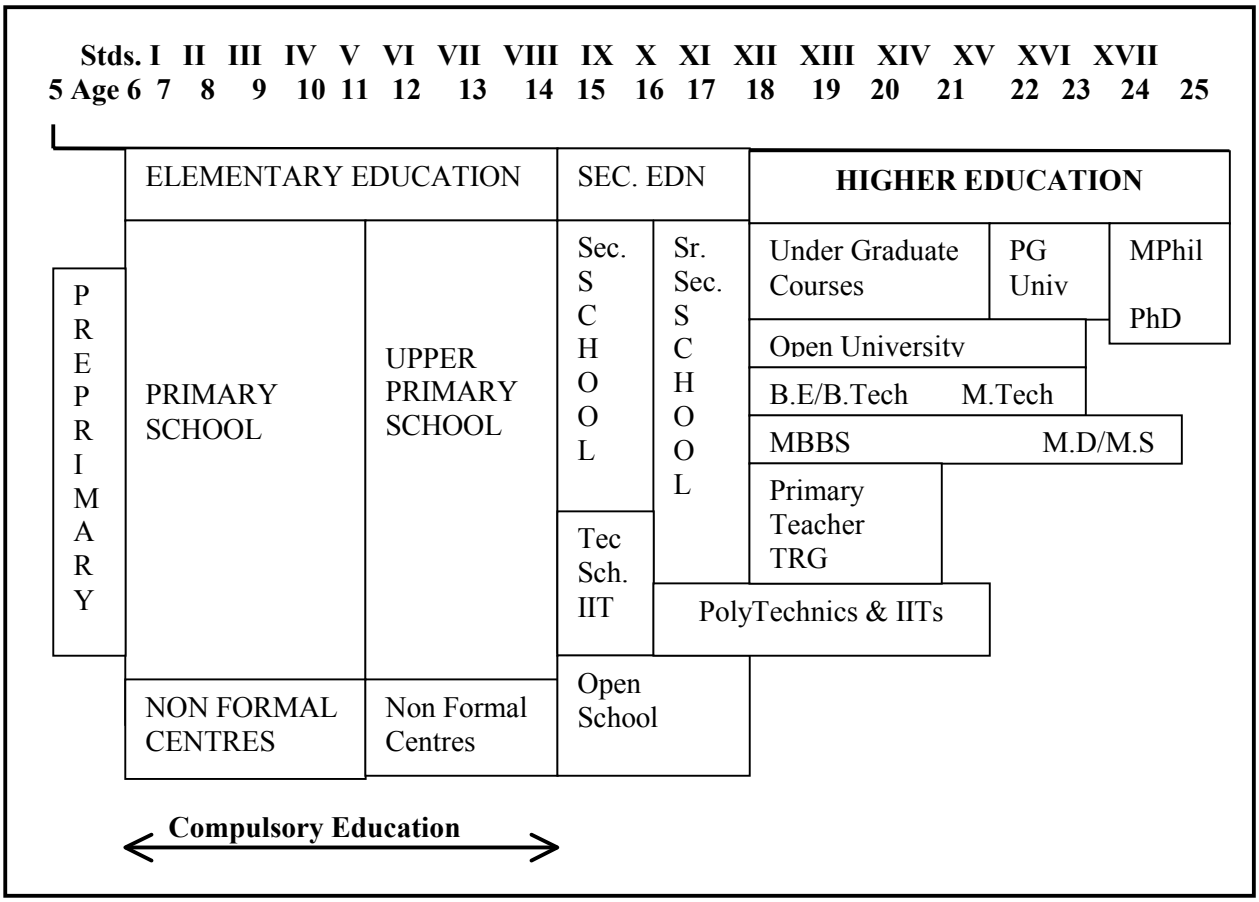
The following is an overview of the educational structure in Karnataka and the Netherlands.

Structure of education in Karnataka

According to the National Policy on education in India 1992, all states and union territories in India have adopted a uniform structure of school education called 10+2 system (Ministry of Education, Government of India 1992).

Figure 3.2 illustrates the education structure in India which is also the same for the state of Karnataka. In Karnataka the age at which children begin Standard one (first year of primary school) is 6 years. The academic calendar for Karnataka begins in the month of June and ends in the month of March (personal communication, Hallad, May 2003).

Figure 3.2 Structure of Education in India



Source: Development of Education in India, 1990-1992 http://www.education.nic.in/htmlweb/strchar1.htm

Stages of school education in Karnataka can be broadly categorised into pre-primary, elementary education, secondary education and higher secondary education. Elementary education is also called compulsory education, which constitutes primary schooling and upper primary schooling. The primary stage consists of standards I-IV for ages 6 to 10. The upper primary stage consists of standards V-VII for ages 11 till 13 years. Secondary education comprises secondary school and the higher secondary school. Secondary school is for those aged 14 till 16 years covering classes VIII-X. Higher secondary school follows the usual +2 pattern (pre-university) the age range of the student being 16 to 18 years. Higher education which proceeds from secondary education comprises graduation (Bachelors), post-graduation (Masters), M.Phil and Ph.D offering from 7 to 9 years or more of education. Privatisation of education is currently at the level of higher education only, whereas the other education categorises are still state-operated. This is the case for the whole of India including Karnataka. Table 3.1 gives us information on Karnataka's educational categories alongside the ages when a particular category of education is completed assuming that schooling begins at the age of 6.

Table 3.1 Educational categories and the ages at which it is completed, Karnataka

Educational categories	Age when education begins and is completed
Primary level (Class 1-4)	6-10 years
Upper primary (Class 5-7)	11-13 years
Secondary school (Class 8-10)	14-16 years
Higher secondary (10+2 pattern)	16-18 years
Higher education (7-9 years more)	19-27 years

Source: National Policy on Education, 1992; Ministry of Education, Govt of India

Here we illustrate how NFHS 1998-99 has categorised the different levels of educational attainment. In the National Family Health Survey, educational attainment of women is considered as one of the background variables, which is assumed to influence the timing of life events in the life course of the women. Women in this survey were asked about their highest educational level (represented by the variable v106 in the women's file). Women state their educational level as no education, primary, secondary or higher. The dataset also gives us information on the single years of education for all the respondents who had been to school and whether the respondent was still studying or not. The single years of education helps in determining the total number of completed years of education, hence the category of highest educational attainment. Censored cases include those women who stated that they were continuing with their education at the time of survey, of which there were 2.

Based on the highest educational level of the women and the single years of education, NFHS-2 classifies the educational attainment of women in the survey as having no education, incomplete primary, complete primary, incomplete secondary, complete secondary and higher. The classification has been reproduced in Table 3.2[1].

Table 3.2 Completed number of years of schooling for categories of highest educational level, NFHS-2, Karnataka

Highest educational level *	Completed number of years of schooling
No education	0 years of schooling
Incomplete primary	4 years of schooling
Complete primary	5 years of schooling
Incomplete secondary	6-9 years of schooling
Complete secondary	10 years of schooling
Higher	11-19 years of schooling

*Source: NFHS-2, 1998-99, Karnataka *2 missing cases*

We shall now explain the structure of the education system operating in the Netherlands.

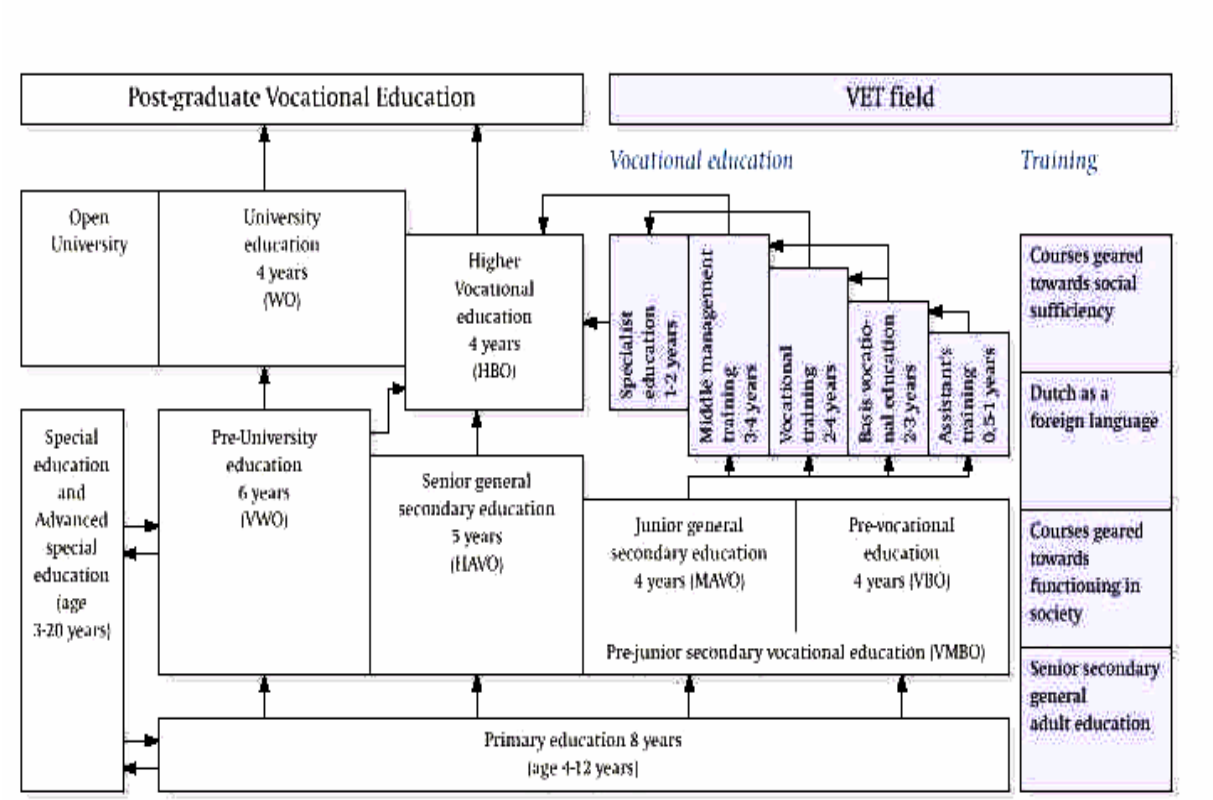
Structure of education in the Netherlands

The Netherlands Family Fertility Survey uses the International Classification of Education (ISCED) to measure educational attainment. In 1976 UNESCO created the ISCED (OECD 1999). As can be observed

[1] Although the number of years of education at each level (primary school, middle school, secondary school and higher secondary school) is different in different states, to facilitate comparison of educational attainment among states, the NFHS-2 tabulations use the same levels in all states (five years of primary school, three years of middle school, two years of secondary school, and two years of higher secondary school) (IIPS 2001: 23).

from Figure 3.3, in the Dutch context school attendance is compulsory from the age of 4 till the age of 12, which is the duration of primary education, lasting 8 years. Thus all children begin schooling from the age of 4.

