



Longitudinal analyses of intentions change over time and their relationship with behavioural outcome

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Executive summary

This report is the last of the series of reports devoted to the activities conducted in the frame of Working Package 5 of the REPRO project. Researchers in WP5 explore fertility decision-making process employing narrative data, collected in several European countries. In previous reports (deliverable 5.13 and 5.15), we offered empirically grounded typology of fertility intentions and summarised our work on their various determinants and correlates. The aim of this set of presentations is to complement our previous findings with studies on stability and realizations of intentions. Altogether, our work aims at extending our understanding of how intentions – as conceptualised in the Theory of Planned Behaviour – may help us in predicting reproductive behaviours.

The understanding and predicting of individual and couple reproductive decision-making is crucial to explain fertility dynamics in general and persisting low fertility in the European context. In socio-psychological theories of decision-making motivations, intentions, ideals, and expectations are assumed to affect behaviour in one way or another. The closest proximate would be fertility intentions, which, according to the Theory of Planned Behaviour (TPB, Ajzen 1991) shall represent the strongest mediator between attitudes, norms, perception of control and actual fertility behaviour. Yet, the predictive value of intentions in relation to reproductive behaviours has been questioned for several decades already.

Even though researchers express scepticism about the predictive value of fertility intentions, there is empirical evidence that the situation may be improved by measuring the certainty of these intentions. Generally, it is assumed that the more certain the intention is the more likely it is that the person will realise it. We addressed the issue of uncertain intentions in our previous studies, described in details in deliverable 5.13. Our narrative data revealed various sources of uncertainty in fertility intentions and we discussed its consequences for predictive validity of questions on such intentions. The studies presented in this report take a step further: they ask what happens to (un)certainly in intentions as time passes by? Do intentions change? Are they getting realized? What are the reasons and processes behind various shifts and changes?

We address these questions in two studies, reported here. The analyses are all based on longitudinal qualitative data, a series of semi-structured in-depth interviews conducted with individual women or couples in reproductive ages. First, we focus on couples' reproductive decision making and changing intentions over time based on the Swiss data. Second, the

Italian study concentrates on the relationships between fertility intentions and their realization. In both studies, we use categorisation of intentions developed and described in details in deliverable 5.13. We use six categories of intentions: (1) *Surely yes, right now* or positive and certain intentions; (2) *Surely not* or negative and certain intentions; (3) *As soon as* or contingent intentions; (4) *Surely one day* or far intentions; (5) *Maybe* or uncertain intentions; and (6) *At times* or ambivalent intentions

The Swiss study: Couples changing intentions over time

The rather close time gap between one wave and the other (less than a year between each of the waves) in the Swiss data, make them a great source for observing changing in intentions over time. The interviews were realized between December 2005 and March 2009 in the French speaking part of Switzerland. Of the original 31 couples, 20 were reached for the second interview after their child was born and the mother was still in maternity leave (4 months after birth at most). The third wave, when the child was aged 12 months or more, reached again 20 couples. These are not always the same cases available in wave 2. In total there are 142 interviews (see Annex 2 for a summary of the complex calendar of this longitudinal fieldwork). Of the initial 31 couples only 15 individuals have discussed their intention to have or not a second child. In the report, we illustrate cases in which fertility intentions changed from one wave to the other in different directions.

In case of three couples the shift was from conditional to certain intentions (from *Surely one day* to *Surely yes*). Another three couples shifted from uncertain to certain intentions (from *Maybe* to *Surely yes* or *Surely no*). Finally, one couple changed from a certain to a conditioned intention (*Surely yes* to *As soon as*).

Our analyses of evolution of fertility intentions for a second child based on the Swiss data allow the identification of different dynamics. First when the desire for children is strong, conditional intentions may become certain intentions even when there is no change in the actual situation of the couple. Conditioning factors or doubts simply loose salience and individuals re-order their priorities.

Second, the step from sure intentions to conditional intentions for young couples depends on a progressive growing conscience about to their actual material condition and life course aspirations other than family enlargement. The birth of the first child functions as turning point of consciousness, which may induce to delay the arrival of the previously surely

intended second child. Similarly, recognition of material difficulties after the first birth, may also explain the transition from an uncertain intention to a certain negative one.

Italian study: Fertility intentions and subsequent behaviour

The Italian data, collected separately in 2004-2005 and in 2009, are remarkably suitable for studying respondents' reproductive behaviour in light of their declared (past) fertility intentions. The initial sample of respondents (2004-2005) included 74 women aged 23 to 45, with different partnership status and educational levels, who ranged from childless women to mothers of five children and 21 men. All the semi-structured interviews touched on union and fertility histories, the upbringing in the family of origin, the current relations with relatives and partner, and practices, intentions and expectations related to parenthood. The aim of the interviews conducted in 2009 was to follow up the 2006 study. Actually, 4 years after the first round of interviews on fertility intentions, a sample of 15 individuals living in Cagliari - precisely 13 women and 2 men- accepted to be re-interviewed, providing the opportunity of linking the fertility intentions declared in 2004-2005 with their realized behaviour. In the report we focus on fertility intentions and subsequent behaviour of these 15 respondents.

In our sample, ten respondents had a(nother) child between first and second wave. Seven of them belonged to the categories *Surely yes* or *As soon as in 2004-2005* – for them an increase in the reached parity showed the realization of their (positive) fertility intentions. For another three respondents, having a child was not in line with the fertility intentions declared in 2004-2005. Precisely, they expressed *Surely one day* or *Maybe* intention at wave 1, but they reached a higher order parity. Three respondents in our sample did not record any change in parity between wave 1 and 2 in line with their fertility intentions that were respectively *Maybe*, *Surely one day* and *Surely no (uncertain, far and excluded)*. Moreover, after the four years they were coded again in the same fertility categories. For the remaining two out of our 15 respondents, they did not have a child between wave 1 and 2 but their fertility intentions have changed (from *As soon as* to *Excluded* in the first case and from *Excluded* to *As soon as* – in the second).

Notably, in the sample under investigation we did not record any case in which the past fertility intention was a sure one (as *Surely yes/Right Now* or *Surely not*) and the realized behaviour is not in line with that past intention. Moreover, no cases of solved contingencies that did not lead to a realized fertility plan have been found.

With the Italian data we analysed factors influencing both fertility intentions and their realization. There were two most distinct factors of that sort: factors related to employment and to partnership dynamics. We characterise them in details in the report.

In our previous deliverable (5.13) we made a first attempt to evaluate predictive value of TPB model. We showed that the strength of the intention may be affected by numerous factors related to attitudes (e.g. attitudes towards childbearing, but also towards competing goals such as professional career), norms (e.g. perceived age norms or norms related to childlessness) or to subjectively perceived control variables (e.g. partnership status, status in the labour market, childcare availability). We identified and described also external factors (as defined in TPB) that influence the strength of fertility intentions (e.g. age or gender attitudes). These factors and their role for fertility intentions were described in details in deliverable 5.13 and 5.15.

In order to investigate predictive value of TPB further, the current report concentrates on intentions dynamics over time and on the gap between intentions and realizations. Our research enriches and complements the findings of Working Package 4, where the realisation of fertility intentions was investigated applying the indicators of beliefs, intentions and realizations available in the GGS survey (see deliverable 4.12 and also previous findings of Spéder and Kapitány 2009).

There are several important messages that arise from our analyses. First, our study shows a straightforward link between certain positive fertility intentions and subsequent childbearing. In the Italian study all respondents, who belonged to *Surely yes* category at wave 1 increased their parity in the following four years. There were no cases in which certain fertility intentions (*Surely yes* or *Surely not*) lead to behaviours inconsistent with these intentions.

Second, for our respondents discrepancies between intentions reported at time point 1 and behavioural outcomes reported at point 2 were associated with a shift in intentions in almost all cases. For instance, conditioned intentions turned into certain ones and lead to childbearing when required conditions had been fulfilled. In other words, intention *As soon as* lead to childbearing indeed as soon as obstacles reported at wave 1 were overcome.

Finally, most of the changes of intentions over time in our study could have been attributed to one of the components of TPB: attitudes, norms or aspects of perceived behavioural control. Intention *As soon as* turned into *Surely no (excluded)* when sufficient behavioural control

could not have been achieved. *Surely one day* intention transformed into *Surely yes* with an improvement of economic situation (behavioural control) or with development of more positive attitudes towards childbearing. A shift from *Surely no* to *As soon as* category was driven by perceived norms, related to family model with two children.

Only in two cases, unintended pregnancies related to a lack of contraceptive use (even though the respondents did not intend to have any children) clearly escape the logic of TPB. Rather than cognitive relationships between intentions and behaviour, other mechanisms seems to have been at work as emotional and affective ones.

Despite various limitations of Theory of Planned Behaviour, the results presented in this report make us conclude that its predictive value is indeed appealing. Qualitative data show that concepts of TPB can be successfully used to predict reproductive behaviour (at least in case of the middle class respondents). But the challenge lies in capturing intention–behaviour link in large, representative surveys and in estimating its magnitude. And the key problem is: how to measure components of TPB accurately?

