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Intentions in the life courses

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Abstract:
The main purpose of this working paper is to describe a potential sub-field of research within the scope of life course studies. This sub-field is defined with intentions for performing life course events. The paper describes a diversity of lines of research providing empirical illustrations based on the use of survey data. A restricted set of events and intentions are considered within the life trajectory experienced by young adults, with an emphasis on the intention to have a first child.
We first describe events and intentions at the macro level. The discussion continues at the micro level including applications of the theory of planned behaviour. Special attention is given to concurrent intentions, i.e. intentions stated at one and the same time. These intentions might be competing or supporting.
We discuss intentions in the light of their realisation or non-realisation. Findings support the existence of links among intentions, in that some are competing and others supporting. Psychological distress is checked and its effect is found for individuals who fail to realise their plans.
The results support the importance of a broad area of research that needs increased attention by researchers. It can provide valuable policy implications.

Keywords: Intentions for life course events, competing intentions, life course

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Contents

1. Introduction

In a life course perspective, individuals are the *agents* that take decisions and perform actions in their own life under the influence of structures and "externalities" which form their social environment. Being self-agents, individuals make decisions and plans for the performance of actions whose outcome are crucial life events, such as leaving home, starting a family, starting a job or education. Elder (1994) emphasizes the significance of agency with placing it in one of five major principles (principle of agency) chosen as fundamental in life course research. Human agency and self-efficacy were fundamentally emphasized by Bandura in a series of publications (for example Bandura 2001).

Agents' behavioural actions, revealed as life course events, line temporally to form life paths and life trajectories. The latter form the centre of life course research. Yet agents do more than just performing behaviour; they construct a decision-making process that precedes behaviour and refers to a single event as well as to a sequence of events.

Research on decision-making for a specific event is abundant. The recent 1-2 decades marked an increased interest of social demography in analyses of childbearing intentions, of intentions to marry, or to migrate. Research on decision-making that encompasses more than one prospective event is however scanty. In a life course perspective, individuals form their decisions for a certain event, such as having a child, under the circumstances specific to each individual's situation in life as outlined in the current phase in the life course. The current phase includes various stages of other life paths, such as those for education or work that are also outcomes of a decision process. Therefore any decision to perform, or not to perform, a specific action is inevitably tied to current decisions related to other action, as well as to outcomes of earlier decisions. Decisions are interdependent, although they may have been taken at different points in time. Frequently decisions are concurrent: for example when an individual needs to decide whether to go on with studies or to interrupt them and start working.

Analyses of decisions will be deeper when they are studied jointly and not in separate sections of the life course. This interdependency however, has not been addressed in scientific research as frequently as analyses of interrelated events; research usually focuses on a single decision-making process with insufficient relevance to another one that exists in parallel.

This working paper discusses potential analyses of interrelated intentions relevant to life course events. The focus is on intentions which operate as an exposed synthesis of a decision-making process. A segmented life course is considered: the one of young adults which was the focus of discussion in the state-of-the-art report produced in the framework of the

FamiliesAndSocieties project (Pailhé et al. 2014). Even within this segment the topics of discussion and research are much larger than what could be incorporated in one single paper. For this reason the paper suggests a *glide* through various topics related to research on intended lives, without pretention to completely comprise the subject matter of the intended life course of young adults.

Another restriction in this working paper is set by the specifics of research in population studies and more precisely in social demography. We consider a restricted set of events that refer to family formation: leaving home as a separation from parents, starting a life with a partner either in cohabitation or in marriage, having a first child, and re-entering education and starting work. Broadly they can be thought of constituting two groups: family-related and socio-economic. These events have been extensively studied during the recent two decades when individual-level data with event histories have become available. Intentions related to these events—with the exception of that to have a child—have rarely been addressed in the research literature. Reported research on concurrent intentions is also limited in numbers.

The paper includes several analyses, each one being a potential research work. At their present status they are work in progress.

The accent in our work is explicitly on demographic contents, although the topic is highly relevant to sociology, social psychology and other scientific disciplines.

2. Concepts and theoretical background

2.1. Clarification of Concepts

The introductory section 1 included several concepts that are not common in pertinent research. They require clarification.

Why do we give centrality on intentions? A theoretical description of decision-making is based on several sequentially lined concepts. In a simplified framework the sequence is starting with beliefs and attitudes that underpin intentions; intentions precede plans; plans lead to behaviour. Selection of concepts, their sequence and relative importance are theoretically debated in social psychology. In life course studies it is especially significant to distinguish intentions and plans. Expressions like “planning the life course”, “planning working career”, “plans for education” are common in life course research, although the theories underpinning the concept of plans are rarely specified. Theoretically, the centrality of intentions in reproductive decision-making is emphasized in the chapters in the book edited by Philipov et

al. (2015) where the theory of planned behaviour (TPB) is considered. It is discussed in the next sub-section.

The debate "intentions or plans" is outside the scope of our paper. We focus on intentions for one important reason: they are operationalized and measured in demographic surveys while plans are not. In the GGS for example, the theory of planned behaviour is operationalized and intentions and their predecessors as specified in the TPB are accordingly measured. Thus intentions, for one, are based as a concept on a sound theoretical ground, and for two, are measured and observed in an international demographic survey.

Next, what is an intended life course? What do we mean with a realised life course? An intended life course is a sequence of intentions constructed either in parallel or at different points in time, independently of whether they will be realised or not. They refer to prospective events that may constitute a phase in life or a specific life trajectory/ life path. For example, while the phase of life referring to family formation includes events such as entering a cohabitation or marriage and having a first and subsequent children, an intended life path related to family formation should include intentions to enter a marriage or cohabitation and intentions to have a first and subsequent children. Apparently this life path is complex: it might include intentions not to perform one or more of these events; the time horizon for the realization of an intention can differ among individuals; intentions can be postponed for later time.

Intended life paths can change in time for diverse reasons. Some intentions get frustrated, i.e. remain unrealized. Others may change before the time of realization has come under the pressure of changing circumstances in life. For example a birth of a child at a specific age can be unintended: although this event will be part of the life path leading to family formation, it is not part of the initially intended life path expected to lead to family formation. An intended life path can remain intact in the course of realization of the sequence of intentions, or it can transform to other intended life paths when some of the included intentions change or remain unrealized. A realised life course, or realized life phase, is the outcome of its intended precursor, i.e. it is conditional on the sequence of intentions that have preceded the events.

Individuals that start with one and the same intended life path, may end it with different realised life paths. These differences can be due to a variety of reasons such as structural changes, unexpected personal events, etc., that motivate individuals to revise their intentions. Analyses of this revision can help receive valuable information about construction and performance of life paths.

Intentions for different events are usually timed at different periods in life. Starting work is frequently timed after completion of education; so is the birth of a first child. Hence following an intended life path through time raises the demand for data needed to cover intentions and behaviours of cohorts. Panel surveys for at least a decade become indispensable. When the whole life course is considered the data coverage might refer to much longer periods. Hence studies of an intended life course might be too demanding with respect to data. That is why we consider what can be called a synthetic intended life course, when synthetic cohorts are considered. The method of synthetic cohorts is frequently applied in demography, for example for the estimation of life expectancy (a cohort concept) for a specific year. A synthetic intended life course is a sequence of intended events across cohorts. It is the decision-making equivalent of a synthetic life course as the latter is tackled by Willekens (2015).

An effective way to overcome part of the problems associated with the need to use synthetic intended life paths is the use of short-term intentions. They refer to a period of 2–3 years which is appropriate for measurement in a panel survey. After the elapse of the period and with the newly collected panel data it becomes possible to link intentions with their outcome, and so link an intended life path with its realised equivalent. The need of a synthetic approach is relaxed although not entirely avoided (Willekens 2015).

Further on in our explanation of concepts we consider concurrent intentions; the term "tied intentions" can also be used, in analogy to the term "tied events" in event history analysis. They are formed at one and the same time and require the performance of the corresponding action at one and the same time. Apparently "one and the same time" refers to a period of time the length of which is defined by the operationalisation of the concept in surveys. For example a person might intend to start a business during the next three years, and also to resume education during the next three years. These intentions are concurrent. In addition, they can be defined as competing insofar as they compete for the time of the individual: starting a business requires time that is required also for the study. Competing intentions in population sciences were first considered by Barber (2001), although she considered in her work competing attitudes. Later Philipov (2009) found a case where intentions expected to be competing were actually mutually supportive, in that individuals who had joint intentions for having a child and starting job were more likely to have the child than those who did not intend to start a job. We discuss competing and supporting intentions in more detail in Section 6.