Figure 3.3 Structure of Education in the Netherlands



*Source: www.dutch-vet.nl; * VET field is Vocational Education and Training*

The academic calendar for Dutch schools begins in the month of September until the end of June (Ministry of Education, Culture and Science 1998, Netherlands). Children with handicap can attend special schools from the age of 3 till the age of 20. The curriculum in these schools runs closely with the mainstream curriculum of regular schools. Children from the age of 12 start secondary education, which can be categorised into four types:

- Pre-vocational education (VBO)[1] which lasts for 4 years
- Junior general secondary education (MAVO)[2] which lasts for 4 years
- Senior general secondary education (HAVO)[3] which lasts for 5 years
- Pre-University education (VWO)[4] which lasts for 6 years

[1] Voorbereidend Beroepsonderwijs (preparatory vocational education)
[2] Middelbaar Algemeen Voortgezet Onderwijs (intermediate general secondary education)
[3] Hoger Algemeen Voortgezet Onderwijs (senior general secondary education)
[4] Voorbereidend Wetenschappelijk Onderwijs (pre university education)

Secondary education lasts from 4 to 6 years, depending on the type of secondary school. Beyond ower secondary education is the upper secondary education that comprises higher vocational education (HBO)[5] which lasts 4 years and university education (WO)[6] which also covers 4 years. However students can be registered up till 6 years for higher education which is completed by the ages of 20 to 22 years depending on the type of upper secondary school. The tertiary education, which usually ends at the age of 26 years, follows the upper secondary education (Mackinnon et al. 1997). Historically the education system in the Netherlands has seen a massive change from the private education based on religious divisions to the present-day state or municipality-run schools. The divisions based on religion i.e. separate schools and colleges for Catholics and Protestants have weakened since the late 1960s, a result of the decline in religious beliefs and practices (Mackinnon et al. 1997).

In OG 98 dataset, information has been collected on the respondent's highest completed education, highest attended education and education that the respondent was attending at the time of the survey. All these variables have been categorised in a similar way i.e. primary, secondary lower, secondary higher, first step high, second step high and third step high. The information on the highest completed education has been used to calculate the number of years spent by the respondent in school. The coding of the categories in the survey has been done in the way as shown in Table 3.3 (based on email from de Graaf, June 4 2003).

Table 3.3 Completed number of years of schooling for categories of highest educational level, OG 98, the Netherlands

Highest educational level *	Years of schooling
Primary education	11 years of schooling
Secondary lower (MAVO, VBO etc.)	12 years of schooling
Secondary higher (HAVO, VWO, MBO)	14 years of schooling
First step high (HBO)	18 years of schooling
Second step high (WO)	19 years of schooling
Third step high (Dr.)	22 years of schooling

*Source: Personal communication with de Graaf, 4 June 2003; *221 censored cases*

From this table we can get further information on the completed number of years of schooling that constitutes categories of highest completed education. For example, for a female respondent in the OG 98 survey who said that her highest completed education is MAVO or VBO i.e. secondary lower, we now know that she has completed 12 years of schooling. Those women who stated that they were still continuing on with their education are treated as censored cases. In our sample size 221 women stated that they were continuing with their education.

To study the changes across time in the cross-cultural perspective women have been categorised into different *birth cohorts*. This has been done keeping in mind the distinctness of each cohort from the others both socially and demographically (Ryder 1985) (see chapter 2). The birth cohorts situate individuals in historical time subjected to social and cultural processes. The birth cohorts have been categorised in a similar way for both Karnataka and the Netherlands as those born 1960 and before, 1961-1965, 1966-1970 and 1971-1976. For an elaborate discussion please refer to Chapter 2 (see section 2.5.3). Each birth cohort

[5] Hoger Beroepsonderwijs (higher vocational education)
[6] Wetenschappelijk Onderwijs (university education)

has a uniform five-year period distribution. This is with the exception of the upper range for the oldest cohort, which is in accordance with the year of birth of the oldest women in each of the surveys. In the context of Karnataka the oldest cohort includes women who were born between 1949 and 1960, while for the Dutch context, the oldest cohort includes those women who were born between 1945 and 1960. This uniform categorisation of birth cohorts has been done to facilitate comparability of the timing of first birth across different generations of women in Karnataka and the Netherlands. The focus is more on the equal five-year distribution of the birth cohorts than the percentage distribution of women in each cohort. This has been done keeping in mind the historical setting of both the cultural contexts and the typology of generations as summarised by Becker (1990) for the context of Netherlands. For the Karnataka context no literature exists on the typology of generations. To present the results of the secondary data analysis, we use the five-year categorisation of birth cohorts. From this categorisation we then move ahead to working with different generations of women. These five-year birth cohorts would then come to represent one generation of women. In Table 3.4 we observe the age range of women at the time of the survey by their birth cohorts for both Karnataka and the Netherlands.

Table 3.4 Age range of the women at the time of survey by their birth cohorts

Birth cohorts	Age at the time of survey Karnataka (1998-99)	Age at the time of survey Netherlands (1998)
Born in 1960 and before	39-49*	38-53**
Born in 1961-1965	34-38	33-37
Born in 1966-1970	29-33	28-32
Born in 1971-1976	23-28	----
Total no of women	3567	4230

**the oldest year of birth is 1949; **the oldest year of birth is 1945*

Tables 3.5 and 3.6 depict the percentage distribution of women both in the Karnataka and the Netherlands dataset by their birth cohorts.

Table 3.5 Number and percentage of women by birth cohorts, Karnataka

Birth cohorts	No.	Percentage
1949-1960	1128	31.6
1961-1965	669	18.7
1966-1970	751	21.1
1971-1976	1019	28.6
Total	3567*	100.0

**907 cases not included as these women are born after 1976*

Table 3.6 Number and percentage of women by birth cohorts, the Netherlands

Birth cohorts	No.	Percentage
1945-1960	2492	58.9
1961-1965	956	22.6
1966-1970	782	18.4
Total	4230*	100.0

**1220 cases not included as these are women born after 1970*

3.3.4 Educational profile of the study population

Karnataka

Table 3.7 gives the percentage distribution of women by their educational categories across birth cohorts in Karnataka. Across birth cohorts of women in Karnataka, women with no education have declined from 53.4 percent in the cohort born 1960 and before to 46.1 percent in the cohort 1971-1976. NFHS-2, Karnataka also reports a decline in illiteracy from 62 percent as found in NFHS-1 (1992-93) to 55 percent at the time of NFHS-2 (1998-99) (IIPS, 2001). However among women who are literate, across all birth cohorts, the largest proportion has incomplete secondary school education. Thus while illiteracy has seen a decline of 7.3 percentage points from the oldest to the youngest cohort, the proportion attaining completed secondary education has increased by 3.3 percentage points for the same birth cohorts.

Table 3.7 Percentage of women by their level of education, Karnataka, different birth cohorts

Educational categories	1949-1960	1961-1965	1966-1970	1971-1976	Total
No education	53.4	52.6	48.9	46.1	50.2
Incomplete primary (4 years of schooling)	11.5	8.2	8.4	8.1	9.3
Complete primary (5 years of schooling)	4.5	4.8	4.5	4.2	4.5
Incomplete secondary (6-9 years of schooling)	14.9	16.4	16.0	17.9	16.3
Complete secondary (10 years of schooling)	8.2	9.0	10.4	11.5	9.7
Higher (11-19 years of schooling)	7.5	9.0	11.8	12.2	10.0
Number of women	1128	669	751	1019	3567*

**907 cases not included (as these women are born after 1976)*

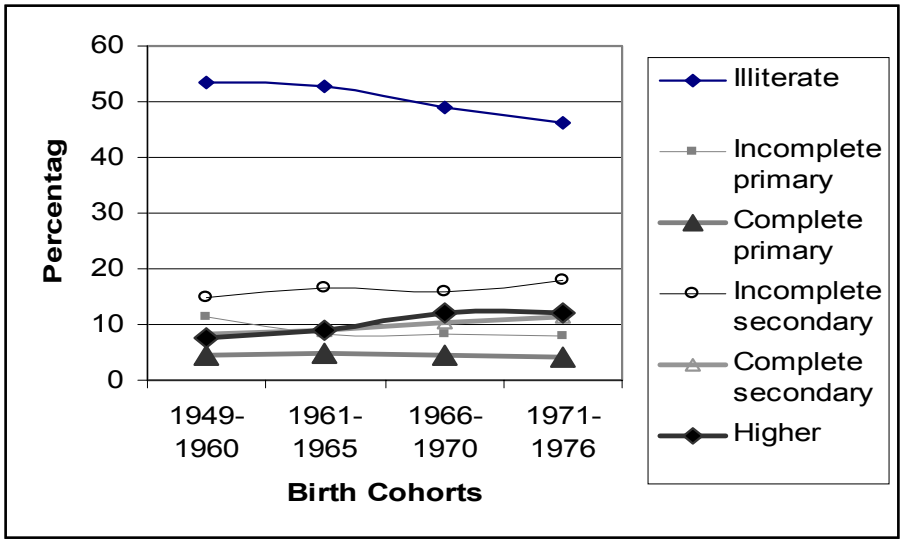
Table 3.7 is based on the categorisation of educational level as defined by NFHS- 2 (see Table 3.2). In the cohort of women born 1971-1976, not only has illiteracy declined, but there has been an increase in the proportion of women with incomplete secondary, complete secondary and higher education when compared with the cohort of women born 1966-1970. From this we can also say that women in the cohort 1971-1976 have been attending increased number of years of schooling when compared to the other cohorts of women in Karnataka. It thus shows how different younger cohorts of women in Karnataka are and the rapid changes taking place in Indian society.

Within each birth cohort we can observe that apart from a substantial proportion of women who have no education, the distribution of women in the other educational categories has shifted from lower levels of

education in the older cohorts to higher levels of education in the youngest cohort. Excluding the women with no education, 46.6 percent had at least some education in the cohort 1949-1960 which is the oldest cohort. Out of the women who had some education in this cohort, 11.5 percent of the women had incomplete primary education or have had 4 years of schooling as their highest educational level. Among the rest of the women who further pursued their education the proportion with incomplete secondary education in the oldest cohort was 14.9 percent and very few have higher education which involves 11-19 years of schooling. The scenario already seems to change in the cohort born 1966-1970 with 48.9 percent of the total women in the cohort without any education, whilst the proportion of women attaining incomplete secondary, complete secondary and higher educational level is increasing. A parallel is shown by the birth cohort of women born 1971-1976.

Hence if women without formal education are left out we can see from Table 3.7 above that of the women with at least some education, incomplete primary i.e. 4 years of schooling and incomplete secondary i.e. 6-9 years of schooling were clear signifiers of high education in the cohort 1949-1960. While in the cohort born 1971-1976, these signifiers were either incomplete secondary education i.e. 6-9 years of schooling or complete secondary i.e. 10 years of schooling and higher i.e. 11 to 19 years of schooling. Thus with this shift in educational signifiers we can conclude that bigger numbers of young women in Karnataka pursue higher education which could influence their age at first birth. We also observe the same from Figure 3.4.

Figure 3.4 Percentage of women by educational levels across cohorts, Karnataka



The Netherlands

In OG 98, the educational categories considered are primary, secondary lower (which includes MAVO and VBO), secondary higher (which includes HAVO, VBO and MBO), first step high i.e. those with an HBO degree, second step high i.e. those with a WO degree and third step high i.e. those with a doctorate. Table 3.8 shows the distribution of women included in the study by their educational categories across birth cohorts in the Netherlands.

