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Late Fertility Intentions and Fertility in Austria

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LATE FERTILITY INTENTIONS AND FERTILITY IN AUSTRIA

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Abstract

Parenthood postponement has been a major component of the huge changes in fertility since the 1970s. We are seeking to understand whether the delay in childbearing contributed to lower aggregate fertility levels in Austria, through the study of late fertility intentions. Our study is based on the Austrian Micro-Censuses (1986-2016) and on the Austrian Generation and Gender Surveys (panel data 2008/09 and 2012/13). Across the female birth cohorts 1950 to 1979, the gap between intentions expressed at age 35-39 and actual cohort fertility kept growing. From that age, and particularly after age 40, women who wanted a child often wanted it as soon as possible or within one year. However, we showed that a strong wish to have children was unlikely to materialize at these late ages. Up to 70% of women who had expressed a certain and short-term intention at age 30-32 in 2008/09 had a child, but due to the deep age-related decrease almost no woman aged 42-45 had had a child by 2012/13. For men the decrease was less steep, from 60% in their 30s to 20% in their 40s. Also, strong intentions started changing massively to less certain or negative intentions when reaching the mid-30s. Partnership status was the main driver of realisation of strong intentions, while childless men and women intended a child late most often but changed their intention least often.

Keywords

Advanced parental ages, higher reproductive ages, delayed childbearing, fertility intentions, reproductive aging, assisted reproduction, low-fertility countries, Europe, United States.

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Late Fertility Intentions and Fertility in Austria

Éva Beaujouan

1. Introduction

Late fertility was common in fertility regimes with a high frequency of very large families, and mostly concerned high-order births. It is reappearing slowly in the picture of contemporaneous fertility, but this time is mostly composed of first births (Billari et al. 2007; Prioux 2005; Sobotka et al. n.d.).

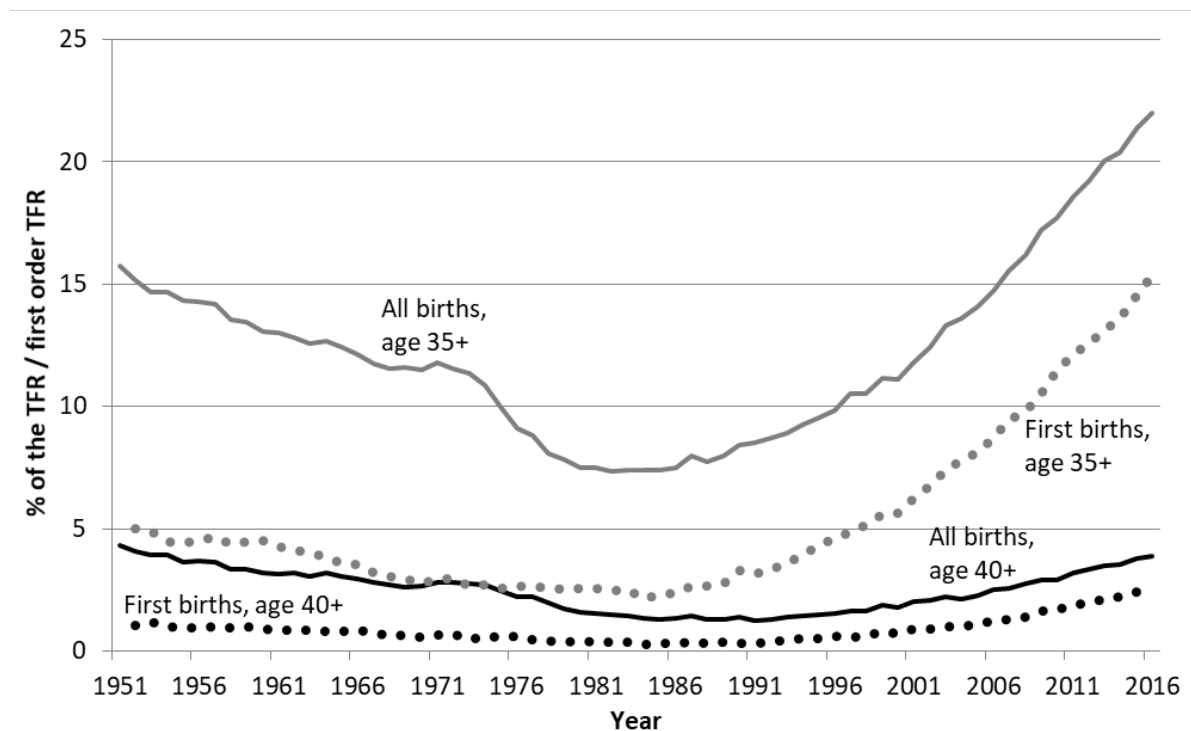
Contraception offers means to postpone childbearing, but also a slower pace of transition through the markers of adulthood has led to a later transition to parenthood (Clark 2007). Particularly, recent research links later completion of education to childbearing postponement (Neels et al. 2017; Ní Bhrolcháin and Beaujouan 2012). Having children, whether a first or further children, thus increasingly relies on the later reproductive life. However, sterility (defined here as the permanent inability to conceive) increases rapidly from age 35: at that age five out of hundred women cannot have a child anymore, at age 40 one out of six, and more than one out of two at age 45 (Leridon 2008). The prevalence of sterility is higher for childless women (Toulemon 2004). Delaying parenthood thus means higher risk of infertility and more medical risks during pregnancy, with the psychological consequences it entails (McQuillan et al., 2003).