2.2. Theoretical background

2.2.1. The theory of planned behaviour

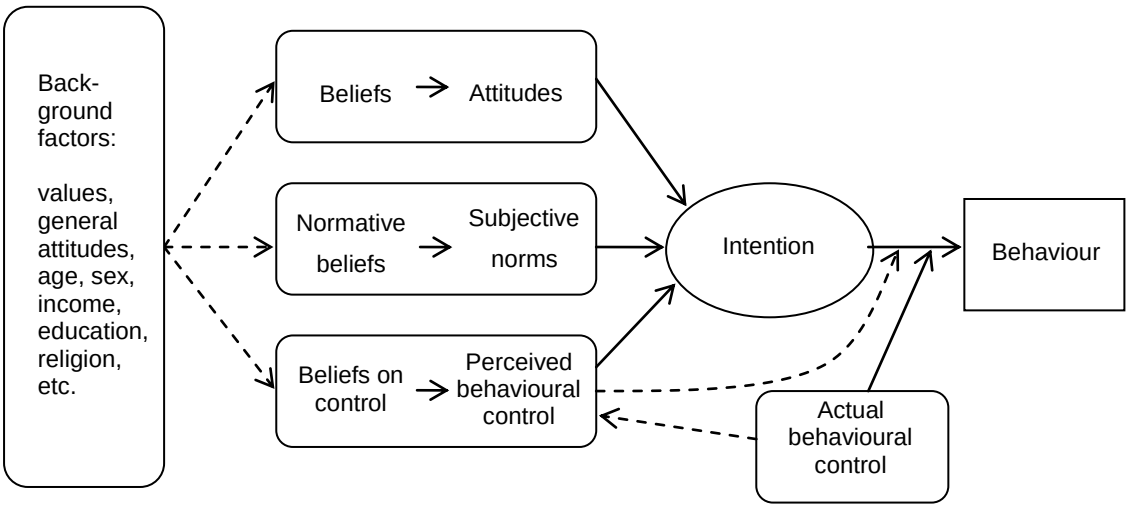
Among the broad spectrum of theories that might be relevant to the study of intended life courses we consider those related to intentions as a construct in social psychology. We discuss here the theory of planned behaviour (TPB) which has gained popularity during the recent years. This theory defines intentions as its central theoretical concept; it also gives a guideline of its operationalisation by setting requirements to data collection. Recently the TPB has been extensively used for analyses of fertility intentions. A detailed theoretical discussion is provided by Ajzen and Klobas (2013), Philipov et al. (2015, see chapters in this book). Earlier studies were reported by Billari et al. (2009), Dommermuth et al. (2011), among others. The TPB has rarely been used for other life course events.

The theory of planned behaviour is of interest in this paper from the point of view of its application for understanding intentions and their realisation. The theory proper and its validity are out of the scope of the discussion. However, it is briefly exposed here as it is used extensively in the subsequent sections.

The theory of reasoned action became known during the 1970s with several publications by Fishbein and Ajzen (Fishbein and Ajzen 1975). An extension of this theory introduced later by Ajzen (Ajzen 1991) became known as the theory of planned behaviour. Figure 1 gives a schematic illustration of the theory. A detailed explanation of the components of the figure can be found in Ajzen (1991); Ajzen and Klobas (2013) discuss the theory with relevance to fertility intentions. In brief, an intention to perform a certain behaviour is composed under the influence of the person's attitudes towards this behaviour, by subjective norms (social pressure, normative pressure, or opinions of important others such as friends and relatives), and perceived control that the individual can exercise over the behaviour. All three proximate antecedents of intentions are actually individual's beliefs: beliefs about attitudes, beliefs about social pressure, beliefs about the ability to exercise control over the behaviour. An intention is itself an antecedent of behaviour which can be influenced positively or negatively by the opportunity for an actual control on the behaviour.

It is important to note that other factors which describe the demographic or social situation of the individual, known as background factors, are not proximate antecedents of the intentions; they directly influence attitudes, subjective norms and perceived behavioural control and indirectly intentions.

Figure 1: A schematic presentation of the theory of planned behaviour (Source: Ajzen and Fishbein 2005, page 194)



The TPB sets rigorous requirements for the measurement of intentions which have to be met in order to expect an adequate outcome that can bring about a high likelihood of the realisation of an intention. The following principles apply, explained with examples related to the intention to have a child. Stated shortly they serve as a reminder.

(i) *Temporal stability*. The more stable are intentions over time, the more likely they are to be fulfilled. Intentions are more likely to be stable in the short run. It is more likely for an individual to expect the fulfilment of an intention to have a child within a period of two or three years than over a period of seven years, for example, because he or she is more likely to confront the effect of intervening obstacles to the realisation of an intention over a longer than over a short period of time.

Temporal stability depends on the predecessors of intentions. The more stable the attitudes for example, the more stable will be intentions.

(ii) *Certainty*. The more certain an intention, the more likely its realisation. Certainty is measured in surveys with a scale. The traditional measurement with "yes", "no" and "uncertain" does not capture certainty very well; a preferable scale is one used in recent surveys, which has four options: "definitely no", "probably not", "probably yes" and "definitely yes". It is applied in the GGS questionnaire (Generation and Gender Survey). Miller and Pasta (1995) and Thomson (1997), for instance, discuss the topic of certainty of intentions to have a child.

(iii) *Properly defined*. The TPB defines intentions as referring to an action. Sometimes an action is confused with its outcome. This is the case with childbearing intentions as operationalised in demographic surveys, where the question is usually phrased to ask about

the intention to have a child within 2 or 3 years. Having a child is not an action; it is the outcome of an action, and the proper action remains unidentified. One example for such action could be stopping contraceptive behaviour. Philipov et al. (2015) provide more discussion on this topic.

In the case of fertility, parity of the intended birth must be plainly considered, i.e. intentions to have another child should be preferred to intentions about the total number of children in one's life.

(v) *Proper measurement of the behaviour*. A question asking about the intention to have a child is imprecise because the outcome is not clear. It can be the birth of a child measured at its birth date, or the start of an intended pregnancy. Miller (1994, 2011b) indicates an even earlier point in time: an intention to have a child can be considered as realised when a couple has started a *proceptive* behaviour (intentions to work towards a pregnancy). This principle has to be considered together with the previous one. Davidson and Jaccard (1979) applied the earlier theory of reasoned action to analyse a sequence of events leading to child birth which includes contraceptive behaviour.

The principles pose important requirements to the formulation and measurement of intentions. The principle of temporality is of particular importance specifically in population studies where childbearing and other family-related intentions are formulated without reference to a time period (for example intentions to ever have a child, to ever marry, to divorce, to migrate etc.). Another crucial principle is the proper definition of an intention with reference to an action, i.e. behaviour-oriented, and not to the outcome of a behaviour. Certainty of intentions has recently become satisfactory; the scale used in the GGS mentioned above is applied for all types of intentions included in the survey.

The TPB is not the only theory on reproductive decision-making. Miller developed his theoretical views in a series of papers (Miller 1994, 2011a, 2011b; for a comparison with the TPB see 2011a). Unfortunately it has not been effectively operationalized and measured in surveys. The same is valid for the theory of conjunctural action (Johnson-Hanks et al. 2011).

2.2.2. Psychological distress and cognitive dissonance

Individuals who fail to realize their intentions may feel psychological distress. Individuals who feel psychological distress may reject the construction of an intention to perform a certain action. Psychological well-being and intentions can be linked and therefore deserve to be analysed.

Among the diversity of relevant theories we mention here the theory of cognitive dissonance. It emerged in the 1950s with the pioneering research by Festinger (1957). Using the terminology of the TPB, cognitive dissonance can arise when an individual manifests attitudes toward different behaviours that may be in conflict in some respect. In a life course perspective, a conflict can arise when potential parallel behaviours, such as working and studying, compete for the individual's time. When planning conflicting behaviours individuals believe that they are able to exercise control over these behaviours. When control is beyond their ability they will avoid construction of such plans in order to avoid dissonance as the latter can cause feelings of uneasiness, stress, and depression.

In the context of this paper cognitive dissonance can arise when individuals construct parallel, or concurrent, intentions for behaviours that compete with each other. In this case we talk about competing, or conflicting, intentions. Dissonance can lead to the rejection of the realization of one or more of the conflicting intentions. It is also expected that, being aware of the dissonance, individuals tend to avoid the construction of competing intentions. The theory of cognitive dissonance has hardly been applied in population studies, although it is used in life course research.

3. Data and methods

3.1. Data

The analyses presented in this paper are based on the GGS data. This survey includes a large number of questions related to intentions, and in several cases the TPB is applied with specified questions. As an illustration of the operationalisation of the TPB we use the questions from the GGS questionnaire related to having a child. Along with the question we discuss the processing of the data used in the applied methods of analyses.

Intentions. The basic question asks about the intention to have a child during the next 3 years (q622 in the GGS questionnaire, see Vikat et al. 2005), and the answers are "definitely not", "probably not", "probably yes", and "definitely yes". The four scales were collapsed in two which form answers "no" and "yes".

Attitudes. In total, 11 attitudes are formulated and asked; for example "If you were to have a/another child during the next three years, would it be better or worse for (a) the possibility to do what you want; (b) your employment opportunities;" etc. (q627), with answers from 5-items scaling from "much better" to "much worse".

Subjective norms. One question (q629) asks about agreement with three different items: "Most of your friends think that you should have a/another child", with the word "friends" being changed to "parents" and "relatives" in the second and third items. There are five answers ranging from "strongly agree" to "strongly disagree".

Perceived behavioural control. This is operationalised with two separated questions. One is specific to the behaviour, in this case (q628), and asks: "How much would the decision to have or not to have a/another child during the next three years depend on (a) your financial situation; (b) your work; ….", where the specified items are nine in number; the answer is selected out of four in a scale from "not at all" to "a great deal". This question measures dependence of the decision to have a child on the situation of the respondent as perceived by him/her.