Problems with measurement have been recurrently emphasized by the proponents and supporters of TPB. In Ajzen's words "Investigators often mistakenly assume that direct measures of the theory's constructs are obtained by asking a few arbitrarily selected questions, or by adapting items used in previous studies. Although this approach often yields findings of interest, it can produce measures with relatively low reliabilities and lead to an underestimate of the relations among the theory's constructs and of its predictive validity. To secure reliable, internally consistent measures, it is necessary to select appropriate items in the formative stages of the investigation" (Ajzen 2002, page 4). This aspect calls for an attentive reflection on the validity of an international comparative questionnaire. Listing indicators related to a limited number of attitude, subjective norms and control domains without having had a preliminary explorative studies demonstrating which are the very items relevant to childbearing for individuals living in a given context (socio-economic and geographical context) may produce indicators which carry very little meaning to predict the intention we want to predict. Ajzen notes a crucial role for qualitative explorative studies here. On his webpage under the frequently asked questions section, he says "The only part of these methods that requires qualitative research is the elicitation and coding of readily accessible behavioural, normative, and control beliefs" (see <http://www.people.umass.edu/aizen/faq.html> last accessed 20.10.2010). Our qualitative results across the various REPRO deliverables)

offered an initial list of behavioural, normative and control-related aspects, important for fertility intentions in European context. The results said even more than that though: they explored types and sources of uncertainty in fertility intentions and illustrated processes of how intentions change or get realised.

We made several suggestions along the REPRO project on how to modify the survey questions on fertility intentions in order to increase their predictive value. One possibility would be to add a direct follow up question in case of answers like “probably yes, probably not” which would ask what the uncertainty depends on. Explorative qualitative data may be used as a base to create a list of possible closed answers to such question. Another possibility would be to separate the measurement of fertility intentions in a two step-question: one step to capture the intended goal and the other to capture the intended timing. This may distinguish more clearly the two dimensions of intentions (positive, ambivalent, uncertain, or negative attitudes towards having a child) and in case of positive feelings, timing of the foreseen child (clearly defined in the short term or less clearly defined in the distant future). A third suggestion, which has arisen based on the studies presented used in the current report, is to add an indicator telling how certain respondents are of their attitudes, subjective norms and perceived control items when measuring predictors of intentions. This way we could better weight the strength of the intentions indicator and consequently better predict possible changes in intentions and behavioural outcomes.

Overview

This report is the last of the series of reports devoted to the activities conducted in the frame of Working Package 5 of the REPRO project. The general tasks of the WP5 are summarized in Annex 1. This particular report refers to task 3 and task 4 and it advances scientific knowledge on the relationship between fertility intentions and actual realization. The theoretical and methodological considerations and empirical findings presented here, which are at various stages of advancement towards publication, have been or are going to be presented within the year 2010 by the researchers of WP5.

Researchers in WP5 explore fertility decision-making process employing narrative data, collected in several European countries. In previous reports (deliverable 5.13 and 5.15), we offered empirically grounded typology of fertility intentions and summarised our work on their various determinants and correlates. The aim of this set of presentations is to complement our previous findings with studies on stability and realizations of intentions. Altogether, our work aims at extending our understanding of how intentions – as conceptualised in the Theory of Planned Behaviour – may help us in predicting reproductive behaviours.

We report the results of two studies here. The analyses are all based on longitudinal qualitative data, a series of semi-structured in-depth interviews conducted with individual women or couples in reproductive ages. All individuals were middle or high educated, living in an urban setting, 15 of them in Sardinia (Italy), 30 (15 couples) of them in French-speaking Switzerland, two contexts which feature below-replacement fertility. Despite samples sizes are relatively small, the originality and the interest of these interviews for the REPRO project is that we are dealing with qualitative panel data (repeated interviews conducted at different point in time with the same individuals). These data allow us to analyze the intention dynamics over time and the relation between intentions and subsequent childbearing behaviour. In addition, in several cases we can contrast reports from both members of a couple. Consequently, we can comment on the role of couple dynamics in changing intentions over time and in realising them (or not).

The report is organized as follows: after a brief reminder about the interest of studying fertility intentions and subsequent behaviour we outline the analytic approach, taken in our studies, which are presented in the subsequent sections. First, we focus on couples' reproductive decision making and changing intentions over time based on the Swiss data.

Next, we present the Italian study that concentrates on the relationships between fertility intentions and their realization. In the final section, we combine the above results with our findings presented in previous deliverables and discuss the theory of planned behaviour in dealing with uncertain decision-making and intentions instability.

1. Introduction

The understanding of individual and couple reproductive decision-making is crucial to explain fertility dynamics in general and persisting low fertility in the European context. While macro-level studies focus on social and legal institutions which offer the frame of opportunities and costs for childbearing choices, micro-level research analyze reproductive decisions mostly as economists would, that is by considering the behavioural outcome, the birth of child or not, as the consequence of a unknown preference revealed through childbearing. This traditional micro-macro perspective based on events and institutional frames, the individual dimension and its subjectivity has been reintroduced by more socio-psychological oriented approaches which open the black box of preferences and explore fertility behaviour as the consequence of reproductive motivations, intentions, ideals, and expectations related to parenthood and enlarged family sizes.

The background of this perspective is that childbearing is a planned behaviour based on individual decision-making. Therefore motivations, intentions, ideals, and expectations are assumed to affect behaviour in one way or another. The closest proximate would be fertility intentions, which, according to the theory of planned behaviour (Ajzen 1991) shall represent the strongest mediator between attitudes, norms, perception of control and actual fertility behaviour. Yet, the predictive value of intentions in relation to reproductive behaviours has been questioned for several decades already. In general, relation between fertility intentions and behavioural outcomes can be seen as a product of two aspects: *(1) the precision with which behaviour is defined and (2) the time lag between the measurement of intention and the measurement of behavioural outcomes.*

As for the first aspect, having a child can be considered a behavioural goal as long as the pregnancy is planned. Similarly, not having a child is a behavioural goal as long as pregnancy prevention is intended. Yet, having a child or not is a complex goal since it requires that actors intend and perform a number of other behaviours, like a consistent sexual intercourse

and contraceptive pattern. In this framework a planned pregnancy, which does not eventually occur, would be the consequence of lack of actual control (infertility or absence of sexual intercourse) as much as an unplanned pregnancy (contraceptive failure). The situation is similar to that of competing behaviours. If one intends to have a child but not to perform the intermediary behaviours necessary to enhance the pregnancy, then attitudes towards having a child should be reduced. The same is true in the case in which one does not intend to have a child but not to behave so to prevent a pregnancy. Such complexity of childbearing as a target of intention, or a goal, rises from the issue of whether having a child is a behaviour or an outcome of a series of behaviours. If we can consider it behaviour, is the declared intention a sufficiently powerful predictor? In general, more difficult goals require higher-level of commitment and regulation of intentions' implementation (Gollowitzer and Brandstätter 1997), than of easy goals. Anticipating of all difficulties is more complicated. For this reason accomplishment rates are lower in case of complex behaviours. The complexity of childbearing as a target of intention is additionally increased by the fact that (at least in the vast majority of cases) two actors are involved in the process of reproductive decision-making.

Secondly, anticipating of all difficulties with realisation of intentions is also more challenging if the time horizon between the formulation of intention and its realization is longer. With larger time lags, the probability that life course changes occur and influence behavioural, normative and control beliefs and consequently change the intention is higher. In such a case, discrepancy between initial intention and behaviour could be expected as a consequence of changes in the intention. Moreover, elements of behavioural control might change, preventing in previously unexpected ways the realisation of intention. The complexity of the picture is increased by taking a couple perspective: the intervening factors may influence a couple, but also any of the partners independently.

Even though researchers express scepticism about the predictive value of fertility intentions, there is empirical evidence that the situation may be improved by measuring the certainty of these intentions (e.g. Schoen et al. 1999, Westoff and Ryder 1977). Generally, the theoretical model includes the possibility that there are uncertain intentions¹, assuming that the more

¹ Traditional measures of fertility intentions included the possibility of expressing uncertain intentions. However, the degree of uncertainty is not always measured. Researchers often have

certain the person is the more likely it is that he or she will realise the intention. We addressed the issue of uncertain intentions in our previous studies, described in details in deliverable 5.13. Our narrative data revealed various sources of uncertainty in fertility intentions and we discussed its consequences for predictive validity of questions on such intentions. The studies presented in this report take a step further: they ask what happens to (un)certainty in intentions as time passes by? Do intentions change? Are they getting realized? What are the reasons and processes behind various shifts and changes? We approach these questions, keeping in mind the complexity of reproductive behaviour – including aspects related to couple dynamics.

2. Analytic approach

Comparative longitudinal qualitative analysis is a time consuming and complex enterprise. Data collection and exploitation of interviews taken at different point in time requires time in terms of connecting arguments and events from the first to the subsequent interviews. Complexity is increased not only by the fact that one has to take into account contextual changes (at all levels, life course of the individual, of the couple, and of their larger social environment) but also by the fact that interviews are often carried out in different languages. The translation is not recommended when analysis needs to pay attention to the way in which respondents express, with their own formulation, the answers to open questions.