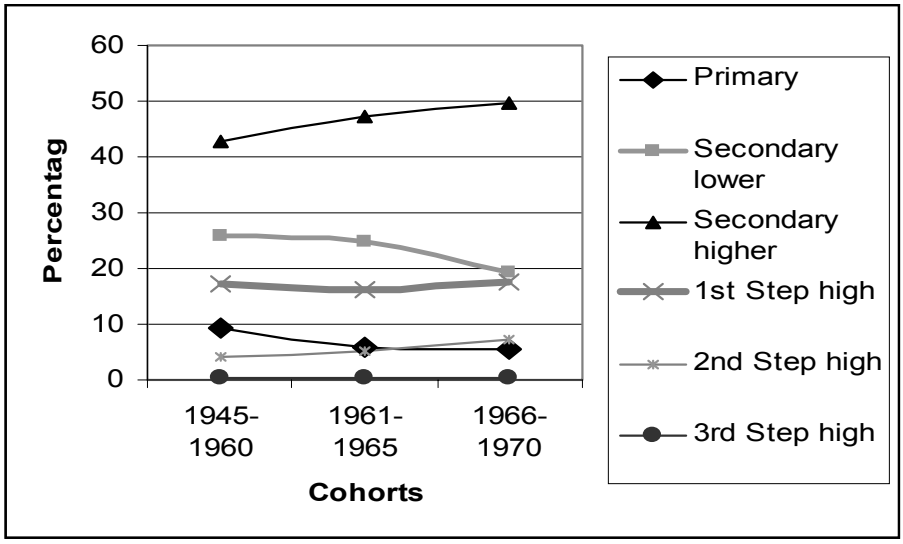
Table 3.8 Percent distribution of women by educational categories, the Netherlands, different birth cohorts

Educational categories	1945-1960	1961-1965	1966-1970	Total
Primary (11 years of schooling)	9.3	5.8	5.6	7.8
Secondary lower (MAVO, VBO etc) (12 years of schooling)	26.0	24.9	19.4	24.5
Secondary higher (HAVO, VWO, MBO) (14 years of schooling)	42.6	47.3	49.6	45.0
1st step high (HBO) (18 years of schooling)	17.3	16.2	17.7	17.1
2nd step high (WO) (19 years of schooling)	4.3	5.1	7.3	5.1
3rd step high (Dr.) (22 years of schooling)	.5	.5	.4	.5
Number of women	2333	924	768	4025*

**1425 cases missing (as women born after 1970 are not included)*

The lower percentage of women, who had primary education i.e. 11 years of schooling as their highest educational attainment across all birth cohorts, indicates the fact that primary education is mandatory and compulsory for all children in the Dutch context. However in India even though primary education is compulsory many children do not go to school to obtain primary education. From Table 3.8, it can be observed that the majority of Dutch women across all birth cohorts have had secondary higher education i.e. 14 years of schooling as their highest educational level. Whilst in the cohort 1960 and before (oldest cohort) the proportion of women who had secondary higher education was 42.6 percent, this increased to 49.6 percent in the cohort 1966-1970. This increase is an increase by 7 percentage points when compared to the oldest cohort. In addition, it can be observed from table 5.9 that amongst the younger cohorts of women i.e. born 1966-1970, there has been an increase in the percentage of women attaining 18 years and 19 years of schooling when compared to the cohort born 1960 and before and 1961-1965. In a similar manner it is observed that in the subsequent cohorts, there is a decrease in the percentage of women attaining 11 years and 12 years of schooling (primary and secondary lower educational categories). The intercohort changes by levels of education are also illustrated in Figure 3.5.

Figure 3.5 Percentage of women by educational levels across cohorts, the Netherlands



The percentage distribution of women according to their educational categories within each birth cohort shows a shift from lower levels of education in the cohort born 1960 and before to higher levels of education in the cohort born 1966-1970. This shift also manifests itself in the increasing number of years spent in school. Across cohorts we observe an increase in the proportion of women pursuing higher secondary education which is 14 years of schooling. In the cohort born 1960 and before, 42.6 percent of women had higher secondary education (14 years of schooling) and this increased to 49.6 percent in the cohort 1966-1970. In the cohort 1966-1970 a shift can be observed as 17.7 percent of them had 1st step high (HBO) education or 18 years of schooling and 7.3 percent of them had 2nd step high (WO) education or 19 years of schooling as their highest education.

Figures 3.4 and 3.5 illustrate the increased education level of women from older to the younger cohorts both in Karnataka and the Netherlands. It is also observed for the literate women both in the Karnataka and the Dutch contexts that women in the younger cohorts attain higher education and thus spend more number of years in schooling. The younger cohort of women in Karnataka depicts change through the increasing number pursuing higher education.

3.3.5 Imputation of age at graduation

Imputation is considered to be a common way of dealing with missing, invalid and incomplete responses in large survey datasets. It can also be called a gap-filling mechanism. From the available information in the survey datasets based on certain assumptions we attempt to impute the century month code (CMC) at graduation. Here graduation means completing highest education level attained. The survey datasets are National Family Health Survey-2 for the state of Karnataka (1998-99) and OG 98. Information on educational levels is from the OG 98 file while the CMC is from Matsuo and Willekens (2003).

We give a brief overview of what information we already have from the Karnataka NFHS-2 and OG 98 dataset. The OG 98 dataset gives us the year (gebjr_op) and the century month code (cmcb_op) in which the respondent was born. It also gives us information on their highest completed education (opl_hb), highest attended education (opl_hg) and education now attending (opl_nu). All these variables have been similarly categorised according to primary, secondary lower, secondary higher, first step high, second step high and third step high (See Section 3.3.3). From these variables in the dataset we already obtain a broader picture of the educational profile of the respondents in the survey.

In a similar way as the OG 98 data, the NFHS-2, Karnataka gives us information on the year of birth of the respondent (v010) and the century month code of her birth (v011). Apart from this the education-related variables in the dataset are highest educational level of the respondent (v106), which broadly classifies the respondents into those with no education, primary, secondary and higher education (see Section 3.3.3). Another variable education in single years (v133) gives us the number of years that the respondent has attended school. The respondents were also asked a question about whether they were still in school and the variable used for a respondent still in school is (v148). The variable educational attainment (v149) gives us information on how much of education the respondent has had. This variable includes both completed education as well as incomplete education as the woman's highest educational attainment. The variable has been categorised as no education, incomplete primary, complete primary, incomplete secondary, complete secondary and higher. Table 3.6 above gives us the information on the number of years of schooling associated with the educational categories in NFHS-2, Karnataka.

The Netherlands

The total number of women in OG 98 is 5,450, out of which 5,229 women had already completed their highest level of education. Precise information on the number of women still in education could not be derived from the OG 98 data file. After knowing the number of years of schooling that a woman has had, the next step was to know her age at graduation (age_grad). We assume two things, the first being that all the respondents have cleared their exams and have been duly promoted to the next class. And the second assumes that everyone begins school at the age of 4. This variable gives us the number of years of education that the respondent had since she began her schooling. Thus to derive the age at graduation (age_grad) we simply add the numbers of years of schooling to 4 i.e. the age at which the respondents have begun school:

$$Age\_grad = (yofedu+4) \text{ (in years)}$$

The CMC birth of the respondent (cmcb_op) is already available in the MWOG03 dataset. We then calculate the month of her birth (month) in the following way:

$$month=cmcb\_op-(gebjr\_op-1900)*12$$

Now to calculate CMC at graduation (cmc_grad) we assume that every respondent completed her education in the month of June. June is the month in which the school calendar year ends and September is the month in which it begins. Here two scenarios need to be taken into account which is very much related to the month in which the woman gained admission to school. The first scenario is the case when the woman is born sometime between January and September. In this case she begins her schooling in the stipulated month of September i.e. the beginning of school calendar year. For these women the CMC at graduation (cmc_grad) is calculated in the following way:

$$Cmc\_grad = cmcb\_op-\{(gebjr\_op-1900)*12 +age\_grad\}+6$$

Here gebjr_op is the year in which the respondent is born and 6 indicates the month of June when the year ends. The second scenario takes into account all those women born in the period October to December. These women have to wait for September in the following year to gain admission to school. The CMC at graduation for these women is calculated as follows:

$$Cmc\_grad = cmcb\_op-\{(gebjr\_op-1900+1)*12 +age\_grad\}+6$$

Here gebjr_op is the year in which the respondent is born and 6 indicate the month of June when the school year ends. As we are looking at completed education we thus take into account the month of June when the school year ends. For example, a child born in October 2000 would not have reached 4 years in September 2004. She thus has to wait until September 2005 when she is 4 years and 11 months to begin her schooling. This is the reason why 1 is added in the formula above.

Taking the abovementioned criteria as pre-requisites the variable highest completed education (opl_hb) has been used to calculate the number of years spent by the respondent in school. The coding of the categories in the survey has been carried out as indicated in Table 3.3 (personal communication with de Graaf (2003), (see Section 3.3.3). This variable has been called years of schooling (yofedu). For example a woman who stated that her highest completed education is lower secondary; we now know that she has had 12 years of schooling.

Karnataka

In the Karnataka NFHS-1998-99, dataset there are two variables that have been used to categorise educational attainment of women. The variable highest educational level (v106) broadly categorises the women in the dataset into none, low, middle and high educated. However, another variable called educational attainment (v149) has distinct categories wherein the respondent states her highest attained education, which can be any level of education either completed or incomplete. In the estimation of CMC of graduation both the complete and the incomplete educational levels are considered individually. The other education related variable in the dataset is education in single years (v133). From this variable we get to know how many years of schooling the respondent had since the time she began her schooling. All the women in the survey have been assumed to begin their schooling at the age of six. This is supported by the National Policy on education (1996), undertaken by the Department of Education, Government of India.

The new variable is age_grad and it has been arrived at as follows:

$$Age\_grad = v133+6 \text{ (in years)}$$

Thus we know two things, first how educated the respondents in the survey are and second their total number of years of schooling. From this information we proceed to calculate the CMC of graduation (cmc_grad). For this we need to keep in mind the school calendar in Karnataka, which is June to March. We also know from the dataset the CMC of birth of the respondent that facilitates us to calculate the month of birth (m_op) of the respondent in the following way:

$$m\_op = v011-trunc(v011/12)*12$$

According to this month of birth of the respondents (m_op), we place them into two categories. One category consists of women who were born in the period January to June and have completed their highest education. These women would be aged 6 at the time they gain admission to school. Their CMC of graduation (cmc_grad) is calculated in the following way:

$$cmc\_grad = \{((age\_grad+v010)*12) +3\}$$

The other category consists of women who are born in the period July to December and who have completed their highest education. These are the women who are aged less than 6 years at the time of admission. They thus have to wait till next June to gain admission to school. The CMC of graduation of these women are calculated thus:

$$cmc\_grad = \{((age\_grad+v010+1)*12+3\}$$

For example, a child born in January 1996 would be aged 6 years and 4 months in June 2002 when she is admitted to school. This girl would fall in the first category of women. However if a girl child is born in July 1996, she would then be 5 years and 11 months in June 2002. This child would then have to wait till June 2002 to be admitted to school. Hence this girl would fall in the second category of women. This is precisely the reason why one is added in the formula just elaborated. The 3 in the last two formulas given indicates the month of March when the school year in India ends, assuming that these women have completed their highest education at the end of the academic year. V010 indicates the year of birth of the respondent taken for the dataset.