Another question is independent of the behaviour; it is designed to measure locus of control (q719), asking: "How much control do you feel you will have over the following areas of your life during the next three years?", with areas "(a) your financial situation; (b) your work", etc., about altogether five items; answers are one out of four in a scale from "not at all" to "a great deal". This question asks about perceived control; however, it is not specified for a specific behaviour and therefore can be used in the TPB framework with sacrifice of accuracy.

The two questions are coupled to produce a measure of perceived behavioural control. Coupling is carried out only for items included in both q628 and q719.

Many countries used the questions "as is" in the master questionnaire but in some countries some questions were skipped which makes the TPB inapplicable. These countries are not included in our analyses. Some countries omitted certain items within a question, and when appropriate they were included in the analyses.

The GGS data were gathered in two panel waves. The second wave can serve as a check of the fulfilment of intentions.

3.2. Methods

We use a diversity of descriptive methods which are self-explanatory. For the application of the TPB we use logit models where the dependent variable is the dichotomous version of an intention, and explanatory variables measure the three proximate antecedents of intentions. The latter are constructed following Billari et al. (2009); in brief:

Factor analysis is applied for the items measuring attitudes. Two factors are retained. Analyses indicate that one of them measures a negative effect of attitudes on the decision to perform the action under study, and the other one measures a positive effect.

One variable presents subjective norms, formed by summing over rows the answers to the four items in the relevant question.

One variable is also used to measure perceived behavioural control. Its construction is more sophisticated. First, each item in q628 is separately dichotomised with two values that roughly correspond to "depends" and "does not depend". Similarly each item in q719 is dichotomised with values roughly corresponding to "a lot of control" and "lack of control". In our case four items refer to one and the same area in both questions, for example the financial situation of the respondent. Next, four bivariate variables are defined for each of the four common areas under the condition that the individual stated "depends" in q628. Finally a new variable is produced as the sum by row over the four bivariate variables.

All four variables—two presenting attitudes, one subjective norms and one perceived control—were standardised with mean equal to zero and standard deviation equal to one. This allows magnitude comparisons of the estimated coefficients.

In conventional demographic analyses of intentions the dependent variable measures intentions, usually dichotomously, and a range of explanatory and control variables are selected on the basis of theories and theoretical considerations related to fertility. These variables may include age, sex, marital status, level of education, employment and many others. The application of the TPB requires a different approach. The proximate determinants of intentions defined in the TPB are three, and they are the explanatory variables in a regression on intentions. The variables specified above are background factors and as such they can determine one or more of the proximate antecedents. The inclusion of these variables along with the proximate on the right side of a regression may lead to correlation and therefore to biased estimates of the coefficients. For this reason, in the logit regressions used in the later section we include only the three proximate antecedents. Exceptions were made only for age and age squared which did not show a significant correlation with the three proximate variables.

4. Life course events and intentions: the macro level at a glance

The purpose of this section is to highlight at the macro level life course events and intentions that refer to young adults, i.e. in the period of life considered in this paper. The analysis suggested here is introductory It serves to derive initial information that could help to better understand the micro-level findings exposed in later sections. Events under consideration are:

(1) Leaving the parental home for the first time in life

(2) Entry into first union

(3) Birth of the first child (transition to parenthood)

(4) Completion of education higher than secondary

Intentions include:

(1) Intention to leave the parental home for the first time

(2) Intention to enter a first union

(3) Intention to have a first child

(4) Intention to resume one's studies

(5) Intention to start a job

A union can be either a cohabitation or a marriage. In this paper we do not distinguish them leaving their disaggregation for more specified research. Biological births are considered.

Intentions (1) and (2) were measured both with and without reference to the order of the event, i.e. to leave home for the first time and in general, or to enter a first or higher-order union.

The GGS data are not informative about the event or the intention of starting a first job.

The analysis is based on mean ages and their standard deviations. For events, both indices are estimated for the population that has experienced the event during the last three years before the survey. For intentions they refer to the population that has not experienced the event and intends to do so during the next three years after the survey. So the time distance between experienced and expected events is 3 years on the average.

In most of the countries participating in the GGS the lowest age of eligibility for the survey is 19 years but in some countries it is higher (22 in Hungary and Estonia). So age 22 is considered as the lowest one in the estimation of the two indicators. This censoring may bias comparability of mean ages of first births estimated with the survey data with those estimated from country-level statistics (country-level statistics is not available for the other events). The upper age of 40 censors a small number of respondents.

Macro-level analyses of life histories differ substantially from those at the individual level. At the macro level the life course refers to that of the whole population or of a cohort which can be synthetic or real. An analogy with life table indicators is helpful again: life expectancy at birth estimated for a particular year is not the length of life of an individual, and in reality maybe only a small part of people will live as long as the life expectancy figure indicates. Similarly, a macro-level life course is not that of an individual and might refer only to a few individuals. So it cannot be expected to correspond to individual-level specifications such as conditionality of events in their sequence over a life trajectory.

A word of caution is needed for the analysis presented in this section. The use of country-wide macro-level indices might mask heterogeneity in a country's population. Heterogeneity might be due to ethnic differences or cultural differences such as for example between immigrants and the local population. Population heterogeneity and compositional change might be relevant in explaining some of the observations in this section. This topic requires specific attention and is outside the scope of the paper.

The use of mean ages and standard deviations estimated for individuals who have experienced the event or individuals who intend to perform the event may include a potential bias for country comparisons because they might not reflect differences in the age composition of country-specific populations that are exposed to the event in question. A certain control is needed of the effect of population age composition. The results exposed below are not based on an intercountry age standardization; for this reason they are considered only as indicative.

4.1. Events: a period approach

Tables 4.1.1 and 4.1.2 display gender-specific mean ages and standard deviations of the four events. Averages are computed across the country-specific indices. The first three events in the tables (first leaving home, first union and first birth) refer to the total population while completion of higher education refers to the sub-population that has completed a lower degree. The information invites detailed analyses, which is only noted here. We skip analyses of single events which are abundant in the available literature.

Mean ages. Table 4.1 shows that, on average, mean ages of women and men for the three family formation events are distinct from one another with few exceptions. They are sequenced in the order: leaving home, followed by entry into a union, and finally the first birth, except for Polish women where entry in a first union precedes leaving home. The smallest differences are observed between the mean ages for leaving home and entry in a

union for men and women from eastern European countries: less than half a year. For example for women in Russia it is 0.1 and for women in Lithuania 0.2 years: in Poland this difference is -0.2 years.

The large time difference between entry in a first union and first birth is unexpected. Allowing nine months for pregnancy, it is only for men in Georgia that a distance of 0.25 years indicates a short delay. The two events are not tied together in time at the level of the whole population. They might be interdependent in terms of causality but less so in their timing.

Gender differences can clearly be seen: mean ages for men are higher than those for women, and the difference is larger for entry in a union and becoming a parent.

The four cases mentioned above (Russia, Lithuania, Poland and Georgia) can be considered as "tied" in time. It is an ecological fallacy to transfer the validity of this observation on individuals but it indicates the need for a rigorous micro-level analysis. Events that happen at one and the same time in the life of an individual are known as "tied" in event-history analysis and specific methods have been developed for their analyses. Tied events might indicate that they are closely interdependent in the life of individuals and their presence implies a specific way of arrangement of the life course.

Since completion of higher education refers to a sub-group of the population it should be compared with the family formation events with caution. The other educational levels were not considered because their mean ages are lower than age 20, so the overall mean age of completion of education would be considerably lower than that for leaving home.

Mean ages of completion of higher education are low in some eastern European countries and also in Belgium. They are lower than those for leaving home in several countries, for both men and women, and differences between the two mean ages are small. Entry into a first union is timed close to completion of higher education in few cases, notably among men in Norway and Sweden, but not for the women in these countries.

We return to a comparison of mean ages of events sequentially from a life course perspective. In general, the dominant trajectory of the events, as macro-level indicators show, is as follows:

- The dominant life trajectory starts with first leaving the parental home or completion of higher education in some countries, followed distinctly by entry into a first union and finally entry into parenthood.

- "Ties" in timing of events are not observed at the level of the whole population, separately for men and women. We noted several exceptions where timing was close but still not coinciding.
- In all countries, both for men and for women, timing of first births within a country is reported at a highest age. Entry into parenthood is preferred to follow after other crucial life course events have been performed: hardly a surprise where leaving home and entry into a union are considered. The difference between the mean ages of completion of higher education and first birth is larger than could be expected as it might be assumed that a first birth is postponed till after the completion of education. Apparently in addition to the latter, another crucial life event intervenes at this phase of life: starting a job and working career. Its timing is not measured in the GGS as needed in this paper. More detailed estimates are necessary for the support of the inferences in this paragraph as the population at risk for completion of higher education forms a sub-group in the population at risk for the other three events.