We optimized research time and reduced complexity by selecting a sample, which focused on middle class individuals in reproductive ages in each context (therefore very early and very late fertility occur only occasionally). We also could count on a team who was composed either of those who collected the data or at least who are mother tongue speakers for each set of interviews.

The reader may refer to the previous deliverables to have complete description of the data and analytical methods used by WP5 to analyse interviews. We used a bottom up coding schema for categorizing fertility intentions based on over 260 similar interviews from different

decided that uncertain intentions should be not analyzed despite that carry valuable information about the perception of childbearing as difficult domain for choice and planning.

European contexts. Deliverable 5.13 reports details on how the categories were constructed and show empirical evidence for their distinct characteristics. Here we just note that we applied the resulting categories to code fertility intentions recorded during the second wave of interviews in Italy and to code the 3-wave Swiss data (which were added only in a second moment to the set of qualitative data available to WP5). A short summary of the categories content follows:

a. *Surely yes, right now or positive and certain intentions.* The first category includes respondents, who have a clear-cut and strong intention to become parents. Respondents in this category share a strong and defined intention to have a child soon and they often are already searching actively to conceive. They all value children greatly and their narrations list advantages of parenthood versus childlessness. Finally, they offer multiple reasons for believing that the right time for them to have a child has come. A part for those with conception difficulties— these respondents are intending and also virtually certain to have a child in the next three years.

b. *Surely not or negative and certain intentions.* The second category locates on the other end of the fertility intentions continuum. Respondents included here are adamant in reporting their intentions not to have any or any additional child. As for the childless respondents, their position is generally related to two aspects: they either completely miss desire to have a child or they have highly valued life-priorities perceived as competing and incompatible with having children. The most distinctive feature of all respondents belonging to this category is the conviction that having a child or another child would damage their current life style. Even though they may believe that having children is positive or that having second (next) child might be generally good (e.g. for their first child) – they do not believe that it would be good *for them*.

c. *As soon as or contingent intentions.* The category we named *As soon as* refers to those individuals who mention a variety of reasons which interfere with their intention to have an otherwise presently desired child. Conditions in this category are generally perceived to be external factors, not necessarily in control of respondents, and whose change does not seem to be predictable. Childbearing desire and motivation to act are at odds for these respondents and considerations of childbearing timing are explicit and crucial. In this category the crucial dimension characterizing childbearing intentions is a weakly perceived behavioural control. The perception of a weak control depends on a variety of different reasons and such reasons

are crucial to differentiate respondents who can indicate when they may start try actively to have a child and those who can not do so.

d. *Surely one day or far intentions.* In this category we predominantly find respondents who desire to have a first child, and yet mostly because of their young ages or the specific life course stage in which they live (living with their parents, not having had a partner in the last few years) parenthood is perceived as something that does not belong to the near future. Their reasoning is less centred on external obstacles and conditions and more on the perceived distance with the issue as a priority. These respondents feel that having a (another) child is currently not one of the decisions to take, they claim not having given to much thoughts about it yet, and that they feel a later point in time to be more appropriate. These answers echo life course sequencing of the transition to adulthood (“I knew I had to grow up for that [having children]. What is common for all respondents in this category is that they do not feel at the stage of their life, when they can even consider childbearing. They frequently express extremely positive attitudes towards children and a very strong desire to have a (another) child, but they think about it in a very far time perspective.

e. *Maybe or uncertain intentions.* Respondents do not express any strong desire to have a child, but the possibility of having a child in the next three years is not ruled out as it is in the case of those who surely do not want a child (*Surely not*) or those who condition their family planning to other contingencies (*As soon as*). These are individuals who sometimes openly declare that they have never thought about becoming parent or having another child, who are uncertain about the time frame they would prefer, and want to maintain an open and non-committing attitude towards the possibility of childbearing. The respondents in the category are rather vague about their fertility intentions and, even when prompted, they are not able to give any time frame. However being vague and undecided about family planning issues is not in contrast with having strong desires for children. They simply leave the issue open, occasionally explicitly declaring that they have never really considered the idea concretely although this option is not ruled.

f. *At times or ambivalent intentions* This category includes only women, who are characterized by waving between the desire to have a child and its opposite. Interviews contain extracts in which respondents declare to intend a child soon and other in which they state that they could imagine remaining (for a longer time or permanently) childless or with one child only. These contrasting directions are not justified with reference to material

conditions, life course situations or biographical age. Rather, wavering is related to individuals' alternating between more or less defined fears of the responsibility of childrearing or to perceived personal immaturity on the one hand, and the foreseen satisfactions of having a child or a second child on the other hand. All in all, women in this category would feel relieved if they could feel a (stronger) desire to have or not to have a child, rather than being stuck between subjective norms and competing goals. Intentional ambivalence is indeed best understood in terms of competing goals (Barber 2001) than in terms of lacking behavioural control (Ajzen 1991).

The above categorisation of intentions was applied to two longitudinal studies, conducted in Switzerland and Italy. In both studies, we analysed fertility intentions and actual reproductive behaviours of our interviewees in at least two points of time. The Swiss study concentrates on shifts in intentions, while the Italian one focuses on the realisation of intentions. The main results of the studies are presented in next sections.

3. The Swiss study: Couples changing intentions over time

The rather close time gap between one wave and the other (less than a year between each of the waves) in the Swiss data, make them a great source for observing changing in intentions over time. The interviews were realized between December 2005 and March 2009 in the French speaking part of Switzerland. The sample was selected based on the following criteria: residence in a French speaking area of Switzerland and being at around the fourth month of pregnancy of their first child independently of their age or education level. Recruitment was based on a spontaneous answer to announcements published in magazines, specialized web sites, kindergartens, and medical care centres.

Of the original 31 couples, 20 were reached for the second interview after their child was born and the mother was still in maternity leave (4 months after birth at most). The third wave, when the child was aged 12 months or more, reached again 20 couples. These are not always the same cases available in wave 2. In total there are 142 interviews (see Annex 2 for a summary of the complex calendar of this longitudinal fieldwork). However, given the particular moment in the life course in which all couples are interviewed and given that fertility intentions were not systematically asked to all interviewees (the panel focused more specifically to capture couples' adjustment to the arrival of the first child), of the initial 31

couples only 15 individuals (among which 4 couples) have discussed their intention to have or not a second child. Table in Annex 3 summarizes the way in which the 15 individuals are distributed according to the categories of fertility intentions by interview wave.

In what follows we summarize cases in which fertility intentions changed from one wave to the other in different directions: from conditional to certain, from uncertain to certain and finally from certain to conditional.

From conditional to certain intentions

Here are respondents whose intention to have a second child moved from intentions that were conditional on something (time or life course conditions) to the expression of certainty in either sure intentions to have – or not – a second child. Table 1 summarizes this transition for the 3 couples concerned.

Table 1: Change in fertility intentions: from conditional to certain intentions

<i>Individuals</i>	<i>Fertility intention expressed at wave 1 (The woman is pregnant of the first child)</i>	<i>Fertility intention expressed at wave 2 (The woman is almost at the end of her maternity leave)</i>	<i>Fertility intention expressed at wave 3 (The first child of the couple is 1 to 1 ½ year old)</i>
<i>F013</i>	<i>Unknown</i>	<i>Unknown</i>	<i>Surely yes</i>
<i>H013</i>	<i>Surely one day</i>	<i>Unknown</i>	<i>Surely yes</i>
<i>F209</i>	<i>Surely one day</i>	<i>Surely yes</i>	<i>Intention for second child realised Maybe (for the 3rd)</i>
<i>H209</i>	<i>Surely yes</i>	<i>Surely yes</i>	<i>Intention for second child realised Maybe (for the 3rd)</i>
<i>F362</i>	<i>Unknown</i>	<i>Surely one day</i>	<i>Surely yes</i>
<i>H362</i>	<i>Unknown</i>	<i>Unknown</i>	<i>Maybe</i>

Men of couple 013 and 362 as well as the woman of couple 209 passed from a intention to have a second child which was vague in term of timing (*Surely one day*) to a *Surely yes* certain intention. Their first expressions were all conditioned by external events or

projects considered as having priority with respect of their child desire. What is interesting for us here is what explain such change to a pressing intention to have a child in the space of a few months. One explanation that works for couple 013 is that they have realized the condition which had put their project into stand by (namely her trial period in the job). However for couples 209 and 362 reasons are different. Couple 209 the desire for a second child had been growing stronger and stronger to the point that it overgrew the rationale for waiting at least 2 to 4 years they had declared in the first wave. Couple 362 is yet another situation. Here the fact that the husband is less motivated and less sure therefore of his own desire for another child makes, by reaction, his wife more and more pressing and more and more explicitly engaged in expressing her intention to have a second child

From uncertain to certain intentions

The three couples represented in Table 2 are all characterized by having moved from an uncertain fertility intention (*Maybe* and *At times*) to a certain (*Surely yes* or *Surely no*).