As the dataset of Karnataka, also pertains to women whose highest educational level is either incomplete primary or incomplete secondary education, a different method for estimating their CMC of graduation is adopted. Herein we select all those women who had incomplete highest education. We then assume that they must have discontinued their education in the middle of the academic year i.e. in the month of October indicated by 10 in the following formulas and v010 indicates the year of birth of the respondent. Again we consider amongst these women the ones who are born in the period of January to June and July to December. Their CMC of graduation is calculated in the following way:

$$cmc\_grad = \{((age\_grad+v010)*12)+10\}$$

For those women who were born in the period July to December and whose highest education, is incomplete, their CMC of graduation is calculated as follows:

$$cmc\_grad = \{((age\_grad+v010+1)*12) +10\}$$

Next we examine the basis of the assumptions and the limitations to arrive at the conclusive imputation of CMC age at graduation for both the datasets. The estimation of CMC of graduation (cmc_grad) is a rough estimate telling us the precise time in months when the respondent has completed her education. We call this a rough estimate because of the paucity of information and the various assumptions involved. The paucity of information is the exact month in which the women began their schooling and the month in which they have ended it. This makes it necessary to estimate the CMC of graduation for both datasets. In the case of Karnataka, some of the respondents have cited their highest educational level as either

incomplete primary or secondary education. However we do not know the month in which these women disrupted their education career. These women are assumed to disrupt their education in the middle of the academic year. It is for this reason that the month of October is considered as the month in which these women must have stopped their education. We also assume that almost all children begin their school when they turn 4 for the case of Netherlands and 6 in the case of Karnataka. However some women in the dataset must have hastened or postponed their school entrance. This is not known from the dataset and all the respondents have been assumed to begin their school at age 4 in the Netherlands dataset and age 6 in the Karnataka dataset. All women in both datasets are also assumed to have a smooth and uninterrupted educational career without any repeat classes. In a real world situation this can never be the case. The estimation of CMC of graduation does not distinguish between the curriculum and type of education imparted by the various educational institutions in both Netherlands and Karnataka. Paucity of information from secondary literature disallows the inclusion of the different year-by-year changes in the education system of both countries. The CMC of graduation thus assumes similarity across different cohorts of women in both the datasets.

The preceding provides a useful exercise to highlight the importance of the CMC of graduation on the different demographic events in the life course of women in both countries. It could also emphasise and substantiate the institutional effect of education on the timing of other life events.

3.3.6 The life table

The life table is used as a quantitative method of data analysis in this research. Life tables describe age-specific decrement and survival rates for a population. Preston et al. (2001: 38) state that in its classical form the life table displays various pieces of information about the dying out of a birth cohort. Thus age is an important variable in life table analysis.The traditional life table is a single decrement life table focusing on transition from one state to another. It originally studied transitions from the state of being alive to death. Thus death was the absorbing state. In this research we make use of single state life tables to study first birth behaviour across cohorts and by different levels of women's education in Karnataka and the Netherlands. The life table uses the empirical transition rates estimated from the data to complete the cohort experience of incomplete cohorts. In addition to the single state life tables, multiple decrement life tables are used. In the present research we use the multiple decrement life tables to study multiple exits from the state of being single to marriage or cohabitation. Blossfeld and Rohwer (2002) term it as multiple-destination model.

The survival analysis is designed to summarise time to event data, taking into account censoring. This is because of the fact that both the surveys are retrospective surveys. Censoring takes place at the time of survey for all those women who did not marry or cohabit and those who did not have their first child before the survey date. As the NFHS-2 sample includes women who are ever-married thus censoring is not used for the timing of first union formation (marriage). For the Dutch context, censoring has been taken into account both for the timing of first birth and first union. The time to the event of first birth is measured at the time from birth of the respondent to the birth of the woman's first child. In a similar way the time to the event of first union is measured as the time from birth of the respondent to the time of first union. The events are calculated in century month codes. A status variable is also created which is coded as 1 if the event of first birth or first union has taken place. It is coded as 0 if the event has not taken place and the observation is censored. The censoring occurs at the time of survey and in the life table analysis it is assumed that censoring takes place in the middle of the month. The survival curves are graphical representations of the percentage of population surviving according to their ages. If the event is first birth,

then the survival curve can be interpreted as the proportion of women who did not yet have their child at particular ages.

3.4 Methodology for Qualitative Research

In this section first the conceptual framework for the qualitative research is presented in Figure 3.6 after which we define and operationalise the concepts in this conceptual model. This model is based on the theoretical framework and provides additional support to answer the research questions directing the qualitative research. The present research is a cross-cultural study on the impact of higher educational attainment on the changing lives of women in Karnataka and the Netherlands. It attempts to study these changes across generations of daughters and mothers in the same cross-cultural perspective. Evidence from secondary literature reveals the linkages between women's higher educational attainment and women's changing lives centered on the events of first union formation and first birth. Hence, being higher educated reflects two simultaneous and interrelated achievements for women. Firstly, a higher level of education refers to the variability of educational attainment in a society at a particular point in time. It is also referred to as the level of investments in the educational sphere (Blossfeld et al.1995). The second type of achievement is the educational enrolment. These two concepts are interrelated. Longer enrolment in the educational arena leads to higher levels of education and vice versa. Higher education's impact on marriage and first birth has been observed to increasingly delay the occurrence of these events while in Dutch society in addition to these events being delayed, they are also avoided (Blossfeld et al. 1995, Sobotka 2004, Matsuo 2003). The impact of longer educational enrolment is observable in the delayed timing of entry into marriage and motherhood (Blossfeld and Huinink 1991, Marini 1984, 1985, Parasuraman et al. 1999, Jejeebhoy 1995). Hence, longer educational enrolment influences women's entry into marriage and motherhood. However, there is also an opposing force that which women face during the pursuit of higher education, namely the occurrence of marriage or first birth could disrupt or terminate the education career (Marini 1984, Jejeebhoy 1995). This is largely due to the fact that educational career and motherhood are considered incompatible (Blossfeld and Huinink 1991, Blossfeld et al. 1995). On the other hand, higher educational attainment enables women's participation in the labour market and increases their opportunity for economic independence. Thus education indirectly creates other avenues for women outside the home. We observe that in contemporary times women are far less solely restricted to the realms of the house and the role of 'traditional homemaker'. They have increasingly taken on dual roles as a working woman as well as a working mother.

We hypothesise in our study that women's higher educational attainment is a strategy adopted by women in order to organise the other spheres of her life such as the personal, familial and occupational. Strategy refers to the tactics people use to balance their needs and wants within the characteristics of the macro-level opportunity structure and individual life stages to reach the best possible level of life satisfaction during the life course (Bosveld 2001). The concept of strategy thus elaborates the life plans that each individual undertakes in the background of socially defined rules and norms by relating it to past experiences. Thus on the one hand, the woman attempts to keep up with the societal expectations, and on the other she herself tries to balance her needs and wants. A woman can use higher educational attainment as strategy to order and organise the timing of her first child birth i.e. the beginning of reproductive career. However, strategies need not be the same across cohorts. In the older cohort marriage was perhaps the only way by which a woman could attain her independence. Marriage not only brought with it leaving the parental home, it also endowed status of a married woman and legitimated her control over her own household. Very much similar to this is the work of Das Gupta (1996) wherein she argues that the rise and fall of women's status and autonomy is highly age graded across her life cycle. Marriage thus brought

with it a marital status, which is above of that of an unmarried woman. Status is further enhanced by motherhood with the birth of the first child and later in life as a mother-in-law.

We also hypothesise that by strategising their behaviour, women achieve certain gains (see Section 2.3.2). This gain can be acquired firstly when there is desirability for this gain and secondly when the factors limiting this gain have been overcome. Women of the younger birth cohorts in India are observed to have a different life style when compared to their mothers. This change is assumed to have come about when women felt the desire for it. Desirability becomes not the only thing, it is necessary for these women to also overcome the limitations imposed by culture and the kinship structure of the society (Jejeebhoy 1996, Caldwell 1993). Adaptation to new forms of behaviour is determined by three preconditions as formulated by Coale (1973). These are readiness, willingness and ability. The notion of readiness refers to the fact that the new forms of behaviour must be advantageous to the actor, i.e. the utility must be evident and outweigh the disutility (Lesthaeghe and Vanderhoeft 2001). The notion of willingness refers to considerations of legitimacy and normative acceptability of the new pattern of behaviour. Willingness to adopt a new behaviour is first evaluated against the normative structure existing in the society at that point of time. The notion of ability refers to the accessibility to the innovative behaviour (Coale 1973). Thus the gains could be in the form of better career opportunities for the woman, change from ascribed to achieved status, role change, autonomy, changing meaning of 'wifehood' and 'motherhood', combination of parallel careers and multiple roles of women as well a bigger range of choices for women.

Thus the aims and objectives of the qualitative research are twofold. Firstly the study assesses whether women's higher educational attainment is a strategising behaviour in their life course in the cross-cultural perspectives of Karnataka and the Netherlands. Secondly the study attempts to understand how this strategising behaviour leads to gains by individual women. Hence the research questions addressed by the qualitative research are as follows:

- How does women's higher educational attainment influence their life course as perceived by the women themselves, across generations of mothers and daughters in Karnataka and the daughter's generation in the Netherlands?
  - What is the perceived timing of events such as; menarche, first union, cohabitation, marriage and first birth: early, late or on time?
  - How are transitions from one stage to another with the occurrence of events in the reproductive life course initiated through ceremonies?
  - What knowledge did women have before and after the occurrence of the event and what had been their sources of information?
  - How does transition from one stage to the other in the reproductive life course lead to socially expected behavioural changes?
  - How does transition from one stage to the other in the reproductive life course lead to socially expected role changes?
  - How do women perceive their role changes themselves with the occurrence of first menstruation, cohabitation, marriage and birth of their first child?
  - What do women perceive as gains (advantages and disadvantages) from attaining first menarche, cohabitation, marriage and birth of their first child?
  - How are these gains related to women's educational background, as perceived by women?

- How has women's position in society changed across generations of mothers and daughters?

- How does women's higher education influence their autonomy and decision-making capability as perceived by the women themselves?
- How has women's higher education influenced their status as perceived by the women themselves? (ascribed versus achieved status)

3.4.1 Need for qualitative research

The secondary data analysis of the datasets NFHS-2, 1998-99 for the state of Karnataka helped us in identifying the target group of women for qualitative research. Secondary data analysis revealed that the cohort of women born 1971-1976 displays an innovative pattern of behaviour as regards the timing of marriage and first birth when compared to the older birth cohorts. Women in this cohort are observed to delay marriage and first child birth and the proportion of women who have completed 11 to 19 years of schooling in this cohort has increased in comparison to the older cohorts in Karnataka. We thus already have evidence of the relationship of higher educational attainment of women linked with their delayed age at marriage and first child birth from the secondary data analysis. This evidence is also corroborated by research findings and secondary literature. The secondary literature also substantiates the indirect effects and the institutional effects of women's educational attainment on the timing and sequencing of events such as marriage and first birth in the reproductive life course (see Chapter 2, Section 2.2.2; Kasarda et al. 1986, Jejeebhoy 1995, Jeffery and Basu 1996, Basu 1996, Parasuraman et al. 1999, Cochrane 1979, Caldwell 1982, 1988, Caldwell et al. 1982, 1983).