Table 4.1.1: Mean ages and standard deviations for four life course events, men aged 22-39

Events: Men	Mean ages				Standard deviation			
	1st leaving home	1st union	1st birth	Completed higher education	1st leaving home	1st union	1st birth	Completed higher education
Bulgaria	25.0	26.2	28.7	25.6	4.5	4	4.1	3
Russia	24.0	24.1	27.0	23.4	3.8	3.4	3.5	3.2
Georgia	26.3	26.9	28.7	23.5	5.4	4.6	4.5	2.7
Germany	23.1	27.1	30.8	26.4	3.2	4.5	4.4	3.5
France	23.7	26.1	31.5	-	4.0	4.4	4.2	-
Hungary	-	26.9	29.9	24.4	-	3.8	3.8	2.8
Italy	28.3	29.9	32.9	-	4.1	3.4	3.5	-
Netherlands	24.4	26.9	32.6	-	3.7	3.9	3.6	-
Romania	26.0	26.5	29.9	25.4	4.1	3.8	3.6	3.2
Norway	22.0	26	31.2	25.6	3.0	4.3	4.1	3.2
Austria	24.3	26.7	31.3	26.6	3.8	4.5	4.2	3.2
Estonia	23.0	24.5	-	24.6	3.8	3.7	-	3
Belgium	24.8	26	31.9	23.6	3.7	4.4	3.9	2.6
Lithuania	23.3	25.1	28.2	24.6	3.3	3.8	3.9	2.9
Poland	25.6	26.1	29.6	24.9	4.0	3.8	4	2.6
Czech Rep.	25.3	25.7	29.4	24.4	3.7	3.8	3.7	2.9
Sweden	21.8	25.5	31.0	25.9	2.5	4.6	4.3	3.6
Average	*24.4*	*26.2*	*30.3*	*24.9*	*3.8*	*4.0*	*4.0*	*3.0*

Standard deviations inform about the spread of an event across ages. Completion of higher education is more concentrated across age than any other event. Within countries the dispersion of leaving home across ages is larger than completion of education in the two Scandinavian countries Norway and Sweden both for men and women, and also for German men and Austrian women. Timing of completion of higher education seems to be more determinedly defined across age as compared with the timing of the other three events.

Differences in standard deviations for the three family formation events are small: the one for leaving home is slightly lower. At the country level, the dispersion of entry in a union is smaller than that for leaving home in eastern European countries. For men, the dispersion of first union and entry into parenthood across age are similar. For women they are more diverse: among eastern European countries a smaller dispersion for entry in a union prevails, while in other countries dispersion of the first birth is larger. "Ties" are observed but they are not as significant as ties in timing.

Table 4.1.2: Mean ages and standard deviations for four life course events, women aged 22-39

Events: Women	Mean ages				Standard deviation			
	1st leaving home	1st union	1st birth	Completed higher education	1st leaving home	1st union	1st birth	Completed higher education
Bulgaria	24.0	25	27.8	25.1	3.9	3.7	4.2	3.1
Russia	24.4	23.2	26.1	22.4	4	3.4	3.5	3.1
Georgia	25.8	24.8	26.8	23.2	4.4	4	4.2	2.5
Germany	23.4	24.9	29.2	25.1	3.8	4.4	4.7	3.4
France	23.1	24.5	29.2	-	3.4	3.9	4	-
Hungary	-	25	27.8	24.2	-	3.2	3.8	3
Italy	26.8	27.4	31.2	-	4.1	3.8	3.9	-
Netherlands	22.9	24.9	31	-	3	3.7	4	-
Romania	25.0	25.3	28.3	25.3	4	3.7	3.3	3.3
Norway	21.3	24.8	29.9	25.1	2.6	4.1	4.2	3.3
Austria	23.2	25.1	29.6	25.9	3.4	4	4.4	3.8
Estonia	22.3	23.4	-	24	3.4	3.4	-	3.6
Belgium	23.9	24.6	29.7	23.1	3	4.2	3.7	2.6
Lithuania	23.3	23.5	26.8	24.6	3.9	3.2	3.7	3.5
Poland	24.9	24.7	28.2	25.1	4.1	3.6	4	3.1
Czech Rep.	24.1	24.4	27.1	24.3	3.4	3.2	3.2	3.1
Sweden	22.2	24.5	30	25.9	3.3	4.2	4	3.6
Average	*23.8*	*24.7*	*28.7*	*24.5*	*3.6*	3.7	*3.9*	*3.2*

4.2. Intentions

Tables 4.3.1 to 4.3.4 display similar information as the one above for the events. Four additional columns are included. Two of them refer to leaving the parental home and entry into a union, both not necessarily for the first time. These two columns will not be analysed here; they can be used for comparisons of repeated events such as resuming one's studies or starting a job. Two columns refer to new events: resuming one's studies (independently of the type of studies and their degree), and starting a job, not necessarily for the first time (no data for a first start of a job were available). Respondents aged above 19 were included in the estimates; two countries where the lowest age of eligibility for the survey was higher were skipped (Hungary and Estonia), the information for these countries being somewhat incomplete anyway.

We discuss in brief the averages across countries. (Note: intentions are not available in some countries where data on the events were available; hence averages might differ. We found a very small change in the averages for events when observations for countries with no data on intentions were excluded.) The data for men show that averages for intentions are slightly lower than those for the corresponding events—expectably so as intentions should precede behaviour. This sequence is observed also, more or less, for each country. For women, the same observation holds for the majority of countries, and there are a few cases where the mean age of intentions is higher than that of the corresponding event. A likely explanation is in the pace of postponement of events which could be higher than that for men, and therefore intentions expected to be fulfilled during the next 3 years might lead to a higher mean age of the corresponding event.

Standard deviations of intentions are larger than those of events. This finding is important. One likely explanation is that intentions are a psychological construct that is not as stable as an immediate plan to fulfil the corresponding event.

A life course described by mean ages of intentions is very much the same as that described by events where first leaving of the parental home, entry into a first union and first birth are considered. We have two additional intended events: resuming one's studies and starting a job. The tables show that first birth, resuming one's studies and starting a job are timed closely by the male respondents, and among women the following sequence dominates: (i) first birth, (ii) resume one's studies, and (iii) start a job. "Tied" timing for men is not surprising as the events are not as conflicting for their lives as they are for women, particularly where a birth is considered.

It is noteworthy that the intention to start a job is broadly dispersed over age, as indicated by its high standard deviation.

Although the macro-level descriptive analysis presented in this sub-section is introductory the exposed findings can be summarised in two short statements as follows:

- Timing of intended events by and large coincides with timing of relevant behaviour. Especially matching timing is noted for birth of a first child: on average, men's and women's intended timing is about 1.5 years earlier than an actual birth which is a good match bearing in mind a pregnancy period.
- The standard deviation of intentions is larger than that of behavioural events. Given the close match in the mean ages the larger spread of intentions indicates that they have a more sophisticated composition. It is likely to suppose that intentions at a lower or higher age are less likely to be realised, and their drop from the performance of the behaviour leads to a more narrow age span over which the realised events are fulfilled.

Table 4.3.1: Mean ages for intentions to perform selected life course events during the next three years, men, GGS Wave 1 data

Intentions, Men	1st leaving home	1st union	Leaving home	Union (any order)	1st child	Resume studies	Start job
Bulgaria	25	26.9	25.9	27.2	28.2	26.1	28.4
Russia	24	24.1	24.9	25.6	25.9	26.2	27.8
Georgia	24.6	27.2	25.8	27.4	27.5	26.1	28
Germany	22.3	26.1	23.6	26.9	30	-	29.7
France	22.7	24.8	23.5	26.4	28.6	28.8	27.5
Italy	28.4	30.4	28.4	30.4	31.3	-	27.8
Netherlands	-	27.9	-	29.4	28.2	-	-
Romania	25.4	26.4	25.6	26.8	28.5	28	28.3
Norway	21.4	-	22.6	-	29.5	-	32
Austria	23.5	25.7	24.7	26.9	29.5	29.1	25.7
Belgium	24.7	25.1	25.2	26.6	28.6	29.9	28.5
Lithuania	22.2	24.8	23.6	25.4	27.4	26.9	29.7
Poland	24.9	25.8	24.9	26.5	28.6	28.1	28.4
Czech Rep.	24.1	-	24.7	-	27.8	-	28
Sweden	-	23.7	-	25.8	28.2	26.9	33.5
Average	*24.1*	*26.1*	*24.9*	*27.0*	*28.6*	*27.6*	*28.8*

Table 4.3.2: Standard deviations for intentions to perform selected life course events during the next three years, men, GGS Wave 1 data

Intentions, Men	1st leaving home	1st union	Leaving home	Union (any order)	1st child	Resume studies	Start job
Bulgaria	5	5.1	5.1	5.2	5.1	5.1	6.1
Russia	4.5	4.5	4.8	5.4	4.4	5.2	6.1
Georgia	4.4	5.3	4.8	5.4	5.3	5.6	5.8
Germany	4	5.5	5.1	5.8	5	-	6
France	4.3	5.1	4.8	5.7	4.7	5.8	6
Italy	5	5	4.9	5	4	-	5.6
Netherlands	-	5.2	-	5.5	5.2	-	
Romania	4.5	4.8	4.5	5	4.8	5.3	6.5
Norway	3	-	3.9	-	4.8	-	5.2
Austria	3.8	5.3	4.8	5.7	5.2	6.2	6.6
Belgium	3.5	4.2	3.9	4.9	4.5	5.7	6.1
Lithuania	3.8	4.4	4.7	4.7	4.6	5	6.5
Poland	4.6	4.4	4.6	4.7	4.3	5.3	5.9
Czech Rep.	4.1	-	4.3	-	4.5	-	5.9
Sweden	-	4.7	-	5.8	5.2	6.1	3.9
Average	*4.2*	*4.9*	*4.6*	*5.3*	*4.8*	*5.5*	*5.9*