Table 2: Change in fertility intentions: from uncertain to certain intentions

<i>Individuals</i>	<i>Fertility intention expressed at wave 1 (The woman is pregnant of the first child)</i>	<i>Fertility intention expressed at wave 2 (The woman is almost at the end of her maternity leave)</i>	<i>Fertility intention expressed at wave 3 (The first child of the couple is 1 to 1 ½ year old)</i>
<i>F004</i>	<i>Maybe</i>	<i>Maybe</i>	<i>Surely no</i>
<i>H004</i>	<i>Maybe</i>	<i>Maybe</i>	<i>Surely no</i>
<i>F042</i>	<i>Surely yes</i>	<i>Surely yes</i>	<i>Intention for second child realised Maybe (for the 3rd)</i>
<i>H042</i>	<i>Maybe</i>	<i>Surely yes</i>	<i>Intention for second child realised Unknown (for the 3rd)</i>
<i>F222</i>	<i>Maybe</i>	<i>Surely yes</i>	<i>Missing (no W3)</i>
<i>H222</i>	<i>Unknown</i>	<i>Unknown</i>	<i>Missing (no W3)</i>

The couple 004 becomes gradually sure that they do not intend to have another child while the other respondents evolve towards the opposite end of the spectrum, exiting from indecision and deciding in favour of a larger family. The first couple (004) declares a strong desire for a

second child, which needs no reasons but has the strength of the evidence in the first and the second wave in which the woman says

« J'ai toujours voulu des enfants. [...] C'est tellement une question de logique pour moi que les choses se fassent comme ça. Parce que même petite je me disais un jour que j'aurai des enfants. Enfin, des ou un, ça n'a pas d'importance. Mais j'ai toujours dit ça donc pour moi c'est quelque chose qui doit être ancré en moi depuis petite déjà. » « Bon moi disons que j'ai toujours, même petite fille, j'ai toujours dit qu'un jour j'aurais des enfants. Un ou plusieurs peu importe quoi. Un déjà c'est bien. Donc pour moi c'était vraiment le... J'veux pas dire le "but" de la vie parce que ce serait faux, parce qu'il y en a d'autres derrière, mais c'était une des choses que j'avais envie de réaliser. Je peux même pas expliquer pourquoi. Enfin je pense que pour une femme c'est un rôle, ça s'explique pas. Moi je suis née pour m'occuper d'enfants. [...] On verra avec le temps si on s'en sort. [...] C'est un accomplissement pour moi, de certaines choses, de certaines parties pour moi de la vie. Après y en a d'autres maintenant qui vont découler mais c'est plutôt un nouveau départ parce que quand on dit "but" ça fait: on arrive et après c'est terminé. C'est un départ [...]. Je me suis toujours dit que j'aurais des enfants mais j'en faisais pas une maladie non plus. »

However it seems that their desire has been fulfilled with the arrival of the first child, while a second one would be welcome but not necessary, as if they do not believe in it after all. It is important to know that they had lost their first pregnancy and it seems that this strong experience have let them doubtful about their chances to become parents. Having the first child became their main objective. In the third wave, when they finally give up the idea of having a second child paradoxically, the man confesses a posteriori that:

« Au début on voulait en faire un deuxième tout de suite. Là c'est... Ah non non, c'est non. A 20 ans ça aurait été peut-être différent vous voyez. On est quand-même plus vieux. On supporte mieux mais là c'est bon. Et aussi du point de vue financier c'est quand-même des charges. Elle peut bien vivre. C'est qu'à l'enfant on pourra lui apporter je pense... Elle pourra avoir un peu ce qu'elle veut entre guillemets puisque... Enfin j'veux dire on est quand-même limité par un budget avec un enfant. Avec deux ça deviendrait peut-être plus problématique. On paie quand-même plus de 1 000 francs par mois pour la maman de jour et puis faire des enfants... On ne peut pas les élever soi-même, c'est une souffrance pour ma femme et pour moi aussi. J'aimerais qu'elle puisse arrêter de travailler mais arrêter de travailler ça sous-entend lâcher certaines choses. Ça elle veut pas non. Elle adore notre appartement, on voudrait pas aller ailleurs dans un plus petit donc voilà quoi. Et puis la p'tite, on sait qu'on peut partir en vacances et tout. Et puis le deuxième il sera peut-être plus calme et tout mais si c'est pour vivre la même année qu'on a vécu la première... Franchement c'était dur donc elle, elle veut pas. Moi je suis... non je veux pas trop non plus. »

For the other two couples, who in the last wave are in favour of having their second child, the reasons of their change of intention should be searched into the realm of physiological reasons. Couple 222 had a bad first pregnancy which made them hesitating in the first wave about living through it again. Only when problems had been overcome could they follow their desire and translate it into a sure intention. In the case of couple 042, who is pregnant of the

second child at wave 3, the woman felt her rising age as crucial to take a decision and press her husband for a second child. Hesitations belonged to him more than to her, as well as the evidence of a first son in need for company (in his mother thoughts) was more her image of a family model inconceivable with just one child.

From a certain to a conditioned intention

The woman in the only couple in this group while pregnant of her first child was sure to intend a second child within 3 years from the first to ensure the company of a sibling to the eldest child. She talks about a completed family including more than 2 children and letting understand that she would wish four of them if their economic situation would allow them to offer the children the possibility to study and to travel. The husband mentions their financial conditions as well but to justify why in wave 2 is still hesitant in engaging with certainty for a second child.

Table 3: Change in fertility intentions: from certain to conditional intentions

<i>Individuals</i>	<i>Fertility intention expressed at wave 1 (The woman is pregnant of the first child)</i>	<i>Fertility intention expressed at wave 2 (The woman is almost at the end of her maternity leave)</i>	<i>Fertility intention expressed at wave 3 (The first child of the couple is 1 to 1 ½ year old)</i>
<i>F068</i>	<i>Surely yes</i>	<i>Surely yes</i>	<i>As soon as</i>
<i>H068</i>	<i>Unknown</i>	<i>As soon as</i>	<i>As soon as</i>

« [...] parce qu'on parle déjà de deuxième etc. On... on... ça nous travaille un peu aussi mais... [...] Oui moi aussi moi j'aimerais... [...] par exemple j'ai toujours dit maintenant si euh... financièrement et pi... Enfin, j'aime pas trop dire qu'il y a que l'argent quoi mais c'est quand-même ça qui nous fait vivre [...] mais euh... enfin mon cœur il serait prêt à... à avoir un deuxième [...] mais... ma raison de... de pardon [l'interviewé tousse]... ma raison de... de travail ou professionnelle me dit non en fait. J'me dis ben... on n'est pas encore fixe, on n'est pas encore euh... indépendants financièrement. On n'a pas encore de euh... des habitudes, on n'a pas les deux un travail euh... Enfin bon moi j'suis en apprentissage mais après j'sais pas s'ils vont me reprendre, je sais pas où j'pourrai travailler enfin... Et pi elle non plus. Donc j'me dis que pour un deuxième... »

In the second wave the man mentions the gap with her partner views :

« Oueh, et puis au niveau familial ben elle veut tout maintenant, faire la... toute la chaîne des enfants et tout ça mais... J'crois qu'il faut quand-même euh... Faut pouvoir vivre quoi. Faut quand-même avoir un peu de raison. »

However, in wave 2 the woman's childbearing intention has not diminished "Ça fait envie d'avoir un deuxième" she says when asked what it is like to be a mother. The delivery of the first child was a good experience and the evident joy she derives from motherhood is not likely to make her revise the positive and sure intention she had expressed in the first wave:

« Oueh, oueh c'est... Oueh ça donne envie quoi. C'est vraiment euh... C'est que du bonheur vraiment euh... J'vois pas d'autre mot que ça. Ça peut paraître euh... cul-cul mais alors vraiment j'adore. Comme j'veus disais avant j'adore m'en occuper et tout euh... J'peux pas imaginer qu'on ait vécu sans lui. C'est vrai j'me dis mais on devait s'emmerder ! J'sais pas c'qu'on faisait mais... ça me paraît plus possible s'il était pas là. »

While the intention for a second child is stable for the wife in wave 2, the number of children she thinks of diminished from 3-4 to 2. In the third wave also the intention for a second child will is not as certain and becomes conditioned :

«La condition de réalisation de l'intention d'avoir un deuxième enfant n'est donc finalement pas l'argent, contrairement à ce que disait l'enquêtée en amont, mais la fin de ses études, qu'elle ne peut mener à bien tout en s'occupant déjà de son premier enfant. « Oueh oueh et pi y'en a souvent un qui est derrière moi (rire) alors euh... Non j'y pense beaucoup, mais y faut pas euh... »

This woman, we need to say still in her mid-twenties in wave 3, seems to have been slowly driven by her husband's position toward a more thoughtful approach to subsequent births, even though she never explicitly mentioned his influence as crucial.

Dynamics of fertility intentions

The analyses of the evolution of fertility intentions for a second child based on the Swiss data allow the identification of different dynamics.

First when the desire for children is strong, conditional intentions may become certain intentions even when there is no change in the actual situation of the couple. Conditioning factors or doubts simply lose salience and individuals re-order their priorities. Therefore it may be useful to examine whether conditional intentions persist and investigate whether their duration can be a positive "risk factor" for a turn towards positive intentions and possibly childbearing.