Thus it is revealed that on the one hand the higher educated women in Karnataka seem to be following a universal pattern of delayed first marriage and consequently delayed timing of first birth shown by the higher educated women in the cultural context of the Netherlands. While on the other hand we find the youngest cohort in the Karnataka context to be displaying an innovative pattern of behaviour, which is distinct from the older cohorts.

The secondary data allows us only a partial observation of the linkages between women's higher educational attainment and individual behaviour outcomes. Marriage and first child birth being delayed by higher educated women in both the cultural contexts do not provide us with enough and convincing evidence to conclude on women's changing life patterns at the micro level and changing position of women as the social outcome. Thus through qualitative research we uncover the underlying mechanisms of how higher education influences women's choice and preference. At the same time, the qualitative research also attempts at determining whether higher educational attainment is a strategy adopted by women in order to achieve different gains. The qualitative research in the cross-cultural perspective enables us to understand how women in the two different cultural contexts make use of their higher education in relation to the social cultural facilities and constraints. So in order to have greater insight, both quantitative and qualitative researches are necessary on this issue. The quantitative analysis focuses on the timing of completion of highest education level, marriage, cohabitation and first birth and thus can be termed as the life history approach. While the qualitative research focuses on the how these events are linked to the changing lives of women as perceived by women themselves in the cross-cultural perspective and hence is termed as life story approach. Matsuo (2003) in her study of Japanese and Dutch women across different cohorts also uses the life history and the life story approaches to explain postponement of motherhood.

3.4.2 Conceptual model and definition of concepts

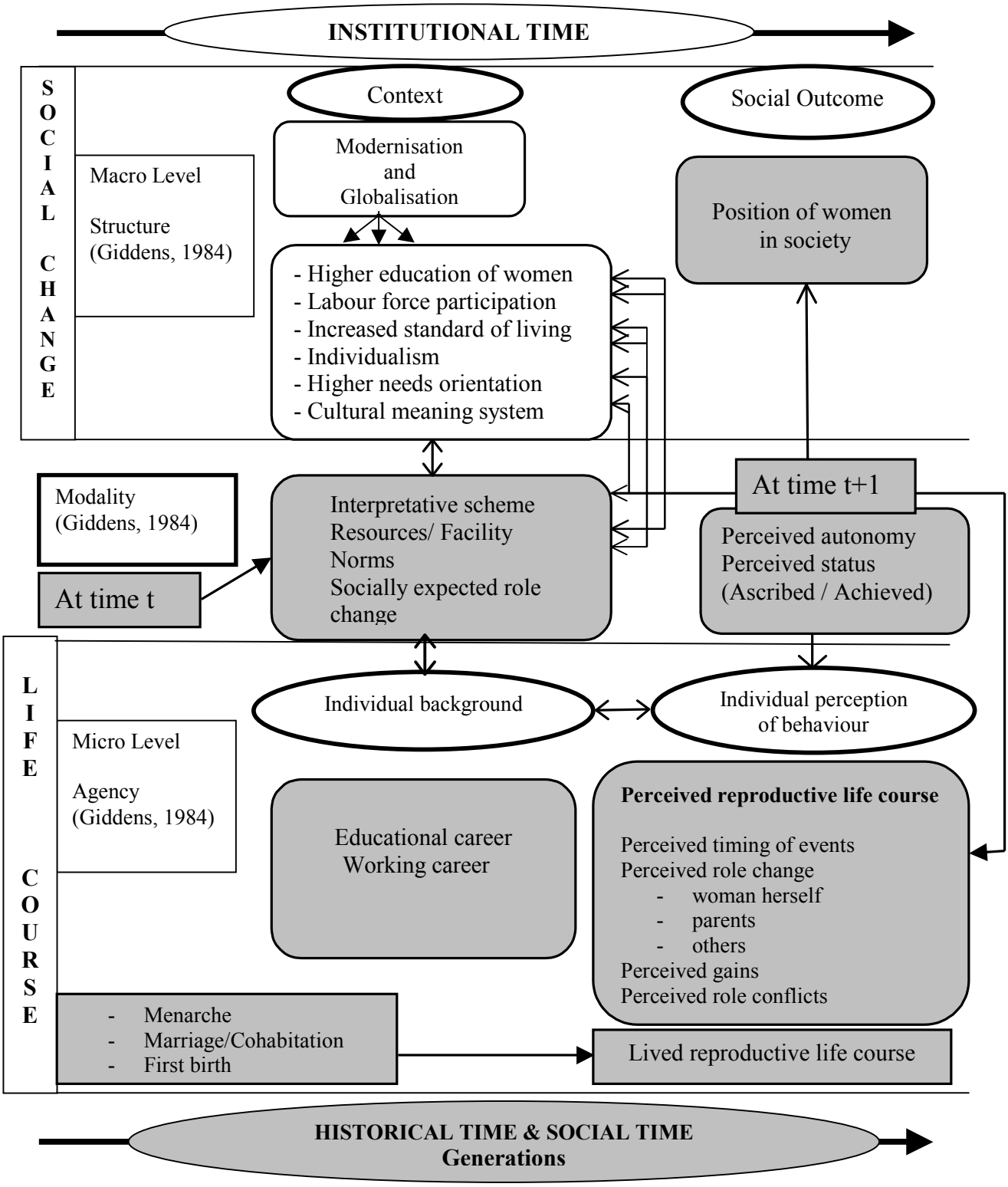
Figure 3.6 illustrates the conceptual framework for qualitative research. This framework is used for the chapters on qualitative research findings in chapters 6, 7 and 8. Similar to the other two conceptual models as depicted in Figure 2.5 and 3.1, this framework also uses the social theory of Coleman (1990) as the background by using the basic elements and making the distinction between the macro and micro levels. The macro level consists of the context and the social outcome while at the micro level; individual background and individual behaviour play a key role. In order to overcome the 'one-way influence' of the macro level on the micro level individual background and individual behaviour and to employ modality to understand the macro-micro linkages, Giddens's structuration theory (1984) is incorporated into the conceptual framework. The fundamentals of Giddens structuration theory represented in the framework are structure, modality and agency. Hence the conceptual framework is divided into two dimensions: the macro level which depicts the societal level, and the micro level which depicts the individual level. The macro level also represents structure as formulated in Giddens's structuration theory. The micro level is represented by agency, which is in other words the human actor or the individual agent. With the progression of time, changes are observable both at the macro and the micro levels hence making the model dynamic. At the macro level the changes are studied as social change that societies face through the processes of modernisation and globalisation. Modernisation and globalisation thus represent the context at the macro level. The context consists of the institutions of the society, which provide the rules, and thus guide individual behaviour. At the micro level, changes are studied according to the life course perspective. The life course approach studies the ordering, sequencing and timing of events from birth to death. However, we focus on the reproductive life course and menarche, union formation by marriage or cohabitation and firstbirth. The important assumption here is that individual agents do not solely follow the rules provided by the institutional setup at the macro level but they also produce, reproduce and transform the rules as well as the institutional framework. The same has been argued by Giddens (1984) and D'Andrade (1995). At the individual level are the elements of individual background and individual perception on behaviour. While the individual perception of behaviour is shaped by the individual background, the context influences individual background. According to de Bruijn (1999:185) individual background distinguishes two separate aspects that fuel the processes of behaviour formation into personal endowments and life course development. We however include only the personal endowments that underlie the individual background in the form of higher educational attainment and work force participation of women. In this research, the educational and working careers of women are personal endowments that seem to influence women's choice and decision on the sequencing and timing of events such as age at marriage, age at cohabitation and age at first child birth. These personal endowments of education and work are considered to influence women's perceived reproductive life course. In our research we make a distinction between the lived reproductive life course and the perceived reproductive life course. In the lived reproductive life course we observe the timing, sequencing and occurrence of events such as menarche, marriage, cohabitation and the birth of the first child. While the perceived reproductive life course deals with how individuals perceive the timing, sequencing and occurrence of these events. For example, the lived reproductive life course of a woman is illustrated by her age at marriage (26 years) and her age at first child birth (28 years). However, the perception of these ages as being a right age to marry and give birth to the first child explains the perceived reproductive life course of this woman. In a similar way other events such as menarche and the beginning of first union are lived experiences at particular ages and at the same time are perceived as early, late or on time by the women themselves.

Higher Education and the Reproductive Life Course

The individual behaviour is influenced by the personal endowments of education and work. Hence the individual behaviour in the conceptual framework for qualitative research focuses on individual perceptions of behaviour. As the conceptual model is observed from the interactionist perspective, the interaction between the structure and agency or in other words the macro-micro linkages can be understood in terms of modalities. These modalities are the forms of 'via-media' between the structure and the agency which link institutional properties to the social actions in day-to-day activities across time. Hence at time t, the structure-agency linkages through modalities can be explained with the help of interpretative schemes, resources and facility, norms and socially expected role changes. The individual background of education and work is influenced by the modalities that lead to individual perception of behaviour. The perceived reproductive life course is located within the individual perception of behaviour which reflects the meaning women attach to their lived reproductive life course. Thus perceived timing of events, perceived role changes, perceived gains and the perceived role conflicts are means through which women give meaning to their lived reproductive life course.

These individual perceptions of behaviour also give rise to perceived autonomy of women and perceived status change from ascribed to achieved arising from higher education and a working career. Hence at time t + 1, perceived autonomy and perceived status become the modalities that explain how individual perception of behaviour and the women's position in the society are linked to each other. The social outcome in this conceptual framework is the position of women in the Karnataka and the Dutch societies.

Figure 3.6 Conceptual Framework (for qualitative data analysis)



In the following paragraphs, concepts employed in the conceptual framework will be defined and operationalised in the qualitative research.

- ***Micro Level***

This level consists of the main elements of individual background and individual behaviour. This level is also known as the agency represented by the human agents and social actors.

Agency

This is at the micro level and is a concept taken from Giddens's (1984) structuration theory. Agency has been defined by Giddens as the 'capability of the individual to make a difference to a pre-existing state of affairs or course of events' (Giddens 1984: 14). He views agency as the transformative capacity and in which human action and practices are inherent. Thus human agency is replicated by the behaviour of individuals. Transformation in action and practices comes about when individuals move from routinised way of life to innovative ways (Giddens 1984). In the qualitative research, the focus is on individual behaviour which will be studied in relation to the societal-level changes.