Table 4.3.3: Mean ages for intentions to perform selected life course events during the next three years, women, GGS Wave 1 data

Intentions: women	1st leaving home	1st union	Leaving home	Union (any order)	1st child	Resume studies	Start job
Bulgaria	24.1	25.4	24.9	26	26.6	27.8	29.3
Russia	23.6	23.1	24.3	25	26	26.6	28.4
Georgia	25.3	26.5	25.8	26.8	26.5	25.9	29.4
Germany	21.5	25.1	22.8	26.1	27.4	-	30.9
France	21.8	23.9	22.3	25.8	27.5	29.1	29.7
Italy	27	22.3	26.9	24	29.4	-	30.2
Netherlands	-	26.5	-	27.8	26.9	-	-
Romania	24.6	25	25.2	26.4	27.6	29.3	30
Norway	20.2	-	21.2	-	27.2	-	31.5
Austria	22.5	24.2	23.6	26.1	28.2	29.5	30.1
Belgium	23.3	23.7	23.7	25.6	27.1	29.9	29.5
Lithuania	21.9	23.6	22.9	24.2	26	27.8	30
Poland	24.3	25.1	24.3	26.4	27	28.7	29.5
Czech Rep.	22.8	-	23.5	-	26	-	30.2
Sweden	-	22.9	-	24.8	27	28.1	31.2
Average	*23.3*	*24.4*	*24.0*	*25.8*	*27.1*	*28.3*	*30.0*

Table 4.3.4: Standard deviations for intentions to perform selected life course events during the next three years, women, GGS Wave 1 data

Intentions, Women	1st leaving home	1st union	Leaving home	Union (any order)	1st child	Resume studies	Start job
Bulgaria	4.7	5.1	5.1	5.4	5.2	5.6	5.4
Russia	4.2	4.1	4.6	5.2	5	5.1	5.3
Georgia	5	5.5	5.3	5.6	5.5	5.1	5.5
Germany	3.6	5.4	4.7	6.1	4.8	-	5.5
France	3	4.5	3.2	5.6	4.8	5.7	5.9
Italy	4.6	3.3	4.5	4.8	4.6	-	5.3
Netherlands	-	5.6	-	5.7	4.8	-	-
Romania	4.8	4.9	5.1	5.7	4.9	5.3	5.1
Norway	1.4	-	2.7	-	4.7	-	4.6
Austria	3.8	4.7	4.3	5.8	5	5.8	5.7
Belgium	3.2	4.2	3.5	5	4.6	5.5	5
Lithuania	3.7	4	4.4	4.4	4.4	5.3	5.2
Poland	4.4	4.6	4.4	5.3	4.6	5.7	5.5
Czech Rep.	3.2	-	4.1	-	4.2	-	4.9
Sweden	-	4.3	-	5.4	4.5	6.5	4.3
Average	*3.8*	*4.6*	*4.3*	*5.4*	*4.8*	*5.6*	*5.2*

5. The micro level: application of the TPB

The TPB is empirically applied as explained in Section 3. It is important to stress again that according to this theory intentions have three proximate determinants (or immediate factors): attitudes, subjective norms and perceived control which are themselves determined by background factors. Hence a rigorous application of the theory requires a structural approach where background factors are used to analyse the three immediate factors, and the latter are used to analyse intentions. An inclusion of background factors together with the immediate in one regression equation, for example in a logit model, may lead to problems of collinearity (Ajzen and Klobas 2013). In conventional empirical analyses with regression models scientists usually use the background factors as explanatory variables and do not apply the immediate factors. This approach might lead to a wrong conclusion that a specific factor has no influence on intentions while it might have an effect on one of the intermediate factors.

In this paper we analyse only the immediate factors, leaving studies the effect that a background factor might have on their formation for later. Women only are considered.

This section exposes an application of the TPB to the three life course events related to family formation. The results are displayed in Table 5.1. Attitudes are presented by two factors that resulted from the application of factor analysis: positive and negative (the latter

with a negative sign as they hinder the construction of an intention to perform the corresponding action). So statistically the number of explanatory factors is four for each intention. Coefficients are standardised and hence their magnitude can be compared. The largest coefficient in each country is underlined. We remind the reader that perceived behavioural control is measured crudely.

Leaving home. Construction of intentions to leave the parental home for the first time is strongly dominated by one factor: positive attitudes. It is the main explanatory factor in all countries with the exception of Germany where negative attitudes dominate. The second most important factor are negative attitudes which hinder action. Subjective norms have some importance only in Belgium and in the Czech Republic. This finding is remarkable because the usual expectation would be that leaving home is influenced by the opinions of others, specifically by the parents in some countries such as Italy, or friends in others. Perceived control (this is actually locus of control) is not only statistically insignificant; its coefficients are close to zero.

Entry into first union. Attitudes and subjective norms are important in all countries (except Belgium). Subjective norms are most important in three eastern European countries: Russia, Georgia and Romania, and important also in Bulgaria and France. Opinion of important others is influential in these countries by discouraging women to perform the event as indicated by the negative sign. Positive attitudes are dominant again over other factors in most of the countries, and in a few countries the coefficients are nearly as large as those of the dominant negative attitudes. Unlike in the case of leaving home, all three factors are of significance in taking the decision to start a union. Perceived control is again of low importance.

First birth. Both attitudes and subjective norms are important factors, and in several countries also perceived control is statistically significant. Subjective norms dominate in eastern European countries and in Germany. As in the case of entry into a union, important others are discouraging the women to have their first child. Additional studies with the background factors can help understand better how subjective norms are constructed and why they play a negative role in the formation of the intention. Both positive and negative attitudes are significant in the majority of countries and play an important role. Even perceived control is important in at least six countries, unlike the previous two intentions.

Comparison of the three intentions. The three intentions refer to behaviour with different degree of reversibility. Leaving home is easily reversible: it depends on the decision of the respondent and family of origin. A union dissolution is a more complex act as it

involves another person: the partner. Hence it is not as easily reversible as returning to the home of the parents. Finally becoming a parent is irreversible (unless the child dies, fortunately a rare event in today's Europe). Therefore respondents are likely to construct their intentions with a different degree of scrupulousness and responsibility which might be imprinted in the influence of the immediate factors. Although the measurement of the TPB is not perfect, the comparison across the events shows that positive attitudes are significant in any degree of reversibility; negative effects and subjective norms increase their significance with a higher level of irreversibility; this is especially visible in the case of perceived control. It is remarkable that subjective norms have a negative influence on the construction of intentions to start a family life.

Table 5.1: Application of the theory of planned behaviour for intentions to perform an action within 3 years, women, GGS Wave 1 data

	First leaving the parental home				First entry in a union				First birth			
	Positive attitudes	Negative attitudes	Subjective norms	Perceived control	Positive attitudes	Negative attitudes	Subjective norms	Perceived control	Positive attitudes	Negative attitudes	Subjective norms	Perceived control
Bulgaria	**0.9**	**-0.7**	0.0	0.0	**0.9**	**-0.7**	**-0.5**	0.1	**0.7**	**-0.5**	**-0.8**	**0.2**
Russia	**0.7**	**-0.3**	0.1	-0.1	**0.3**	**-0.6**	**-0.8**	0.1	0.4	**-0.7**	0.1	**0.4**
Georgia	**0.9**	**-0.4**	0.0	0.0	**0.5**	**-0.4**	**-1.6**	0.0	0.2	**-0.4**	**-1.2**	0.0
Germany	0.1	**-1.1**	-0.1	0.0	*n.o.*				**0.6**	**-0.7**	**-1.0**	0.0
France	*n.o.*				**0.6**	**-0.7**	**-0.4**	-0.0	**1.1**	**-1.1**	**-0.8**	**-0.4**
Hungary	*n.o.*				*n.o.*				**0.6**	**-0.4**	**-0.2**	**-0.3**
Italy	**0.5**	**-0.4**	-0.1	1.0	*n.o.*				**1.3**	-0.2	-0.2	-0.1
Romania	**1.3**	**-0.4**	-0.1	-0.1	**0.7**	**-0.8**	**-0.8**	0.1	**0.6**	**-0.4**	**-1.0**	-0.1
Norway	**1.2**	0.7	-1.1	0.1	**1.1**	**0.3**	**-0.5**	0.1	1.2	-1.1	-1.6	-0.3
Austria	**1.0**	**-0.6**	0.1	0.1	**1.1**	**-0.4**	**-0.6**	0.1	**0.9**	**-0.9**	**-0.6**	-0.2
Belgium	**1.2**	-0.3	**0.4**	0.0	0.4	-0.1	-0.2	-0.2	**1.6**	**-0.8**	**-0.4**	0.1
Lithuania	**1.1**	-0.3	0.0	0.0	*n.o.*				**0.4**	-0.2	**-0.6**	0.1
Poland	*n.o.*				*n.o.*				**0.6**	**-0.8**	**-1.3**	-0.2
Czech Rep.	**0.9**	**-0.5**	**0.3**	0.1	*n.o.*				**0.6**	-0.1	**-0.8**	0.0
Sweden	*n.o.*				**0.3**	**-0.3**	-0.2	0.1	**0.7**	**-0.5**	**-0.6**	0.0

n.o. = no observations; bold type = statistical significance $p<0.05$; a number 0.0 indicates that the value is below 0.05.