Second, the step from sure intentions to conditional intentions for young couples depends on a progressive growing conscience about to their actual material condition and life

course aspirations other than family enlargement. The birth of the first child functions as turning point of consciousness, which may induce to delay the arrival of the previously surely intended second child. Similarly, recognition of material difficulties after the first birth, may also explain the transition from an uncertain intention to a certain negative one. It is not by chance that it is often women who make this kind of shift in intentions after becoming mothers. In Switzerland, because of a combination of traditionally conceived gender roles in the private sphere and lack of public support for parents, the birth of a child changes, at times dramatically the employment and social life trajectories of women, while it leaves relatively unchanged those of men. It is hence little surprising that women who were sure wanting a second child soon revise their position and prefer to forgo or at least delay the event, adapting their intentions to their new level of awareness of what motherhood actually means to them.

4. Italian study: Fertility intentions and subsequent behaviour

The Italian data, collected separately in 2004-2005 and in 2009, are remarkably suitable for studying respondents' reproductive behaviour in light of their declared (past) fertility intentions. The initial sample of respondents (2004-2005) was purposely chosen via a complex snowball sampling stratified by age, parity and marital status of the woman in order to maximise the variation in the major socio-demographic characteristics usually associated with fertility behaviour. The complete sample of respondent that were interviewed in 2004 and 2005 by a team of anthropologists included 74 women aged 23 to 45, with different partnership status and educational levels, who ranged from childless women to mothers of five children and 21 men. In 11 cases, also the mother was interviewed. All the semi-structured interviews touched on union and fertility histories, the upbringing in the family of origin, the current relations with relatives and partner, and practices, intentions and expectations related to parenthood. With these data, we examined desires and expectations related to family formation and relations that reflect the culture of reproduction in Cagliari. Independent of the particular behaviour of the individuals who give voice to them, basic beliefs, values, expectations, and perceptions constituted the context in which reproduction acquires meaning.

The aim of the interviews conducted in 2009 was to follow up the 2006 study. Actually, 4 years after the first round of interviews on fertility intentions, a sample of 15 individuals living in Cagliari -precisely 13 women and 2 men- accepted to be re-interviewed, providing

the opportunity of linking the fertility intentions declared in 2004-2005 with their realized behaviour. Note that given the resulting categories to code fertility intentions, the distance between the two interviews in this setting contributes to strengthen the suitability of these data; moreover, the particular behaviour of the individuals who gave voice to the fertility intentions were central in the analysis. The following sections focus on fertility intentions and subsequent behaviour of these 15 respondents, whose characteristics are presented below.

Intentions and subsequent realizations

Table in Annex 4 shows the basic socio-demographic characteristics of the individuals and reports the information about their fertility intentions (and the respective coding category) as they have been recorded in the first wave of the interview in 2006. Table in Annex 5 reports the same kind of information recorded in 2009. Data on intentions in 2006 and behavioural outcomes for the same individual in 2009 are reported in table in Annex 6.

Realization of fertility intention: a change in parity

In our sample, ten out of fifteen respondents had a(nother) child between first and second wave. Seven of them belonged to the categories *Surely yes* or *As soon as in 2004-2005* – for them an increase in the reached parity showed the realization of their (positive) fertility intentions. Among them, three were in *Surely yes* (a couple and a woman) and already parents of one child and they succeed in realizing their fertility intention, giving a sibling to their first child. More interesting are the cases of the other four respondents, which in the first wave of the interviews had contingent conditions to solve before becoming parents (again). Two of them were childless and two of them already mother of one child at the time of the first interview.

Starting from the childless women, they were able during the time interval between the two waves to solve the obstacles that prevented their childbearing. Precisely, one of the two women was waiting for finding a permanent job, and she wanted to get married. During the four years, she got married and she started a new job as autonomous worker, so she realized her intention after having solved the contingencies. The other respondent in 2005 had a simple logistic problem: his partner was living in Milan and he was trying to understand if and how to move to Cagliari without losing his job. Moreover she wanted to get married before having a child. During the 4 years many things happened: actually, as a teacher employed in the public sector, she asked and obtained to work in Milan. Moreover, when the logistic

problem was solved, she also got married. Again all the contingencies (linked to the existence of both social norms and job related features) were solved, and at the time of the second interview she was pregnant of the first child.

As far as the two other respondents is concerned, they were already mothers at the time of the first wave and they faced a similar obstacle that precluded the second childbearing: one respondent did not have a job, so she wanted to find a job before actively trying to have another child; the second interviewee worked as a researcher and the fact of having only temporary contracts really created troubles. Even if they had similar problems and they ended with another child, they solved in different ways their constraints: the first women decided to become a housewife and to stay out from the labour market, while the second one won a public competition and became a public employee with a permanent contract that allowed her to overcome the contingent condition she had.

Among the respondents that recorded an increase in parity, three (2 women and 1 man) had a(nother) child but the behaviour was not in line with the fertility intentions declared 4 years before. Precisely, they expressed *Surely one day* or *Maybe* intention at wave 1, but they reached a higher order parity. One of the central reasons that could explain the incoherent behaviour of the man in this sub-category may be found in an improvement in the housing condition with respect four years before. Precisely, he and his wife moved a little bit far from the centre of Cagliari where they lived before but in a property house. This (considered a proxy for higher level of economic stability) together with the (solved) contingences of his wife could have indirectly contributed to the birth of the second child.

As for the other two cases, the women were coded in 2005 as *Surely one day* and *Maybe*: there were not any particular reasons for them not to think about a first child, they simple felt too young and they had other priorities at that time, but the fact that they did not use any contraceptives did not prevent them from a childbearing.

Realization of negative fertility intention (no change in parity)

Three respondents in our sample did not record any change in parity between wave 1 and 2 in line with their fertility intentions that were respectively *Maybe*, *Surely one day* and *Surely no (uncertain, far and excluded)*. Moreover, after the four years they were coded again in the same fertility categories.

The reasons for their intentions (and the sequent coherent behaviour) are mainly found in their demographic characteristic, such as their age (two are young while the third one perceived herself as too old and already has two teenager daughters) and their partnership status (two of them are single).

Referring to the working sphere, the youngest respondents had the opportunity to better their career perspectives, but the fact that one worked as a free-lancer and the other one did not have a permanent and regular contract put on them a lot of responsibility that prevented the fact of having an even higher responsibility (a child) in a short time span.

Changes in fertility intentions: two opposite cases

For two out of our 15 respondents, the declared fertility intention was not followed by a coherent behaviour and this caused not only a kind of “dissatisfaction” but also a change in fertility intentions between wave 1 and 2. The two recorded case are characterized by two different features: precisely, for one respondent coded into *As soon as* in 2005, although all the contingencies related to her job issues were solved before the second interview, in 2009 the fertility plan resulted to be not realized; moreover, the reference category of fertility changed, passing from *As soon as* to *Surely not* category. The reason of this change is twofold: firstly, for what concern the family life, a serious healthy problem hit her youngest daughter and this created troubles and prevented both another childbearing and a positive fertility plan; secondly, another element that has been considered and perceived as relevant was the age: the respondent -at the time of the second interview- was 43 years and she openly declared that after age 40 a woman is not able anymore to follow and help her child in the every-day-life choices. Finally, another reason emerged and it was related to her relation with the husband: even though any particular problem with the partner was highlighted during the interview, she stated that in the few occasions she proposed to have a third child he always refused the idea. In her heart she did not completely rule out the possibility of having a third

child, but she thought that a couple must plan a child together: given that her husband was irremovable, she accepted his husband's vision and she excluded another childbearing.

For the second respondent we record an opposite situation. Although she did not change the number of children she had, she experienced a change in fertility intention that went from *Surely not* in 2004 to *As soon as* in 2009. It is important to record that in the first wave the respondent was pregnant of the first child and this probably was one of the reasons she excluded the intention of becoming mother again. Moreover during her pregnancy she had to take care about her boyfriend that was living a difficult period (drugs) and she was working hard in the family activity. After the birth of the first child and after 4 years, even if the global situation was even worse than before (the economic conditions did not improve, her partner did not work and she lived with her parents far from his husband), she thought that her daughter should have a sibling and that she would start to try to give a sibling to her daughter as soon as she could solve some constraints such as finding a house where to live with her partner and a job for her partner, thought necessary pre-requisites for a second childbearing.

Notably, in the sample under investigation we did not record any case in which the past fertility intention was a sure one (as *Surely yes/Right Now* or *Surely not*) and the realized behaviour is not in line with that past intention. Moreover, no cases of solved contingencies that did not lead to a realized fertility plan have been found.

Factors intervening between the formulation of an intention and its realization

Two kinds of intervening factors have been revealed through the analysis of the Italian study: factors related to employment and to partnership dynamics. These were the two most distinct factors influencing both fertility intentions and their realization.

Employment related issues

The high level of responsibility, the numbers of hours to devote to the job and the rigid working time play a real role in shaping both the fertility intention and the changes that occur during the time. This is valid in both a positive and a negative way: reaching a good economic stability in the working place or a higher level of satisfaction increase the probability of intending another childbearing (even if with different levels of confidence), but when the responsibility is too high and the consequent stress is unsustainable the effect on fertility

intention for another child is negative. Of course, the higher is the number of children already born, the higher is the necessity of reaching a better economic position.