Reproductive Life Course

The reproductive life course delineates the fertile years of a woman's life beginning from menarche and ending at menopause and identifies life events such as marriage, age at graduation, first birth and entering into the labour force. Life events are the most basic element of the life course (Willekens 1999). As events occur they are related to a chain of person states, sequence of stages and each stage confers the individual with status (Runyan 1984, Willekens 1999, Heinz and Kruger 2001). For example, the event of marriage confers marital status to the individual. However, as Willekens (1999: 25) points out, individuals experience the events and go through the stages in infinitely varied ways. This is because the events and transitions are culturally and institutionally determined. Thus the life course approach at micro level enables situating life events and studying individual behaviour across historical and social time. However, in this study we focus only on the reproductive life course of women situating it in the social, cultural and historical contexts. The events that we focus at are menarche, cohabitation, marriage and first birth. The important assumption is that the timing of these life events both influences and is influenced by women's age at completion of highest education level, which we term as age at graduation. This assumption is based on several literatures and research findings mentioned in chapter 2. Studying the life events along the reproductive life course across different birth cohorts and generations of mothers and daughters imbues the life course approach with dynamism in our research.

Individual background

Individual background deals with the personal endowments that influence individual behaviour. The educational and working careers are the two important personal endowments that we focus on in the qualitative research. These personal endowments enable the ability to choose and also impact on women's personality characteristics through individual autonomy of women. The abilities to choose and to decide are assumed to influence the timing, occurrence and sequencing of events in the reproductive life course while the personality characteristics enable women to combine and cope with parallel careers of work and motherhood.

Individual behaviour

The qualitative research focuses on the perceived life course of women across cohorts in Karnataka and the Netherlands at the level of individual behaviour. At this level, we distinguish individual perception of

behaviour as illustrated in Figure 3.6. In our qualitative research, we focus on women's own perception of the events that shape their reproductive life course. We also discuss women's perception of the timing of events and answer questions about why they perceive the age at occurrence of these events as early, late or an age on time. Perceived role changes for the respondents themselves, for members of the family such as parents and others such as friends, members of the opposite sex, grandparents, and other elders in the household are also studied in the perceived life course. Related to the role changes are the perceived role conflicts that highlight how women in the cross-cultural context balance and combine multiple roles in the individual life course. Perceived gains of higher education and working career and perceived gains from the events of menarche, marriage, cohabitation and birth of the first child also form an indomitable part of the perceived life course. Thus related to the perceived gains is the status that women attain through the occurrence of such events, for example, the marital status brought about by the event of marriage, or the birth of first child conferring the status of motherhood.

Historical Time
The historical events that shape the reproductive life course of women in the cross-cultural contexts of Karnataka and the Netherlands are defined as historical time. Historical events in the formative years of life provide individuals with a unique experience, which they carry along with them shaping their own lives. Thus groups of people who share the same historical event are termed as generations. Considering the dimension of historical time at the micro level enables us to understand how historical events shape individual lives and how these in turn influence the larger societal framework. In a similar way social change at the macro level takes place as older cohorts are succeeded by younger cohorts.

Social Time
Social time as defined by Elder (1994: 6) is the 'incidence, duration, and sequence of roles and relevant expectations and beliefs based on age'. Social time also includes the age norms that prescribe the proper timing of events and events that occur later or earlier are viewed in terms of late or early ages.

- **Macro level**

The macro level is also termed as the structure, a concept which is taken from Giddens's structuration theory. This level consists of the processes of social change that occur in society.

Structure
Structure has been defined by Giddens (1984) as the interdependent dimension through which social systems operate. Structure in this present research refers to the institutions such as the education system, labour market, family and society at large. It is through these structures that the social action by human agency takes place. Human agency is the individual behaviour. According to Giddens (1984) structure works through the three aspects of signification, domination and legitimation as outlined in the structuration framework (see Chapter 2). For a specific process of social change to take place in the society, the three aspects of structuration, domination and legitimation must be undergone. Signification illustrates how individuals from different cultural contexts communicate with each other through cultural schemas. Thus individual behaviour makes use of the interpretative scheme that facilitates cultural interpretation. Domination works through the enabling and the capacitating resources of individuals. This argument is in line with Giddens's (1984) definition of resources. According to him resources are allocative and authoritative. Legitimation is perceived in the form of informal morals or formal legal regulations (Giddens 1984 cited by Mills 2000). It illustrates how individual behaviour is affected by the sanctions imposed on individuals through the normative regulations in the form of societal norms.

In the present research the two aspects of social change operationalised at the macro level are the processes of modernisation and globalisation. Both these concepts will be defined in the cross-cultural context after which we shall discuss how these concepts have been operationalised in the present research. These concepts are taken as a background for the present study and have been defined in Chapter 2.

Social Outcome

The social outcome is what we conclude from the qualitative research and focuses on the changing position of women in the Karnataka and Dutch society. De Bruijn (1999) distinguishes between two types of outcomes: one is individual and the other is social. Individual outcomes are observable at the micro level in the form of individual behaviour change, for example, the relevance of events such as marriage, cohabitation and first birth in the reproductive life course of high educated women in the two cultural settings. The social outcomes on the other hand are outcomes at the societal level or the macro level.

Thus 'gains' that educational attainment brings about in a woman's life can also be viewed as her acquisition of autonomy. Autonomy has been defined as 'the ability – technical, social and psychological – to obtain information and use it as the basis for making decisions about one's private concerns and those of one's intimates' (Dyson and Moore 1983: 45). Autonomy has been observed to vary by region, level of income, social and cultural factors such as the kinship system, caste system, religious factors, historically established agricultural systems that either limited or facilitated the economic role of women (Jeffery and Basu 1996, Dyson and Moore 1983, Cain 1993, Boserup 1970). Thus women's autonomy has largely been determined by the societal traditions. To understand the autonomy of women as one of the 'gains', which is the result of women's educational attainment, it can be viewed in terms of the addition of an attribute. Jejeebhoy (1995) has summarised five separate yet interdependent aspects of autonomy, which are central in the education-fertility relationship.

In the present research the social outcomes are operationalised as the position of women in Karnataka and Dutch society, explained by ascribed and achieved status in relation to women's higher education and workforce participation of women. Indicators of women's autonomy as a result of education – knowledge autonomy, decision-making autonomy, physical autonomy, emotional autonomy and economic and social autonomy along with self- reliance – also help us to draw firm conclusions about the position of women in Karnataka and Dutch society.

Institutional time

At the macro level the dimension of time adopted to understand social change is institutional time. According to de Bruijn (1999: 145) institutional time refers 'to evolution of various institutions that make up the social context'. Thus the dimension of institutional time helps us to understand how the institution of education within the society has transformed across time resulting in changes such as greater job opportunities for women and culturally prescribed meanings of working women.

Modality

We argue that the macro-micro linkages are not unidirectional but exist in close mutual interaction. Here we take into account modality, a concept taken from the structuration theory of Giddens (1984). Modalities link structure and the agency. Individual actors draw upon the modalities in their interaction and thus reproduce or transform the institutional properties of the structure. The modalities are interpretative scheme, resources or facility and norms. Higher education of women and their labour force participation are operationalised as the resources that facilitate a certain type of behaviour, which would not have been possible if women had low levels of education. The resources provide the necessary

authority to individuals to achieve a desired outcome. They also enable women to accomplish goals (Giddens 1984). Increased standard of living, individualism and higher needs orientation serves as the modality of norms which are the rules or ways of doing things. Norms are shaped by the expectations of actors as regards their rights and obligation. Norms as modalities can also be linked to the individual background at the micro level through social expectations of role change for the woman herself, her parents and others. The last mentioned include everyone apart from parents such as grandparents, friends, relatives or members of the opposite sex. Interpretative schemes as modality are used by social actors to interpret behaviour and interact with one another in meaningful ways. Behaviour is interpreted with the help of cultural schemas which are the shared knowledge of a group of social actors. According to D'Andrade (1992: 34) the cultural meaning systems are related to the institutions of the society and direct behaviour through the normative properties and sanctions. The cultural schemas influence individual behaviour at the micro level in how women perceive their role change for themselves, their parents and others. In the individual background we study the socially expected role change while with regard to individual behaviour we assess how women themselves perceive their role change after attaining menarche, being married or in partnership and being a mother. In Chapter 2 (see section 2.4.2) we have discussed why modality is necessary to study the structure-agency linkages.

3.4.3 Research setting

The qualitative research was conducted in Bangalore, the state capital of Karnataka, and in Groningen, a province of the Netherlands. In this subsection we shall discuss about both research settings to give the reader an insight into the two locales.

Bangalore

The city of Bangalore is the state capital of Karnataka, one of the southern states in India. After the arrival of the British, the city was given the anglicised name of Bangalore, originally named 'Bengaluuru' (Wikipedia visited on 9/7/2004). Bangalore is the fifth largest city of India with a population of 6.5 million according to the 2001 Census. Ten years before that, the city was designated as an urban agglomeration with a population of more than 2 million. It is a vibrant cosmopolitan city, housing major industrial and commercial centres. The census highlights for the year 2001 mention that amongst all the districts of Karnataka, Bangalore is the smallest in area (2190 square kilometers) but registered the highest population in the Census of both 1991 and 2001. Hence, amongst all the districts of Karnataka, Bangalore has the highest density of population (2979 persons per square kilometer). Bangalore is known as a city of contrasts and is nicknamed variously as 'India's Silicon Valley', 'Garden City', 'City of Pubs' and 'Shopper's Paradise'. It is known as India's Silicon Valley because it is home to a large number of software industries, computer and technology companies and information-technology-enabled services like the call centres. Bangalore plays host to a number of multinational companies especially computer hardware and software giants such as IBM, Dell, Hewlett-Packard, Siemens and Motorola. Indian IT giants such as Infosys, Satyam and Wipro also operate in Bangalore. Apart from IT industries, Bangalore also has a number of other industries, for example Hindustan Aeronautics, Bharat Electronics, Bharat Heavy Electronics and Hindustan Aeronautical Limited. Bangalore also has many academic institutions such as the Indian Institute of Science, and the headquarters of the Indian Space Research Organisation. All these provide a large job market and create an upsurge in employment especially of women. According to Sekher et al. (2001: 4747), 'the city of Bangalore exercises tremendous influence on the urban growth of the state by attracting a large number of migrants particularly from the neighbouring states'. They also stated that the city accounts for 27 percent of the urban population in Karnataka. Much

of this growth is also attributed to rapid industrial expansion. Thus the cosmopolitan nature of Bangalore has enabled social mobility of women and workforce participation of women (Kelkar and Nathan 2000, Kelkar 2004, Ramu 1989).

Educational reforms and the growing number of women in pursuit of higher educational levels can be observed from the increasing literacy rates in the state of Bangalore. Bangalore has the highest literacy rate for females amongst the other districts in the state of Karnataka (Census 2001 highlights). According to the 2001 census of India, the female literacy rate in urban Bangalore was 79 percent in comparison to 68.8 percent in the year 1991. The female literacy rate in the state of Karnataka for the year 2001 was 57.5 percent, which has increased from 44.3 percent of 1991 Census.