6. Concurrent Intentions

Some of the respondents report intentions formulated at one and the same time, i.e. they report concurrent (or tied) intentions, a concept analogous to the concept "tied events" used in event-history regression analysis. These intentions can be independent from one another but they can also have a certain relationship.

Concurrent intentions can be competing or supporting. One theoretical background draws on the inclusion of the impact of competing attitudes in the TPB (Barber 2001; see also Barber, J., Axinn W., and Thornton, A. (2002)..). Philipov (2009) discussed competing and supporting intentions using 2002 survey data for Bulgaria; he found that intentions to start studying, or the behaviour of actually studying, hamper the realisation of childbearing intentions, while the intention to enter into employment, or actually being employed, facilitates the realisation of childbearing intentions. In the context of Bulgaria therefore the intention to have a child is competing with the intention to resume one's studies and is supported by the intention to start working. These intentions are tied. The concept of competing intentions is analogous to that of competing risks, used in life table analyses (see Philipov and Jasilioniene 2008, for more discussion and applications; also Andersson and Philipov 2002).

In this section we examine concurrent intentions without reference to their realisation. We first discuss descriptively the observed data and then turn to a specific implementation of the TPB in the case of supporting intentions.

6.1. Descriptive analysis: a selected case

We consider links between intentions to have a first child on one side, and intentions to start a union or to resume studies, on the other, declared by childless women aged below 40 who do not live together with a partner (Tables 6.1 and 6.2).

Our interest is specifically in the proportion of respondents who declared "yes" for both intentions. In Table 6.1 for example in Bulgaria, 34% of 932 respondents declared that they intend to enter a union during the next three years and also to have a child during the same period. This large proportion is observed in all countries where data were available. The observation is not surprising as the two prospective events are closely linked: it is common behaviour that a couple will have their first child shortly after entering a union, especially when this union is a marriage.

Other proportions of interest are where the answer to one of the intentions is positive, and in the other negative. A very small proportion of respondents declare that they intend to become mothers during the next three years but do not intend to enter a union (10% in Bulgaria). The proportion of those who do not intend to have a child but intend to enter a union is not as small but not as high (with few exceptions) as of those who declare intentions to perform the two events.

Table 6.2 is similar in construction to Table 6.1. It refers to the concurrent intentions to have a child and to resume studies, both within a period of three years. Respondents are childless women aged below 40 who did not study at the time of survey. The two potential events are competing for the time of a woman as mother care needs time and hence she will be less able to allocate sufficient time for her studies. So the two intentions are also competing.

Following the theory of cognitive dissonance, it is expected that respondents will avoid the conflict of competing intentions by not planning to perform conflicting actions at the same time. So the number of responses where "yes" is stated on both intentions should be small. Indeed Table 6.2 shows that it is not large (for example 15% of 661 respondents in Bulgaria). Across countries, the lowest proportion is 12% and the highest 23%. They indicate that the number of respondents who intend to perform both events is not small and cannot be neglected. These respondents are expected to suffer consequences of cognitive dissonance unless they have some specific reasons for the construction of their plans. We will return to this topic later in the paper.

Table 6.1: Distribution of responses across two intentions: intention to start a union within the next three years (columns), and intention to have a first child during the next three years (rows), women below age 40 living without a partner, GGS data Wave 1

Bulgaria				Russia			
	No	Yes	Total		No	Yes	Total
No	43%	13%	526	No	43%	20%	116
Yes	10%	34%	406	Yes	9%	27%	66
Total	493	439	932	Total	95	87	182
Georgia				Germany			
	No	Yes	Total		No	Yes	Total
No	38%	10%	336	No	26%	45%	84
Yes	5%	47%	368	Yes	2%	26%	33
Total	303	401	704	Total	33	84	117
France				Hungary			
	No	Yes	Total		No	Yes	Total
No	22%	42%	383	No	13%	36%	80
Yes	3%	33%	215	Yes	10%	40%	82
Total	149	449	598	Total	38	124	162
Netherlands				Romania			
	No	Yes	Total		No	Yes	Total
No	8%	6%	34	No	35%	22%	226
Yes	26%	60%	215	Yes	4%	38%	168
Total	85	164	249	Total	155	239	394
Austria				Belgium			
	No	Yes	Total		No	Yes	Total
No	41%	30%	460	No	38%	31%	242
Yes	6%	24%	194	Yes	5%	26%	109
Total	304	350	654	Total	150	201	351
Lithuania				Poland			
	No	Yes	Total		No	Yes	Total
No	17%	32%	51	No	15%	36%	70
Yes	7%	44%	52	Yes	2%	46%	66
Total	25	78	103	Total	24	112	136
Sweden							
	No	Yes	Total				
No	27%	48%	412				
Yes	2%	23%	133				
Total	159	386	545				

Table 6.2: Distribution of responses across two intentions: intention to resume studies within the next three years (columns), and intention to have a first child during the next three years (rows), women below age 40, GGS data Wave 1

Bulgaria				Russia			
	No	Yes	Total		No	Yes	Total
No	28%	12%	263	No	20%	20%	49
Yes	45%	15%	398	Yes	37%	23%	73
Total	483	178	661	Total	70	52	122
Georgia				France			
	No	Yes	Total		No	Yes	Total
No	30%	7%	190	No	26%	10%	201
Yes	50%	12%	319	Yes	47%	16%	349
Total	409	100	509	Total	404	146	550
Romania				Austria			
	No	Yes	Total				
No	23%	7%	112	No	32%	17%	285
Yes	49%	21%	262	Yes	29%	22%	298
Total	271	103	374	Total	355	228	583
Belgium				Lithuania			
	No	Yes	Total		No	Yes	Total
No	38%	8%	140	No	29%	18%	139
Yes	39%	15%	162	Yes	34%	19%	155
Total	233	69	302	Total	185	109	294
Czech Rep.				Sweden			
	No	Yes	Total		No	Yes	Total
No	32%	10%	156	No	18%	32%	251
Yes	45%	13%	217	Yes	29%	21%	248
Total	288	85	373	Total	233	266	499

6.2. Concurrent intentions: an examination based on the TPB

The numbers in Table 6.1 indicate that the two intentions are interconnected. This is supported by the high value of a positive correlation coefficient: from 0.20 in the Netherlands to 0.70 in Georgia, with an exceptionally low value in Hungary. So intentions to have a first child and intentions to enter a union are supportive. Then the question can be asked: will the TPB's proximate antecedents for one of the intentions bring any explanatory value to the other? This question is incorrect from a purely theoretical point of view as it violates one fundamental requirement of the TPB: both antecedents and intention should refer to one and the same proper potential action. Yet the close link between entry into a union and having a first child both as behaviours and as intentions indicates that antecedents for each one of them have many commonalities. Discovering these commonalities helps understand better both

intentions and the corresponding actions. It can serve for example towards a search of common background factors that influence the same antecedents for the two intentions.

Towards finding commonalities it is appealing to examine the effect of antecedents of the intention to enter a union on intentions to have a first child, and that of antecedents to have a first child on the intention to enter a union. Table 6.3 displays results. The results with the "true" implementation of the TPB for the two intentions, i.e. with the proper antecedents are given in Table 5.1. Comparing the results in the two tables shows commonalities between the left part of Table 6.3 and the part on the right side in Table 5.1 (TPB for having a first child). Positive attitudes and to some extent negative attitudes preserve their significance, although the coefficients are smaller (we recall their comparability insofar as they are standardised). Subjective norms have a relatively more frequent statistical significance in both tables. It is indicative that it might have an important influence on both events (entry in a union and having a child).

A comparison of the right side of Table 6.3 and the middle part in Table 5.1 does not reveal a pronounced compatibility as in the previous case. That is, the two potential events, when represented by the corresponding intentions, are, as indicated statistically, better lined in the order of first the union and then the birth. This statistical finding might be of interest in studying reverse causality in the sequence of entry in union in order to have a child.

Table 6.3: Intentions to have a child and intentions to enter a union, TPB implementation with swapped antecedents

	Intention to have a first child with antecedents for entry in a union				Intention to enter a union with antecedents for having a first child			
	Positive attitudes	Negative attitudes	Subjective norms	Perceived control	Positive attitudes	Negative attitudes	Subjective norms	Perceived control
Bulgaria	**0.6**	**-0.5**	**0.4**	0.0	**0.5**	**-0.4**	**-0.3**	0.1
Russia	0.1	-0.3	0.4	0.3	0.1	-0.3	0.3	0.2
Georgia	**0.2**	**-0.4**	**1.5**	-0.1	0.1	**-0.2**	**-0.9**	**0.2**
France	**0.4**	**-0.5**	**0.3**	-0.2	**0.5**	-0.1	-0.6	-0.3
Romania	**0.7**	**-0.5**	**0.4**	0.1	0.2	0.0	**-1.1**	0.2
Austria	**1.1**	**0.4**	**0.3**	0.0	**0.3**	-0.1	**-0.4**	0.0
Belgium	**0.6**	-0.2	**0.4**	0.1	**0.8**	-0.2	**-1.6**	-0.1
Lithuania	0.2	-0.1	**0.6**	0.1	0.0	-0.3	-0.1	0.3
Sweden	0.2	-0.1	0.2	**0.2**	**0.4**	-0.2	0.4	0.1

7. Realisation of intentions

Abundant research analyses reasons for realisation or non-realisation of intentions. Demographers are specifically interested in intentions to have a child, usually applying logistic models with a realised intention as a dependent variable and a diversity of explanatory and control variables. However, the issue of realisation of intentions is more than that. The TPB has rarely been applied to better understand the outcome of the action of interest to demographers; the effect of concurrent intentions on realisation has not been analysed sufficiently, and consequences of cognitive dissonance have not been examined. These three topics are highlighted briefly below with a focus on childbearing. In this section we use GGS data from Wave 2 to trace realisation of intentions stated in Wave 1.