Linked to that is the experienced lack of external help for working mothers (especially mothers of one child), external help that could be related to parents' availability or to public structures. In this second case the problem is twofold: i) the structures provided are not enough; ii) they are too expensive, so working for paying a kindergarten is useless, it is better spend time with the child. Of course, these problems push the fertility intention more to "negative" fertility intentions than to positive ones for those who decided to postpone the fertility plan they had in 2004-2005.

Another important aspect that plays a role in making the new fertility intention more uncertain especially for those who did not realized their past intentions is the distance of the working place: even when the kind of performed job increases the respondent fulfilment, when it is far from home it becomes problematic. Moreover, when the career orientation is strong it prevails on the intention of reaching higher parity.

For working women the dilemma a(nother) child-job is really determinant even when they are already mothers: both if they work and left their children alone or if they renounce to achieve the satisfaction in the job market in the majority of the cases they feel sacrificed (and not only when they have to face the choice but also after having make the decision).

A clear and more relevant picture when linking the intention with the subsequent behaviour emerges for those employed in the public sector who find easy the conciliation between family and working life and who show a behaviour in line with the past declared intention.

On the contrary, when the contingent condition that affected fertility intentions was there in 2004-2005 and after 4 years it is again there, the perceived believe that something will change decreases and this creates an effect on the perceived behaviour, lowering the positive expectation.

Partnership related issues

Change the partnership status – especially from living in couple to live alone or becoming single – has an impact on the fertility outcome and of course on the new intention.

Moreover, even for those who did not experience during the time span changes in the partnership status, the troubles that the husband or the other members of the family face play

an important role in excluding or postponing both the realization of past intention and the intention for another child.

Another important element considered was the existence of contrasting intentions within the couple. Such contrasting intentions were expected to play a role in shaping the final behaviour, especially when the intended/non intended child was the second one. Although in our sample we have only two couples and only one of the two recorded different intention in 2004, it is possible to see an implicit change in fertility intention for one of the two partners (the man) that leads to a positive fertility outcome/behaviour

5. The theory of planned behaviour model applied to fertility intentions

One of the goals tackled by Working Package 5 was to evaluate the usefulness of the notion of fertility intention, as it is conceptualized in the Theory of Planned Behaviour, in predicting action towards complex goals like having a child in a given time frame. In particular we wanted to evaluate how valid are predictions of intentions based on beliefs in the light of the insights emerging from the qualitative data. This report presents the last part of a research, conducted to this end and summarises our finding based on these results and previously reported ones.

The TPB theoretically defines intentions as composed of two types of elements: beliefs (attitudinal, normative, and control beliefs) and their strength (subjective evaluation of the strength of beliefs). Our results, presented mostly in deliverables 5.13 and 5.15, show that indeed the dimensions identified in the analysis of our respondents' declarations about their childbearing intentions and goals can easily be related to the elements of the TPB: beliefs are captured by the childbearing goals and the place they are given in the life course, while the strength of the intention lay in its certainty, the more or less clear definition of the goal and in the shorter or longer time frame for its realization.

In deliverable 5.13 we made a first attempt to evaluate predictive value of TPB model. We did so by discussing our qualitative findings in relation to the validity of fertility intention indicators such as those we find in the Gender and Generation Survey. In sum, we had concluded that the GGS question, ("Do you intend to have a (another) child within the next three years?") does well for construct validity (how well the question reflects the theoretical concept that it is meant to measure) of the motivational aspects of intentions (discriminating

between the two groups of “yes/probably yes” and “no/probably not”). However, for the middle options in the scale (“probably yes” or “probably not”) we cannot say whether the strength of respondents’ intention is weak or that they are uncertain or ambivalent about their goal. Our findings show that when respondents are uncertain in their fertility intentions this uncertainty is related to the behavioural goals or to the time frames for them. We showed that the strength of the intention may be affected by numerous factors related to attitudes (e.g. attitudes towards childbearing, but also towards competing goals such as professional career), norms (e.g. perceived age norms or norms related to childlessness) or to subjectively perceived control variables (e.g. partnership status, status in the labour market, childcare availability). We identified and described also external factors (as defined in TPB) that influence the strength of fertility intentions (e.g. age or gender attitudes). These factors and their role for fertility intentions were described in details in deliverable 5.13 and 5.15.

One of the general conclusions, derived from our studies on fertility intentions and their indicators was that if we do not understand the nature of the uncertainty behind the survey answer given, predictive validity of questions on fertility intentions would be weak.

In order to investigate predictive value of TPB further, it was a natural next step to concentrate on intentions dynamics over time and on the gap between intentions and realizations. These are the two studies presented in the current report. First, with the Swiss study, we showed how fertility intentions may shift from uncertain or conditional intentions to sure and certain intentions, whether directing towards having a child or not. The mechanism of the opposite transition – from certain to conditioned intentions – was also illustrated. In the Italian study, we concentrated on realization of fertility intentions. Thanks to rich narrative data, obtained in two waves of interviews, we could analyse how initial intentions develop, sometimes change, and lead to given behavioural outcomes. Our research enriches and complements the findings of Working Package 4, where the realisation of fertility intentions was investigated applying the indicators of beliefs, intentions and realizations available in the GGS survey (see deliverable 4.12 and also previous findings of Spéder and Kapitány 2009).

There are several important messages that arise from our analyses. First, our study shows a straightforward link between certain positive fertility intentions and subsequent childbearing. In the Italian study all respondents, who belonged to *Surely yes* category at wave 1 increased their parity in the following four years. There were no cases in which certain fertility intentions (*Surely yes* or *Surely not*) lead to behaviours inconsistent with these intentions.

Second, for our respondents discrepancies between intentions reported at time point 1 and behavioural outcomes reported at point 2 were associated with a shift in intentions in almost all cases. For instance, conditioned intentions turned into certain ones and lead to childbearing when required conditions had been fulfilled. In other words, intention *As soon as* lead to childbearing indeed as soon as obstacles reported at wave 1 were overcome (notably: we found no cases in which when contingencies were overcome, respondents did not realize their intention).

Finally, most of the changes of intentions over time in our study could have been attributed to one of the components of TPB: attitudes, norms or aspects of perceived behavioural control. Intention *As soon as* turned into *Surely no (excluded)* when sufficient behavioural control could not have been achieved. *Surely one day* intention transformed into *Surely yes* with an improvement of economic situation (behavioural control) or with development of more positive attitudes towards childbearing. A shift from *Surely no* to *As soon as* category was driven by perceived norms, related to family model with two children.

In two cases of unintended pregnancies, related to a lack of contraceptive use (even though the respondents did not intend to have any children) clearly escape the logic of TPB. Rather than cognitive relationships between intentions and behavior, other mechanisms seems to have been at work as emotional and affective ones.

The importance of couple dynamics for shaping and realising fertility intentions became clearly visible in some of our cases. Theory of Planned Behaviour is only partially fit to understand the relationship between beliefs and intentions as well as intentions and their realizations when it comes to applying the model to reproductive behavior. The model is specified for individual intentions and does not explicitly consider couple's intentions, while childbearing decision often involve two individuals and their relationship, which play an important role in the formation of fertility intentions. Nor does the approach considers the possibility that mediators may be channelled by other mechanisms than cognition and rationality, like emotions or the application of simple routine heuristics (and consequently lead to apparently unintended pregnancy).

Despite these limitations, the results presented in this report make us conclude that the predictive value of the Theory of Planned Behaviour is indeed appealing. Qualitative data show that concepts of TPB can be successfully used to predict reproductive behaviour (at least in case of the middle class respondents). But the challenge lies in capturing intention–

behaviour link in large, representative surveys and in estimating its magnitude. And the key problem is: how to measure components of TPB accurately?

Problems with measurement have been recurrently emphasized by the proponents and supporters of TPB. In Ajzen's words "Investigators often mistakenly assume that direct measures of the theory's constructs are obtained by asking a few arbitrarily selected questions, or by adapting items used in previous studies. Although this approach often yields findings of interest, it can produce measures with relatively low reliabilities and lead to an underestimate of the relations among the theory's constructs and of its predictive validity. To secure reliable, internally consistent measures, it is necessary to select appropriate items in the formative stages of the investigation" (Ajzen 2002, page 4). This aspect calls for an attentive reflection on the validity of an international comparative questionnaire. Listing indicators related to a limited number of attitude, subjective norms and control domains without having had a preliminary explorative studies demonstrating which are the very items relevant to childbearing for individuals living in a given context (socio-economic and geographical context) may produce indicators which carry very little meaning to predict the intention we want to predict. Ajzen notes a crucial role for qualitative explorative studies here. On his webpage under the frequently asked questions section, he says "The only part of these methods that requires qualitative research is the elicitation and coding of readily accessible behavioural, normative, and control beliefs" (see <http://www.people.umass.edu/aizen/faq.html> last accessed 20.10.2010). Our qualitative results across the various REPRO deliverables) offered an initial list of behavioural, normative and control-related aspects, important for fertility intentions in European context. The results said even more than that though: they explored types and sources of uncertainty in fertility intentions and illustrated processes of how intentions change or get realised.