Groningen

The province of Groningen is to the north-east of the Netherlands with Germany in the east and North Sea to the north. The name of the province has been in use for about two centuries. Before 1800, it was called 'Stad en Lande' (meaning City and Province) or 'Groningen en Ommelanden' (Groningen and Hinterland) (Regionaal Historisch Centrum, http://www.groningerarchieven.nl). The city of Groningen is the capital of Groningen Province, and the city is also known informally as Stad (city). The area of Groningen City is 79.6 square kilometers and its population in 2004 was 574,384, with a population density of 246 persons per square kilometer. Amongst women aged 15 and 64 years that constitute the employable group, the net labour force participation of women is 50.5 percent in Groningen in comparison to 54.4 percent in the rest of the Netherlands (Statistics Netherlands 2005). The city is known for its fairly big proportion of students due to the University and the Hanzehogeschool. In addition to the academic function, Groningen hosts companies such as KPN (the Dutch telephone company), Gasunie (Natural gas research organisation), a sugar factory (SuikerUnie and CSM), as well as software companies.

3.4.4 Process of conducting in-depth interviews

Qualitative research was conducted in both Karnataka and the Netherlands through in-depth interviews among high educated women. In-depth interviews are a common tool of data collection in qualitative research (Harvey-Jordan and Long 2001), which enable the researcher to gather more detailed knowledge about a certain issue as well as enables a deeper understanding of 'how the apparently straight forward is actually more complicated' (Wengraf 2001: 6). In-depth interviews are also known as semi-structured interviews in which the interviewer prepares questions to be posed to the respondents in advance through a series of open-ended questions and extensive probing. The in-depth interviews undertaken in the present qualitative research made use of a detailed list of questions and probes to elicit responses on the perceived life course in the cross-cultural context. This method of interviewing was also very effective in discussing sensitive topics in the different cultural contexts, for instance, discussing the topic of menarche amongst younger and older generations of respondents in Bangalore. Discussing the onset of sexual relationship and decision to become a mother amongst Dutch women in Groningen was also perceived as a sensitive issue. Ingham et al. (1999: 158) suggests that during discussion of a sensitive topic the interviewer needs to be open-minded and accepting. The list of questions framed was specific in their phrasing, keeping in mind that respondents might find it difficult to share their private thoughts and actions with an outsider. We also kept in mind the ethical issues while conducting the in-depth interviews. An oral consent was obtained from the respondents at the start of the interview in which the respondents were provided with a brief introduction of the research stating its purpose and its main features in simple words and making use of the local terminology. This is done to familiarise the respondent with the research, and gain trust of the

respondent before beginning to conduct the interview. It also enables the respondent to decide whether or not to participate in the interview. The consent form also specifies about maintaining the confidentiality and anonymity of the responses and not disclosing any aspect of the interviewee's private life divulged during the interview. We also stated in the consent form that the information provided by the respondent would be used only for scientific purposes. We also sought permission from the respondents to record the interview and also mentioned the estimated duration of the interview. Thus after the consent form was read out to the respondent she could either refuse to be interviewed or proceed with the interview. If the respondent agreed to be interviewed then she was required to sign the consent form. There was no strict rule about the language of interaction during the interviews. Respondents were asked to interact in the language with which they felt comfortable to express themselves. For the respondents in Bangalore, they were asked to choose between the local language Kannada, Hindi and English, while for respondents in Groningen they were asked to choose between Dutch and English. All the respondents of the younger generation in Bangalore and all respondents in Groningen opted for English as their language of interaction during the course of the interview while two women from the older generation in Bangalore spoke in the local language Kannada and one respondent interacted in Hindi.

Thus after obtaining written consent we began with the interviews. Even though the interviews were taped, brief notes were taken during the course of the interview. These notes proved to be useful in understanding the context while transcribing the interviews. Hennink (2001) suggests that taking notes during the course of the interview indicates to the respondents that their words are important. The taped interviews were then transcribed as detailed as possible by listening to the tape. Harvey-Jordan and Long (2001: 220) defines transcribing as the procedure for producing a written version of the interview. All the interviews were transcribed in English and those interviews that were in Kannada and Hindi were translated into English. Irrespective of most of the interviews being in English, respondents sometimes made use of local phrases and words. We have been careful in not translating these local phrases and words into English as they carry the essence of the cultural context and sometimes these convey a suitable, special meaning typical of the cultural context. Hence it is through these transcripts that the interviews were analysed. The analysis did not involve the use of any computer package. The transcripts were read a number of times after which the key categories were identified. These categories were then related to the research questions and the theoretical framework. Respondents were quoted in order to ground the analysis and provide credibility to the interview data analysis.

3.4.5 Selection of respondents

Results from the secondary data analysis revealed that the high educated women constituted a special category in comparison to women of the other educational categories. Cohort changes from the oldest to the youngest cohorts are also clearly observable from the secondary data. The cohort of women born 1971-1976 in Karnataka is found to be a special cohort that depicts innovative behaviour of delay in the marital age as well as delay in the age at first birth. Large numbers of women in this cohort pursued higher education and there has been an increase in the labour force participation of women (see Section 3.4.3). Newspaper articles in leading daily newspapers in India report that numerous expanded job opportunities in recent times were brought about by the advent of software industries and multinational companies (MNCs). These articles also time and again discuss the changing role of Indian women from 'traditional' to 'corporate' woman. The youngest cohort revealed by the Dutch dataset comprised high educated women born in the cohort 1966-1970. There is an ample amount of secondary literature for the Dutch context that focuses and studies the changing lives of Dutch women across cohorts. Thus backed by evidence from secondary data and secondary literature sources we identified the target group of

respondents for the in-depth interviews. The present research aims at understanding the linkages between women's higher educational attainment and their changing lives along their reproductive life courses as well as women's changing position in society. The main events in the reproductive life course that we focus on in the in-depth interviews are menarche, union formation by cohabitation and marriage, and first birth. In order to understand women's changing position in society we address the topic of women's autonomy and its types as discussed by Jejeebhoy (1995) in the in-depth interviews. The target group of respondents selected comprised high educated and working women in urban areas. The urban areas are assumed to provide better educational and career opportunities. Keeping these requirements in mind, we chose the city of Bangalore representing the Karnataka context. (For a detailed description of Bangalore as an urban agglomeration, please see Section 3.4.3.) For the Dutch context, we used Groningen as our research setting largely because the cosmopolitan aspects of these two cities are comparable.

As we are studying the events in the reproductive life course, the respondents selected for the interview were required to be married or living together with their partner and should have had at least one child. For interviews with women in Bangalore, respondents were required to be married, while for the respondents in Groningen the criterion of marital status included married women as well as women who were living together with their partner without being formally married. This is how first union formation has been conceptualised in the secondary data analysis of the cross-cultural context.

Women who have completed their graduation formed the target group of respondents in Bangalore, while the educational qualification of women in the Netherlands was HBO/University or higher. Evidence from secondary literature suggests that higher education is closely related to increased participation of women in the labour force. Thus, in both the cultural contexts the respondents selected were also working women. However, we did not distinguish between women working in the private sector and the public sector in our target group. In Bangalore, women working in the private sector comprised software professionals in IT industries, management staff in business companies, and doctors in private hospitals. Respondents in the public sector comprised women scientists, lecturers, and technical staff in government-run institutions.

Change is a central theme of this research. As we have already mentioned in the theoretical and conceptual framework (see Chapter 2), at the macro level it is social change that we focus on, while at the individual level it is changes in women's lived and perceived reproductive life courses across cohorts. Thus the respondents interviewed in Bangalore were categorised into two different cohorts, with an age gap of 20 years. This gap between cohorts also represents the generational gap and that is why the older cohort is termed as the mother's generation while the younger cohort is termed as the daughter's generation in the in-depth interviews. In the Dutch context, respondents who were interviewed in Groningen were in the age range of 31 to 37 years at the time of the interview. Thus they roughly belonged to the birth cohort 1966-1970, the youngest cohort in the secondary data analysis dealt in Chapters 4 and 5. Unlike the case of Bangalore, we focus only on a single cohort in the Dutch in-depth interviews, while the change across generations is presented as perceived changes by this cohort of women.

In Bangalore, 31 respondents in total were interviewed, out of which there were 6 pairs of mothers and daughters, while the remaining 19 women belonged to both older and younger cohorts. Thus in all, 15 women were interviewed from the older cohort (aged 50 and above), while 16 women were interviewed from the younger cohort (aged 27 to 38 years). Only the younger cohort was required to be higher educated, working, married, and with at least one child. For the women in the older cohort the criteria required were that they should be older than 50 years, living in and around the city of Bangalore, and

willing to participate in the interview. The in-depth interviews in Groningen comprised 10 respondents, all of whom were in the age range 31 to 37 years at the time of the interview.

In the research settings of Bangalore and Groningen we adopted the following procedure for identifying potential respondents for the in-depth interviews. A sift questionnaire was prepared and, in addition to explicitly seeking consent for participation in the in-depth interviews, this questionnaire also contained some questions to determine whether the women met the necessary criteria for the in-depth interviews. At offices of various companies, research institutions, and hospitals, women were approached and requested to fill in this questionnaire. The sift questionnaire is found in Appendix A. In addition to the sift questionnaires, respondents were also contacted by the snowball method, friends and acquaintances of women who filled in the sift questionnaire provided contact details of other potential respondents.

3.4.6 Profile of the respondents

Bangalore

At the beginning of each interview the respondents were asked about their background characteristics such as age, marital status, highest level of education and place of residence. Respondents were also asked about their husband and information was collected on the husband's highest educational level, whether working or not, his occupation and his working hours. In addition to the background information about the respondents, information on personal details on the timing of events such as age at menarche, marriage and first birth were also obtained. Respondents were also asked about their working career, for example, age when they began with their first job, their occupation, job type whether government or private sector and their working hours. In the same way, education career is also constructed retrospectively by eliciting information on highest educational level, age at completion of highest education level, whether education was disrupted at any point in time and age when the respondents first left home for further education.

The age of the respondents in the younger cohorts, who are also known as the daughter's generation, ranged between 27 to 38 years at the time of the interview. These women belonged to the birth cohort 1966-1979, which overlaps with the cohort of our primary interest, 1971-1976. Among the 16 women in the younger cohort, all of them were married and mother of at least one child. Further, they were all graduates or their education level was graduate and above, and working at the time of the interview. Exact details about their educational qualifications and their occupation are provided in Table 3.9.

Table 3.9 Educational and occupational profiles of respondents in the younger cohort in Bangalore

Educational profile	No. of women	Occupational profile	No. of women
BA and BSc.	5	Lecturers	3
MA and MSc	5	Scientists	2
MBA degree	2	Teachers	2
Ph D	2	Software professionals	3
MBBS	1	Managers	2
MPhil	1	Editorial staff	2
		Doctor	1
		Freelance journalist	1

Apart from information on educational and occupational profiles respondents were also asked about their age at the time of completion of highest educational level, age when they first began working, age at menarche, age at marriage and age at the birth of their first child. The median age at the occurrence of events amongst the younger cohort of women in Bangalore is illustrated in Table 3.10.