7.1. Realisation of intentions to have a child: the TPB

According to this theory, intentions are a main explanatory variable for births, along with variables which should reflect actual and perceived control over the behaviour of interest, in this case having a child (Figure 1). It is appropriate to apply structural equations models where the proximate antecedents describe intentions and the latter influence the outcome, i.e. having a birth. A simpler version although with some loss of statistical significance is to analyse the effect of antecedents on having a child directly, without use of the intention.

This analysis was carried out for 8 countries where data were available (Bulgaria, Georgia, Germany, France, Hungary, Austria, Lithuania and the Czech Republic). A logit model was applied with the dependent variable being a birth of a first child during the period between the two GGS waves to women aged below 40, and the antecedents were applied as explanatory variables along with age and age squared. The results (not displayed here) indicated that positive attitudes were statistically significant for having a child in only two countries: Bulgaria and Austria, and negative attitudes only in Georgia and Austria. Their effect on intentions was found strong (see Table 5.1), and hence indirectly they had an effect on childbearing. In this direct link however their effect is not pronounced.

Perceived norms were significant statistically in four countries: Bulgaria, Georgia, Germany, and Austria, and in all countries their effect was negative, i.e. they hindered childbearing. Their effect on intentions was similar. Perceived behavioural control was found statistically significant in four countries: it supported childbearing in Bulgaria and Austria, and hindered it in France and Hungary. Its significance was preserved in three countries and increased in Austria; this is in line with the theory as it has a direct effect on childbearing (Figure 1).

This short analysis shows that a direct link between the TPB antecedents and realisation of intentions has limited power, as could be expected from the theory itself. The application of the TPB in a structural equations framework is preferable; it can enrich our understanding of childbearing decision making and its realisation.

7.2. Realisation of concurrent intentions

A step further in understanding the realisation of a specific intention is its examination together with other intentions. Table 7.1 displays realised intentions for three events: having a first child, entry in a first union and starting a job. Comparing the outcomes for the three events related to the three intentions we reach several important conclusions. These intentions are examined independently of each other, i.e. concurrency if any is not explicitly considered.
First, the proportion of women's realised intentions is higher than that of men. The difference is remarkable where starting work is considered: averaged across countries women's level of realisation is with 15 points higher than that of men. Is it likely that men are more optimistic than women when constructing their intentions? Or did men more frequently than women fail to realise their intentions by experiencing more unexpected obstacles?

A second observation is that the proportion of persons who realised their childbearing intentions is considerably lower than that for any one of the other two intentions, and the gap is enormous. This is due to the irreversibility of becoming a parent whereas a union can be dissolved and an inappropriate job can be terminated. Irreversibility along with the enormous responsibility connected with childcare would make persons more cautious in realising their intentions. It is much easier for an obstacle to annul an intention for entry into parenthood than the intention for the other two events.

Third, differences by countries indicate that persons living in ex-socialist countries are less likely to realise their intentions to have a child, and persons living in Bulgaria and Georgia are less likely to realise their intentions to enter a union or start a job. Conditions of life in these countries are less favourable for realisation of intentions as the turmoil of change lowers predictability of plans that individuals construct for their future.

Table 7.1: Proportion of realised intentions for having a first child, entry in a first union, and starting a job

	Having a 1st child		Entry in a 1st union		Starting a job	
	Males	Females	Males	Females	Males	Females
Bulgaria	0.14	0.16	0.38	0.48	0.59	0.71
Georgia	0.24	0.2	0.36	0.34	0.51	0.71
Germany	0.22	0.43	0.77	0.79	0.61	0.85
France	0.29	0.34	0.56	0.67	0.72	0.83
Hungary	0.26	0.29	0.72	0.79	0.7	0.89
Netherlands	0.27	0.33	0.66	0.69	.	.
Austria	0.31	0.44	0.71	0.76	0.88	0.94
Lithuania	0.31	0.31	0.63	0.69	0.78	0.79
Czech Rep.	0.15	0.32	.	.	0.73	0.93
Average	0.24	0.31	0.60	0.65	0.69	0.83

Note: realisation of intentions to start a job refers to persons who were unemployed at Wave 1 and not unemployed at Wave 2; so those who intended to change their job are excluded.

A next step in the analyses of intentions is to examine realisation of concurrent intentions. To this end, for illustrative purposes we examine links between childbearing and various intentions. A logit model is applied with having or not having a first child born in the period between the two waves, and intentions being explanatory variables; several control variables such as for age and age squared were also included. The logit coefficients and their statistical significance are displayed in Table 7.2. We skip a discussion of interaction effects among the intentions.

All intentions are linked with the event of having a first child (parity 0 in the table). However, the intention to resume one's studies hinders its performance (the coefficient sign is negative) while all other intentions support it. While intentions to marry and intentions to complete or resume one's studies have a well-known effect this is not as clear for starting work or changing work. Indeed, childcare and work are competing events and so it should be for the intentions. We recall that the correlation between the intention to have a first child and the intention to start work is positive and statistically significant. This finding requires a detailed investigation at the country level as it contradicts a fundamental theoretical statement that foregone earnings have a negative effect on childbearing.

The results for having a second child (parity 1 in the table) indicate a negative significant effect of resuming one's studies and a positive one for starting work. Again the latter finding is unexpected.

Table 7.2: Effect of various intentions for having a first or a second child during the period between Waves 1 and 2, coefficients from a logit model

Intentions to:	Parity 0	Parity 1
Have a child	*0.83* ***	*1.27* ***
Marry	0.41 ***	-0.23
Complete study	0.80 ***	0.28
Resume study	-0.24 **	-0.35 **
Change work	0.14 *	0.16
Start work	0.79 **	0.92 **

In general, various intentions exercise their effect on having a first or a second child. While this inference is not surprising for certain intentions such as to marry or complete one's studies, it is surprising to find the positive effect of the intention to start a work.

7.3. Is cognitive dissonance observed? Is psychological distress observed?

According to the theory of cognitive dissonance it can be expected that individuals will avoid the construction of competing intentions. Our descriptive results presented in tables 6.1 and 6.2 support the validity of the theory: the proportion of those who reported competing intentions is very small. Further the theory suggests that those who have constructed competing intentions will fail to realise at least one of them and thus may experience a psychological distress, unless they are able to control the conflicting behaviours (as was the case reported by Philipov 2009). Our analysis on these issues is pending.

Further we noted that those who fail to realise their intentions will be subject to various forms of psychological discomfort in their life and in more acute cases might experience depression. We checked this hypothesis empirically using a couple of questions included in the GGS questionnaire which refer to individual psychological well-being. Again for illustrative purposes we considered the intention to have a child. Two questions refer appropriately to the measurement of the effect of cognitive dissonance. The first one is whether the respondent has experienced recently a general sense of emptiness, with answers: yes, more or less, and no. The second question asks: "During the past week did you feel depressed?" with answers: seldom or never, sometimes, often, and most or all of the time.

We checked the intention to have a first child and its realization. The results of a logit model show that those who failed to realise their intention to have a first child were more likely to experience emptiness and depression. Frustrated intentions frustrate individuals. Note: in this sub-section we present work in progress. It is important to consider aspects of reverse causality: emptiness and depression might have occurred before the moment for realization of an intention has arrived. Other explanatory variables should not be neglected.

8. Linked intentions: a note

"Linked lives" is a concept introduced in life course analyses by Elder (1994). It refers to life trajectories shared by a group of individuals that have some common characteristics. In analogy to this concept we can think of linked intentions: intentions for a specific event shared by more than one individual. In demography a typical case of linked intentions refers to intentions of a couple to have a child or not. Intentions of partners may coincide and may differ: the views of both are crucial for the corresponding behaviour and outcome. Research on this topic is due for example to Testa et al. (2014).

9. Summary and discussion

This paper is unusual: it does not present a complete and detailed research on a specific study question. Instead, it includes several separate potential studies unified under one main idea: they belong to an under-investigated sub-field of research within the field of life courses. This sub-field is defined with its focus on intentions to perform actions whose outcomes are events in the life course. The main purpose of the paper was to provide support to the existence of this sub-field, providing an outline of central potential directions of its future development.

A theoretical background is provided by life course theories with a need of at least one extension: theories related to intentions are fundamentally needed. We discussed the implementation of the TPB, yet other theories are relevant as well, in particular when they are designed for the study of intentions related to specific behaviour. Demographers enjoy a specification of the TPB for analyses of reproductive behaviour along with two more theories: due to Miller (1994, 2011a, 2011b) and Johnson-Hanks et al. (2011). The theory of cognitive dissonance is not new to life course studies; it may find an expanded use in research on consequences of frustrated or realised competing intentions. The set of concepts to be used in studies of intentions in the life course needs expansion; we showed that frequently concepts related to life course events can be reformulated as concepts associated with the corresponding intentions.