In deliverable 5.13 we made several suggestions on how to modify the survey questions on fertility intentions in order to increase their predictive value. One possibility would be to add a direct follow up question in case of answers like "probably yes, probably not" which would ask what the uncertainty depends on. Explorative qualitative data may be used as a base to create a list of possible closed answers to such question. Another possibility would be to separate the measurement of fertility intentions in a two step-question: one step to capture the intended goal and the other to capture the intended timing. This may distinguish more clearly the two dimensions of intentions (positive, ambivalent, uncertain, or negative attitudes towards having a child) and in case of positive feelings, timing of the foreseen child (clearly

defined in the short term or less clearly defined in the distant future). A third suggestion, which has arisen based on the studies presented used in the current report, is to add an indicator telling how certain respondents are of their attitudes, subjective norms and perceived control items when measuring predictors of intentions. This way we could better weight the strength of the intentions indicator and consequently better predict possible changes in intentions and behavioural outcomes.

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Annex 1

Work package 5 – A summary overview of objectives and tasks: Qualitative Analyses of fertility decision- making

(WP leaders: Laura Bernardi, UNIL, Clémentine Rossier, INED)

The objective of this Work Package is to study the subjective declarations of fertility intentions; the way in which intended fertility is subjectively placed in relation to other life course goals; its relation with behavioural, normative and perceived control beliefs about childbearing in different cultural contexts; the interplay between representations of gender roles, labour market participation and fertility. The data we use are either selected parts or the entire collection of semi-structured interviews from Bulgaria, France, Germany, Hungary, Italy, Poland, and Switzerland (for a detailed description of the available dataset see the appendix). Comparative analyses are conducted using shared coding schemes which allow to perform systematic content analyses on the interview data. In order to fulfil these goals, four types of tasks are undertaken

Task 1. A typology of declared fertility intentions, divided according to their sign (positive, negative or ambivalent), to their degree of certainty (certain and uncertain), and to envisaged time frame for realization (short term of maximum 3 years and longer time frame). *See Deliverable 5.13 'Surely Yes, Surely Not, As Soon As, Maybe, At Times, Surely One Day: Understanding Declared Fertility Intentions.*

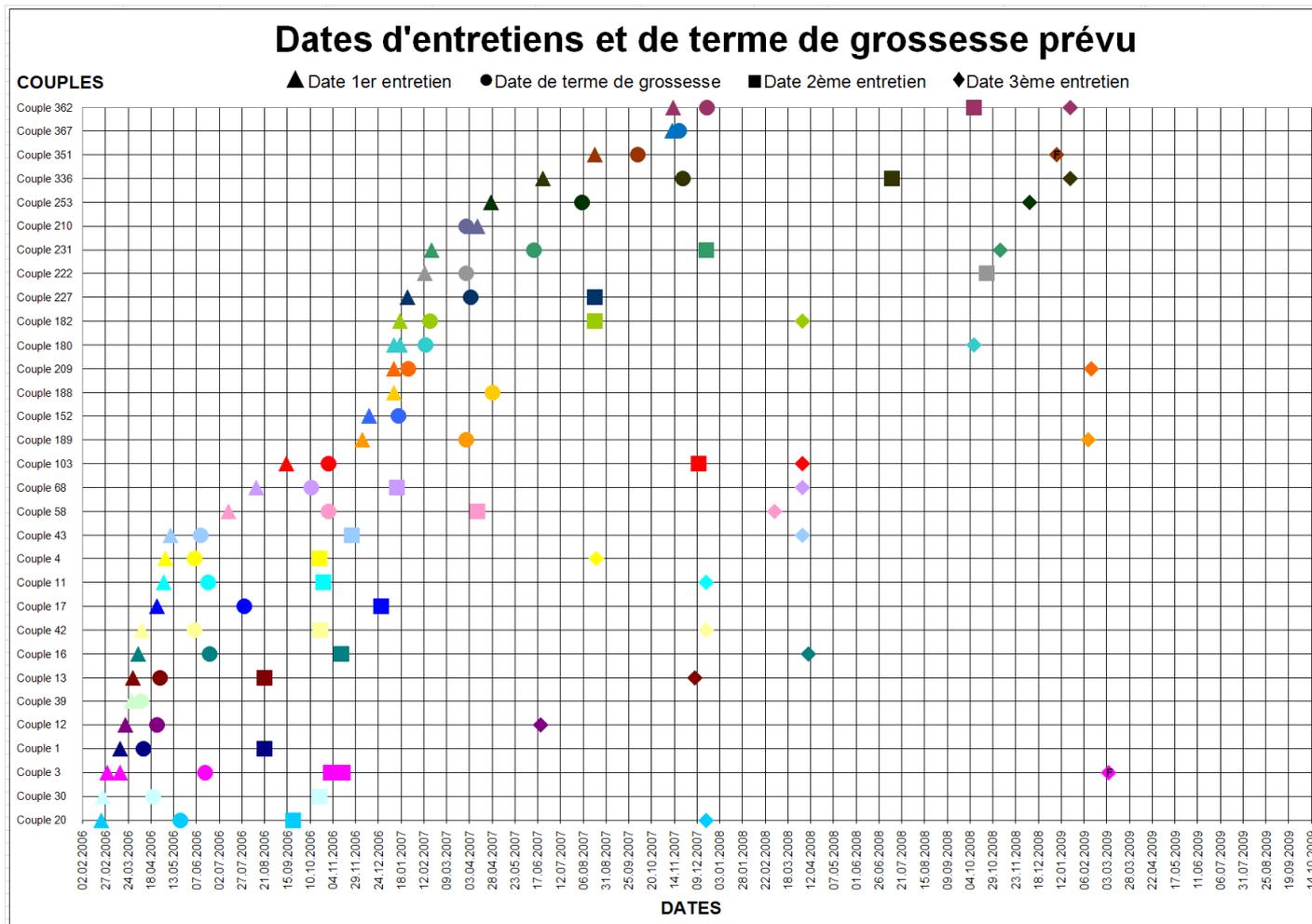
Task 2. An analysis of beliefs about the consequences of having one (more) child, of normative schemas, and elements of control informing childbearing choices in relation to attitudes, norms and control related to adulthood, gender, and employment. *See Deliverable 5.15 Variation in social norms and practices of social influences in different family and fertility cultures and specific political economies*

Task 3. An in-depth longitudinal analysis of the patterns leading from fertility intentions to fertility outcomes, including an analysis of changes in intentions over time. (Italy and Switzerland samples only). *See Deliverable 5.16*

Task 4. Based on the qualitative findings, a critical appraisal of the theory of planned behaviour (that inspires the module of the Gender and Generation Survey used in other working packages), which measures the impact of attitudes, norms, and control beliefs to

predict intentions and successive realisation. *See Deliverable 5.16* (At the time of writing findings are based on qualitative analyses; The next step is to contrast them with the results of Working package 3, 4 and 6. This is planned for early 2011.

Annex 2. Swiss study: Predicted day of birth and interviews' day by wave



Annex 3. Swiss study: Intentions to have a child by interview wave

Individuals	<i>Fertility intention expressed at wave 1 (The woman is pregnant of the first child)</i>	<i>Fertility intention expressed at wave 2 (The woman is almost at the end of her maternity leave)</i>	<i>Fertility intention expressed at wave 3 (The first child of the couple is 1 to 1 ½ year old)</i>
F004	Maybe	Maybe	Surely no
H004	Maybe	Maybe	Surely no
H013	Surely one day	Unknown	Surely yes
F020	Unknown	Surely one day	Surely one day
F042	Surely yes	Surely yes	Intention for second child realised Maybe (for the 3rd)
H042	Maybe	Surely yes	Intention for second child realised Unknown (for the 3rd)
F068	Surely yes	Surely one day	As soon as
H068	Unknown	As soon as	As soon as
H182	As soon as	Unknown	As soon as
F209	Surely one day	Surely yes	Intention for second child realised Maybe (for the 3rd)
H209	Surely yes	Surely yes	Intention for second child realised Maybe (for the 3rd)
F222	Maybe	Surely yes	Missing (no W3)
F231	Unknown	Surely one day	Surely one day
F336	Unknown	Surely one day	Surely one day
F362	Unknown	Surely one day	Surely yes

Annex 4. Italian study: Demographic characteristics and fertility intention of individuals at 1st wave