Table 3.10 Median ages at the occurrence of events for younger respondents in the interview sample, Banglaore

Events	Median age at events
Age at menarche	12.5 years
Age at marriage	26.5 years
Age at first child birth	29 years
Age at completion of highest education	24 years
Age at first job	23 years

The majority of the women in the interview sample had only one child i.e. 75 percent, except for 4 women (25 percent) who had 2 children at the time of the interview. Out of the 16 respondents, most of them had completed their highest educational level and worked before getting married, except 4 respondents who were still continuing with their education and 2 of them who did not work before their marriage. At their age at first child birth all the respondents had completed their highest education and were working.

Women were also interviewed from the older cohorts, which represents the mother's generation. The total number of women interviewed in the older cohort was 15 whose current age at the time of the interview was between 53 to 78 years. These women thus belonged to the birth cohort 1925 to 1950. The education level of these respondents varied and all of them had at least some education. Their educational profiles are illustrated in Table 3.11.

Table 3.11 Educational and occupational profile of respondents in the older cohorts in Bangalore

Educational profile	No. of women	Occupational profile	No. of women
Completed 2nd Standard	1	Teachers	5
Completed 10th Standard	1	Library Assistant	1
SSLC	2	Professional Editor	1
Intermediate degree	2	Editorial work	1
BA and BSc.	7	(part time)	
MA and MSc	2		

As regards the occupational profile of these respondents during the time of the interviews 5 of them were still working as teachers, l worked as a library assistant, 1 as a professional editor and 1 respondent worked part time at the age of 70, engaged in editorial work. Out of total 15 respondents, 10 of them were previously or presently working while 5 of them did not work at all. The median age at the occurrence of events amongst the older cohort of women in Bangalore is illustrated in Table 3.12

Table 3.12 Median ages at the occurrence of events for older respondents in the interview sample, Bangalore

Events	Median age at events
Age at menarche	14 years
Age at marriage	22 years
Age at first child birth	23 years
Age at completion of highest education	18 years
Age at first job	21 years

The median age at menarche amongst the older cohort of women was 14 years while the median age at marriage and first child birth was 22 and 23 years respectively. These women completed their highest educational level on an average at the age of 18 and of the women who joined the workforce their median age at first job was 21 years. An equal proportion of them (i.e. 5 mothers) had 1, 2 and 3 children respectively, and the mean number of children amongst this group of women was 2.

Groningen

The age of the respondents in Groningen at the time of the interview was 31 to 37 years and they belonged to the birth cohort 1967-1973. The educational profile and the occupational profile of 10 respondents who were interviewed are shown in Table 3.13.

Table 3.13 Educational and occupational profile of respondents in the interview sample, Groningen

Educational profile	No. of women	Occupational profile	No. of women
Completed HBO	3	Teachers	2
Completed PhD	4	Social Worker	1
Completed University	3	Project Managers	2
		Jurist	1
		Professor	2
		Consultant	1

The median age at occurrence of events in the life course of these women are shown in Table 3.14.

Table 3.14 Median ages at the occurrence of events amongst the respondents in the interview sample, Groningen

Events	Median age at events
Age at menarche	12 years
Age at first serious relationship	18.5 years
Age at first child birth	30.5 years
Ag at leaving parental home	19 years
Age at completion of highest education	25.5 years
Age at first job	24 years

3.4.7 List of questions and probes

A list of questions was formulated in order to answer the main research questions. In-depth interviews focused on how events such as menarche, marriage or cohabitation and first birth are perceived by high educated working women in the different cultural contexts of Bangalore and Groningen. The in-depth interviews also enable us to understand how educational attainment is linked to women's autonomy in the various spheres of their life. It is assumed that the changing lives of women are greatly dependent on the historical context and the conditions of socio-economic development of the society. Thus respondents' perception of their own generation is also a major theme included in the list of questions.

The questions pertain to three important events in the reproductive life course of women: (i) menarche, (ii) marriage/cohabitation, and (iii) motherhood. Questions on different types of autonomy as operationalised by Jejeebhoy (1995) and respondents' perception of their own generation were also included in the list of questions. Each of these broad themes had many sub themes. The events at the micro level were socially and culturally situated by asking respondents how they perceive their age at which these events occurred. These events are also culturally situated by the enquiring about the ceremonies that mark the events of menarche, marriage or cohabitation and birth of first child. Perceptions on role change, social expectations of the different roles through transition from one stage to the other, status, perceived gains of menarche, marriage and motherhood, gains of being higher educated and gains of having a working career were also identified. In order to understand the linkages between higher education and autonomy, we included questions on five different types of autonomy as operationalised by Jejeebhoy (1995) such as (i) knowledge autonomy, (ii) decision-making autonomy, (iii) physical autonomy, (iv) emotional autonomy, and (v) economic and social autonomy and self-reliance. In addition, respondents were asked about their perception of one's own generation and generational similarities and dissimilarities between the respondent and their mother. The list of questions is included in *Appendix B*.

Also included within the list of questions were the probes to the questions in order to elicit better response. These probes were also cues to incorporate different aspects, which the respondent might not find worthy of mentioning. For example when we discussed about role change brought about by the event of marriage some of the probes were 'changes in her day-to-day activities', 'type of dress to be worn'.

The list of questions used for the in-depth interviews amongst women in Bangalore and Groningen were similar to each other. The language used was English in both contexts. However some specific wordings and concepts were sometimes translated into Hindi or in Dutch for the women in Bangalore and Groningen, respectively.

3.4.8 Reflections on the fieldwork

This section describes the researcher's reflection on the fieldwork. It is a type of retrospective report discussing the researcher's experience of conducting the in-depth interviews in the two cultural contexts of Bangalore and Groningen.

In-depth interviews in Bangalore

The in-depth interviews in Bangalore were conducted in a two-month period starting from 3 January 2004 to 3 March 2004. In the first two weeks of the researcher's stay in Bangalore, time was spent interacting with people, discussing about the research and visiting educational institutes and offices with the sift

questionnaire (see subsection 3.4.5). It was very disheartening during the initial weeks as no respondents came forward to participate in the interview. The time constraints of being a working mother were one of the most recurring reasons for non-participation. These women worked from 9 to 5 after which they rushed back home to be with their children and family, cook dinner after which there was little left of their day. And during the office working hours it was not possible for them to participate in the interview. Some offices did not allow my entry and I was asked to wait outside the gates of the office to talk to people after the office hours. This period continued for about 12 days after which I conducted my first interview. It was an interview with a scientist, which lasted for 3 hours. The initial rapport with many people set the ball rolling soon. Women mentioned my research to their friends and relatives. Some of them met the required criteria and also agreed to be interviewed. An appointment about the time of the interview and the place of the interview was agreed with the respondent in advance. In most of the cases, the respondents found it convenient to be interviewed at their own house. Interviews were conducted on days that the respondents had an off-day or during the weekends on Saturdays and Sundays. The preferred time for interviews at home was during the afternoons when the children were asleep and it was relaxing for the respondent herself. Some interviews were also conducted after office hours, when I accompanied the respondent home. Usually in these cases her mother or the mother-in-law looked after the kids while the interview was conducted in another part of the house. The duration of each interview was between three to four hours. Sometimes it was not possible for the respondents to spend that much time in one stretch. In such cases the interview was divided into two parts: life events followed by autonomy and perception of generations. So one part of the interview was conducted after which a fresh appointment was made for the next part of the interview. At times such as on public holidays more than two interviews were scheduled on the very same day as women did not go to work. Some interviews were also conducted in the respondent's workplace in a quiet place for example, a conference room or a seminar hall. Sometimes appointments were forgotten and at the last minute the interview would be postponed to another date and time. As all the respondents were high educated women, they preferred giving the interview in English.

Amongst the older generation of respondents the researcher was faced with an entirely different problem. It was the question of having trust. Most of the older respondents had not interacted with the researcher before the interview. They were often told about the interview by their daughters, daughter-in-law, friend or an acquaintance. Thus the researcher was called to their house for the interview only if there were other family members in the house as well. Amongst the older cohort, some respondents could express themselves better in the local language Kannada or in Hindi (the national language of India).

In-depth interviews in Groningen

The cultural context of Groningen was new for the researcher as she is from a different cultural context. At first focus group discussions were decided on. Flyers were printed with a brief discussion about the research and the criteria required in the respondents. With prior permission from the respective authorities the flyers were dropped into randomly selected post-boxes *(post vakjes)* at the workplaces. After a few days it was evident that it was difficult for women to have some free time and meet at one particular place on a stipulated date. It was difficult to impose the timing of one person on another person. However, women were willing to be interviewed at their own home at a time suitable for both the researcher and the respondent. Thus, in-depth interviews were conducted. Getting to know about the respondents was a snowball effect through personal contacts and friends and colleagues at the researcher's workplace. A prior appointment was made with the respondent about the timing of the interview. The interviews were conducted in English. However, the respondents were asked to feel free to talk either in Dutch or English

as long as they expressed themselves. However, all the interviews were in English and respondents did use Dutch in instances where they could not express themselves properly in English. Most of the interviews were conducted at the house of the respondents on the days when the respondents had a day off. Sometimes the interviews were scheduled during the evening after dinner and after the children had been put to bed. At times the interviews were conducted during the late afternoons as well and during those times someone looked after the children. Of the 10 interviews conducted, only two of them were conducted at the workplace of the respondent in a quiet room without any disturbance. By conducting in-depth interviews the researcher was directly introduced to Dutch culture.

3.4.9 Response and quality of data

It was challenging to conduct the in-depth interviews. In spite of many difficulties the respondents were cooperative and cordial during the interviews. Some of the difficulties have been discussed. In-depth interviews are long and require a lot of time. These working women rarely have so much time to spare. This hastens the responses and there is hurry on the part of the respondents to get over with the interview as soon as possible. Sometimes respondents are not so patient with the long duration of interviews which also influences the responses. At times responses were affected by the language barrier between the respondent and the researcher, especially amongst the older group of respondents in Bangalore. In this group the responses were also affected by the inability to remember accurately the age at first menstruation or the age at completion of highest education.

As most of the interviews were in English it was easy to comprehend and understand them. The interviews were transcribed both by the researcher and a transcriber. For the interviews that had been transcribed, re-listening to them and checking the transcripts was done by the researcher. For the one interview that was in the local language Kannada, it was translated into English and transcribed. As the interviews were long, the transcripts had to be read many times to code the variables. All the interviews were manually analysed by the researcher and quoted for better explanation in Chapters 6, 7, 8 and 9. The background information of the respondents was entered into Statistical Package for Social Sciences (SPSS) and the percentage distributions, and median ages at all events were analysed in the SPSS.

Every respondent received a small gift at the end of the interview. Respondents in Bangalore were given a Dutch souvenir while the Dutch respondents received an Indian gift.

3.5 Concluding remarks

In this chapter we have described the data and methods used in this research. This research uses both quantitative and qualitative methodology for data analysis to study the lived and the perceived life courses of women across cohorts in the cross-cultural contexts of Karnataka and the Netherlands. The reasons behind selecting Karnataka and the Netherlands for this cross-cultural study were elaborated in Section 3.2. Focus on universality, irrespective of the diverse cultures, and the role of education have also been emphasised in this section. The methodology and the conceptual models for the quantitative (Section 3.3) as well as the qualitative (Section 3.4) aspects in this research have been elaborated in this chapter. Hence this chapter lays the basis for the research which will be elaborated in the ensuing chapters of this thesis.