With some optimism, we identified five potential directions of research.

The first one refers to a macro-level examination of timing of events and intentions. Using macro-level indicators such as mean ages and standard deviations we obtained some findings that require profound attention. For one, the standard deviation of having a first child is considerably more dispersed than for other events related to family formation such as leaving home and entry into a cohabitation or marriage. Childbearing is an irreversible event unlike

any other during this phase of life, so individuals carefully select a proper moment for its performance. When intentions were considered it was unexpected to find that their standard deviation is larger. Consequences of a frustrated untimed intention are considerably less problematic than the untimed corresponding action and hence intentions are more dispersed across age than the corresponding event.

Second, the TPB was applied to a comparison of three events related to family formation. The comparison revealed a thought-provoking finding. The event that is most easily reversible—first leaving of the parental home—was found to depend mainly on positive attitudes and to some extent on negative attitudes, and not on subjective norms and perceived behavioural control. Further, the less reversible an event is, the more it depends on the three antecedents of intentions.

Special attention is given here to concurrent intentions as a third line of potential research. We looked into the concurrence of intentions to start a union and have a first child, and the concurrence of intentions resume studies and have a first child. The former two intentions were found highly positively correlated which means they are supporting each other: the realisation of one increases the likelihood for the realisation of the other. By contrast, the latter two are competing as their correlation is negative.

A fourth line of research is a continuation of the third: it takes a step further by comparing the realisation of intentions for a specific event and looking into the influence of supporting or competing intentions for other life-course events. Analyses showed that intentions to have a first child are much less likely to get realised than intentions to enter a first union or take up a job. The birth of a first child is positively related to intentions to enter a union, complete one's studies or start work, and negatively related to the intention to return to studying. It is strange that studying and childcare are competing while childcare and working are not, at least for a sub-group of respondents which needs to be identified.

A further important topic of research, the fifth one on our list, is the implementation of the theory of cognitive dissonance. Our analyses showed that a frustration of the intention to have a child is linked with a higher likelihood for experiencing psychological uneasiness and even depression.

Most of the topics outlined above were discussed across countries. An important finding is that intentions in general are less likely to get realised in countries situated in Eastern Europe.

The list of topics for research and the preliminary findings presented here prove the necessity of addressing intentions in a life course perspective, as an extension of conventional

research on intentions considered separately. This approach will provide additional insight into the decision-making process of individuals as well as into the reasons that lead to the failure of its realisation.

Theoretically the approach is completely feasible as it relies on theories that are already available. A proper choice of theories remains a subject of additional research. An important drawback of the approach is its high-level data requirements especially for following realisation of intentions. The GGP samples were found too small in some cases when they are disaggregated by different states in the life course.

This paper does not suggest an exhaustive list of references. A list of this kind would be much too long as the topics discussed here are too many; a detailed review of available research is a specific topic by itself and a detailed list would be appropriate in it.

The paper does not discuss numerous important life course paths and events such as intentions to migrate or retire in a life course perspective. Recently researchers started to include another intention as an explanatory variable in models for analyses of an intention. For example, Dommermuth and Klüsener (2015) in their study of intentions to migrate included as explanatory variables other intentions such as the intention to enter a union, have a child, or change jobs. Damman et al. (2011) analysed retirement intentions in a life-course perspective.

We conclude by pointing out an issue that has been discussed previously; see Philipov et al. (2015): understanding intentions and their realisation can help policy-makers identify obstacles that people encounter and take policy measures within the scope of their capacity towards mitigating their effects.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211. doi: http://dx.doi.org/10.1016/0749-5978(91)90020-T

Ajzen I., and M. Fishbein (2005): The Influence of Attitudes on Behaviour, Chapter 5 in: In D. Albarracín, B. T. Johnson, & M. P. Zanna (Eds.), *The handbook of attitudes* (pp. 173-221). Mahwah, NJ: Erlbaum

Ajzen, I., and Klobas, J. E. (2013). Fertility intentions: An approach based on the theory of planned behavior perspective. *Demographic Research, 29*(Article 8). doi: 10.4054?DemRes.2013.29.8

Andersson, G. and D. Philipov (2002): Life-table representations of family dynamics in Sweden, Hungary, and 14 other FFS countries: a project of descriptions of demographic behavior. *Demographic Research*, Vol.7-4, http://www.demographic-research.org/

Bandura, Albert (2001). "Social cognitive theory: An agentic perspective", Annual Review of Psychology 52 (1): 1–26, doi:10.1146/annurev.psych.52.1.1

Barber, J. (2001). Ideational influences on the transition to parenthood: attitudes towards childbearing and competing alternatives. *Social Psychology Quarterly*, 64(2), 101–127.

Barber, J., Axinn W., and Thornton, A. (2002). The influence of attitudes on family formation processes. In R. Lesthaeghe (ed.), *Meaning and Choice: Value Orientations and Life Course Decisions*, NIDI CBGS Publications.

Billari F., D. Philipov & M.R. Testa (2009). Attitudes, Norms and Perceived Behavioural Control: Explaining Fertility Intentions in Bulgaria, *European Journal of Population*, Volume 25, Issue 4 (2009), pp. 439-465.

Damman M., K. Henkens, M. Kalmijn (2011). The Impact of Midlife Educational, Work, Health, and Family Experiences on Men's Early Retirement. The Journals of Gerontology Series B: Psychological Sciences and Social Sciences, 66/5 pages 617-627. Oxford University Press

Davidson, A. R., and Jaccard, J. J. (1979). Variables that moderate the attitude–behavior relation: Results of a longitudinal survey. *Journal of Personality and Social Psychology*, 37(8), 1364-1376.

Dommermuth, L., Klobas, J., & Lappegard, T. (2011). Now or later? The Theory of Planned Behavior and timing of fertility intentions. *Advances in Life Course Research*, 16(1), 42-53.

Dommermuth L. and S. Klüsener (2015*).* Formation and Realisation of Migration Intentions Across the Life Course. Evidence from Norway. Unpublished manuscript.

Elder G.H. Jr. (1994). Time, human agency, and social change: Perspectives on the life course. *Social Psychology Quarterly*, 57, 4-15.

Festinger, L. 1957). *A Theory of Cognitive Dissonance.* Stanford, CA: Stanford University Press.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention, and Behavior: An Introduction to Theory and Research*. Reading, MA: Addison-Wesley.

Johnson-Hanks, J.C. Bachrach, S.P. Morgan and H.P. Kohler (2011). *Understanding family change and variation: structure, conjuncture, and action*. New York: Springer.

McLeod, S. A. (2012). Developmental Psychology. Retrieved from www.simplypsychology.org/developmental-psychology.html

Miller, W. B. (1994). Childbearing motivations, desires, and intentions: a theoretical framework. *Genetic, Social, and General Psychology Monographs*, 120(2), 223–258.

Miller, W. B. (2011a). Comparing the TPB and the T-D-I-B framework. *Vienna Yearbook of Population Research*, 9, 19–29.

Miller, W. B. (2011b). Differences between fertility desires and intentions: implications for theory, research and policy. *Vienna Yearbook of Population Research*, 9, 75-98. doi: 10.2307/41342806

Miller, W. B., & Pasta, D. J. (1995). Behavioral intentions: Which ones predict fertility behavior in married couples. *Journal of Applied Social Psychology, 25*, 218-250.

Pailhé A., D. Mortelmans, T. Castro, C.C. Trilla, M. Digoix, P. Festy, S. Krapf, M. Kreyenfeld, V. Lyssens-Danneboom, T. Martín-García, W. Rault, O. Thévenon, L. Toulemon (2014). Changes in the Life Course. State-of-the-art report. *FamiliesAndSocieties Working Paper Series* 6.

Philipov, D. (2009), The Effect of Competing Intentions and Behaviour on Short-term Childbearing Intentions and Subsequent Childbearing, European Journal of Population, Volume 25, Issue 4 (2009), pp. 525-548. DOI 10.1007/s10680-009-9202-1

Philipov D., A. Liefbroer and J. Klobas, editors (2015). *Reproductive Decision-Making in a Macro-Micro Perspective*, Springer, Dordrecht, Heidelberg, New York, London.

Philipov, D. and A. Jasilioniene (2008). Union formation and fertility in Bulgaria and Russia: A life table description of recent trends. *Demographic Research*, Vol. 19 article 62, website http://www.demographic-research.org/volumes/vol19/62/

Testa, M.R., L. Cavalli and A. Rosina. 2014. The effects of couple disagreement about child-timing intentions: a parity-specific approach. *Population and Development Review*. 40(1): 31-53

Thomson, E. (1997). Couple childbearing desires, intentions, and births. *Demography, 34*(3), 343-354. doi: 10.2307/3038288

Vikat, A., Beets, G., Billari, F. C., Buhler, C., Désesquelles, A., Fokkema, T., MacDonald, A. L., Neyer, G. R., Pailhé, A., Pinnelli, A., Solaz, A., & Spéder, Z. (2005). Wave 1 questionnaire. In *Generations & Gender Programme: Survey instruments* (pp. 35–113). New York/Geneva: United Nations.

Willekens, F. (2015), Life Histories: Real and Synthetic *Max Planck Institute for Demographic Research*. Paper presented at the annual PAA meeting.