Interview ID	Gender	Age	Partnership status	Highest educational degree	Employment status at the time of interview	Number of Children in 2005/6	Fertility intention	Remarks
CA_3_CB	Female	23	cohabitation	Diploma	Unemployed	1	2 (contingent conditions)	She has a daughter aged two and she says that she intends to have at least another child but she does not have a job, so first of all she wants to find a job, then she'll start trying to have another child (marriage is not a precondition)
CA_3_CB_U	Male	27	cohabitation	Licenza media (lower secondary degree)	Occasionally employed	1	5 (far)	He wants another child, but he does not know when; he has so many things to do before a second child that the possibility of becoming father again is seen as something really far from the present
CA_5_C	Female	27	cohabitation	Diploma (professional school)	Free-lancer	0	5 (far)	Maybe, in future. She wants a child, but first of all she wants to reach some satisfactions in her job and she wants to feel realized. Moreover, if the legal system does not change, she wants to get married before becoming mother, in order to protect her child from the legal perspective.
CA_23_MB	Female	33	married	Laurea (University degree)	full-time employed	1	1 (project)	She wants another child: the previous experience was so lovely that she and her husband are trying to become parents again.
CA_7_MB	Female	36	married	Laurea (University degree)	full time employed with temporary contract	1	2 (contingent conditions)	She wants for sure another child but not soon: she wants to recover for the first birth and see how things go at work.
Cp01_1810dg0	Female	Near 30	in a relationship	Laurea (University degree)	full time employed with temporary contract	0	2 (contingent conditions)	She wants a child but after marriage. Actually now she is waiting for a) finding a permanent job; b) getting married with her partner. While the second thing appears near in the time framework, the second is uncertain
Cp04_2710dg0	Female	30	single	Diploma (High School Degree)	student at University +occasional job	0	4 (uncertain)	She is not thinking about it and has no partner. Not possible to have a child with her mentality, moreover, she wants to change her job.. but she is changing her mind and she will be ready one day
Cp05_0511dv0	Female	33	in a relationship	Diploma (High School Degree)	full time employed	0	5 (far)	She wants two children, but not before 3 years, probably after 5 or 6. Now or within the next two years is too early and she does not feel ready. She will get married in two years
Cp06_0711dv2	Female	40	married	Licenza media (lower secondary degree)	full time employed	2	2 (contingent conditions)	She (and her husband) would like to have another child but she works 100Km far from home and she cannot stay at home without working or leave her job for economic reasons
Cp10_1011dg0	Female	32	in a relationship	Diploma (High School Degree)	Student and full-time employed	0	2 (contingent conditions)	She wants becoming mother but she has a logistic problem with his partner that lives in Milan and that is trying to understand -from the job point of view- how to move to Cagliari. Moreover, she wants get married before having the child (they are planning to get married in one year)
Cp11_1111dv1	Female	33	married	Diploma (High School Degree)	full time employed	1	1 (project) ?	She is actively trying to have another child but sometimes she says she would like to have another one not for herself but for fulfilling husband's desire to have children. (She could be classified also as ambivalent, but she declares that she stops the pill and that she is trying since 3 months)
Cp11_1411p1 husband of Cp11_1111dv1	Male	34	married	Laurea (University degree)	full time employed	1	1 (project)	He really wants another child and he (successfully) encouraged also his wife in starting trying actively. He loves to be father and wants to replicate the sensations he felt when his son was little
Cp15_1611dgl	Female	32	in a relationship	Licenza media (lower secondary degree)	full-time employed	0.5	6 (excluded)	She is pregnant but not yet married; her boyfriend passed a difficult period (drugs) and she has to take care about him; moreover she is in charge of the family activity and she will not be able to manage another child
Cp16_1611dv2	Female	40	married	Diploma (Professional school)	housewife	2	6 (excluded)	She has 2 daughters aged 9 and 10, she now wants to live her life with her family and she does not think absolutely to start everything from the beginning
Cp20_1801dg0	Female	27	cohabitation	Diploma (High School Degree)	Student and unemployed	0	4 (uncertain)	If it happens she would be happy, she thinks that a life without children is not so good but she has never really thought about it and now she has to find a job. Looking for a job and during a interview saying that you are married, means that you intend to have children and this is the worst thing to say for obtaining a job

Annex 5. Italian study: Demographic characteristics and fertility intention of individuals at 2nd wave

Interview ID	Gender	Age	Partnership status	Highest educational degree	Employment status at the time of	Number of Children in 2005/6	Fertility intention	Remarks
CA_3_CB_2_D	Female	26	married	Diploma	housewife	2	4 (uncertain)	She loves being mother and she is fine as housewife. Now she is in line with his husband because they want time for themselves and because the second son is really difficult to take care of, but she does not exclude the possibility of being able to convince his husband for the third time.
CA_3_CB_2_U	Male	30	married	Licenza media (lower secondary degree)	occasionally employed	2	6 (excluded)	He absolutely doesn't want another child, two are enough and the decision seems quite sure
CA_5_C_2	Female	31	single	Diploma (professional school)	full time employed	0	5 (far)	Maybe, in future, but for the moment is only an abstract concept. She wants a child, but first of all she wants to find a partner and find the security in the job market.
CA_23_MB_2	Female	36	cohabitation	Laurea (University degree)	full-time employed	2	2 (contingent conditions)	She would like to have the third child, but she has problems with her husband: she does not have reached yet the security that she needs and he doesn't want absolutely another child.
CA_7_MB_2	Female	39	married	Laurea (University degree)	full time employed	2	4 (uncertain)	She has her second daughter 1 month before the interview: she would like to have another one, the economic conditions are good, but she wants to wait at least two years in order to see how is the family organization, how are the daughters and if she is fine. Moreover, her husband is 50, so she does not really know what they will do in future.
Cp01_1810dg0_2	Female	33	married	Laurea (University degree)	full time employed	0.5	5 (far)	She and her husband don't want to leave the son alone, so even if it is quite early, they will see how the things go with the first one and then they will think on what to do. In any case the distance between the two will be no more than 3 years.
Cp04_2710dg0_2	Female	34	single	Laurea (University degree)	full time employed	0	4 (uncertain)	She is not thinking about it and has no partner even if the partner is not a precondition for becoming mother. Not easy to have a child with her mentality even if with the maturity she changed opinion and she is more flexible.
Cp05_0511dv0_2	Female	38	cohabitation	Diploma (High School Degree)	part time employed	1	4 (uncertain)	She did not get married as planned but she has a daughter. She thinks that having another child now will be an obstacle because she has no help from her family, but she does not rule out the possibility of becoming mum again.
Cp06_0711dv2_2	Female	44	married	Diploma (High School Degree)	full time employed	2	6 (excluded)	She would like to have a third one, but she thinks that a couple must plan a child together and given that her husband does not want absolutely any more child, she agrees with his solution and she is fine with that.
Cp10_1011dg0_2	Female	36	married	Diploma (High School Degree)	full time employed	0.5	1 (project)	She has a job that permit to have another child and the economic conditions are good. She does not want to leave the first child alone and she plan to have another one in 2 years.
Cp11_1111dv1_2	Female	37	married	Diploma (High School Degree)	part time employed	2	6 (excluded)	She is fine now with two children, the condition she is living with her husband that works far is difficult and she has to do a lot of sacrifices. She is ok in this condition and she will not change her idea
Cp11_1411p1_2 husband of Cp11_1111dv1_2	Male	38	married	Laurea (University degree)	full time employed	2	2 (contingent condition)	He does not rule out the possibility of having another child, but he has some contingent conditions to solve: he works far from Cagliari and he is waiting the right moment to ask for the movement to Cagliari. Moreover he would like to have a bigger house, but know is really difficult and he think he will not be able in this condition to effort another child.
Cp15_1611dgl_2	Female	36	in a relationship	Licenza media (lower secondary degree)	full time employed	1	2 (Contingent condition)	She really would like to have another child, but she can't. She has a difficult economic situation; her partner does not work and she lives with her daughter at her parents' place. Moreover she works 14 hours per day in her activity (pub) so the idea of having another child is really difficult to realize.
Cp16_1611dv2_2	Female	44	married	Diploma (Professional school)	part time employed	2	6 (excluded)	She has 2 daughters and she does not think to start everything from the beginning, even if the main reason is the big difference in ages that the new child will have with the other two daughters.
Cp20_1801dg0_2	Female	31	married	Diploma (High School Degree)	unemployed	1	2 (contingent conditions)	She is looking for a job that never comes; she already has a child aged 2 and she would like to have another one, but the fact that she does not have a job obstacles her intention.

Note: 0.5 children means that the respondent is pregnant at the time of the interview.

Annex 6. Italian study: Fertility intentions and their realisation between 1st and 2nd wave.

Interview ID	Gender	Number of Children in 2005-2006	Fertility intention 2005-2006	Number of Children in 2009	Fertility intention 2009
CA_3_CB	Female	1	2 (contingent conditions)	2	4 (uncertain)
CA_3_CB_U	Male	1	5 (far)	2	6 (excluded)
CA_5_C	Female	0	5 (far)	0	5 (far)
CA_23_MB	Female	1	1 (project)	2	2 (contingent conditions)
CA_7_MB	Female	1	2 (contingent conditions)	2	4 (uncertain)
Cp01_1810dg0	Female	0	2 (contingent conditions)	pregnant	5 (far)
Cp04_2710dg0	Female	0	4 (uncertain)	0	4 (uncertain)
Cp05_0511dv0	Female	0	5 (far)	1	4 (uncertain)
Cp06_0711dv2	Female	2	2 (contingent conditions)	2	6 (excluded)
Cp10_1011dg0	Female	0	2 (contingent conditions)	pregnant	1 (project)
Cp11_1111dv1	Female	1	1 (project)	2	6 (excluded)
Cp11_1411p1 husband of Cp11_1111dv1	Male	1	1 (project)	2	2 (contingent condition)
Cp15_1611dg1	Female	pregnant	6 (excluded)	1	2 (contingent condition)
Cp16_1611dv2	Female	2	6 (excluded)	2	6 (excluded)
Cp20_1801dg0	Female	0	4 (uncertain)	1	2 (contingent conditions)