We are seeking to understand whether the delay in childbearing contributed to lower aggregate fertility levels, through the study of late fertility intentions. We explore here how unfulfilled late intentions and the associated “fertility gap” have been changing across cohorts at the population level. To deepen the understanding of this aggregate gap, we study the importance of age in realising fertility intentions, using the retrospective and panel features of the Austrian Generation and Gender Surveys (GGS). Particularly, we study the individual outcomes of late positive fertility intentions among men and women. To do so, we adopt a narrow definition of positive intentions, i.e. wishing a child within 3 years and certainly, which we mostly call “strong intention to have a child”. We draw the age profile of those realising and of those reversing their strong positive intentions, and give an insight into their characteristics. Men could more often succeed in having children when they try late, so we model both sexes separately. Since highly educated women display later fertility schedules, it is likely that they will be constrained in their childbearing attempts more often than the others. Possibly other demographic characteristics such as number of children and partnership status will contribute in explaining realisation and change in fertility intentions (Bloom and Trussell 1984).

2. Background

In all European countries, birth calendars have been shifting to later ages (Frejka and Sobotka 2008; Malačič 2008; Mills et al. 2011). The new feature of late fertility is the high prevalence of first births after age 35. In Austria notably, while it was limited to 5% of the total first birth rate in the middle of the 20th century, it reached 15% in 2016 (Figure 1). The contribution of births by mothers aged 35 or more to the total fertility rate also increased to reach 22% in 2016. This is above past levels of the 1950s, when higher order births were the main contributor to late fertility. These results are in line with results in other developed countries (Prioux 2005; Sobotka et al. n.d.). Note that Austria is in the middle range of Western European countries: in most of them more than one fifth of all births took place at age 35 or above in 2014 (Sobotka and Beaujouan 2018).

Figure 1 Contribution of women aged 35+ and 40+ to total fertility rates (TFR) and to first-birth fertility rates, 1951 - 2014



Source: Human Fertility Database (HFD), Austria, made available 05/11/2015; Human Fertility Collection (HFC), Austria, made available 12/11/2012 by Sobotka and Šťastná; Eurostat.

Note: calculations are based on data organised by age in completed years (ACY, i.e. the squares on the Lexis diagram, suited for period calculations), except for those based on the Human Fertility Collection (first births 1951-1983), available only in age reached during the year format (ARDY, organised for cohort calculations). See the HFD protocol (Jasilioniene et al. 2007) for details. The recent estimates are not affected, and this is of little impact for the years in question given the low prevalence of late first births.

2.1. Trends in Late Fertility Intentions and Childbearing

Childlessness spread quickly across European countries in cohorts born in the second half of the 20th century (Sobotka 2017). In Austria 19.2% of women born in 1972 did not have children against 12.6% of women born in 1950 (Sobotka et al. 2015). Completed fertility decreased from 1.87 children per woman in the earlier birth cohort to 1.67 in the later birth cohort (Zeman et al. 2017). Delayed childbearing means that family life is starting later, but does not necessarily correspond to lower completed fertility or to higher childlessness rates. Evidence is mixed on this link. On the one hand, Toulemon and Mazuy (2001) showed for France that there was still margin for postponement before completed fertility would be affected. On the other hand, microsimulation results for several European countries showed that childlessness was increasing due to later fertility schedules (te Velde et al. 2012). This awakes demographic concerns about the possibility to have children and a theoretical “unrealised” fertility (Casterline and Han 2017). We argue that fertility levels could be subject to an involuntary decrease. Women are not necessarily aware of the extent of the age-related fecundity decline. They could postpone childbearing until ages where they are very unlikely to have a child or where having more than one child could turn out difficult. This corresponds to more and more women wanting a child late, but the share of women having a child late not necessarily increasing to the same extent.

Research questions

- How did the proportion of women still intending to have a child after age 35 change over time, particularly at late reproductive ages (43-45 years old)? We expect that this proportion has been increasing.
- Did the gap between aggregate late intentions and completed fertility change in the recent birth cohorts? We expect that late fertility intentions increased (wishing a child and how many), but that the proportions actually having a child or the number of children had increased less, resulting in an increase in the gap.

2.2. A Necessary Account of Uncertainty, “Selectivity” and Change in Intentions with Age

Research shows that fertility intentions are to a certain extent good predictors of childbearing behaviour, but that they are subject to strong uncertainty and not necessarily well defined in peoples mind (Bachrach and Morgan 2013; Kuhnt and Buhr 2016; Ní Bhrolcháin and Beaujouan 2015). The constructed aspect of intentions (inferred from available information, e.g. depending on the circumstances and on the surroundings) explains that many people tend to declare different intentions from one survey wave to the next or after a transition such as a break-up or unemployment (Gray et al. 2013; Kuhnt and Buhr 2016). Fertility intentions, initially weak and indistinct, appear to be discovered as people experience fertility and life events related to it (Ní Bhrolcháin and Beaujouan 2015). This explains that, at young ages, uncertainty is very prevalent and there is much

variability in answers to intention questions. Uncertainty then seems to decrease with age, but could become large again when reaching less fertile ages.

Indeed, having waited too long can result in not having the children one expected (Koert and Daniluk 2017). Persons with strong positive intentions at one point in time may thus become less certain that they will have the child previously intended as they reach less fertile ages, thus shifting to an uncertain positive or to a negative intention. Notably, they change massively from a positive to a negative intention to have children (Berrington 2004; Kapitány and Spéder 2012; Roberts et al. 2011; Spéder and Kapitány 2013). Those really engaged into having a child, for instance trying, then become more numerous among those with certain positive intentions at later ages. Theoretically, the group with strong positive intentions at age 35 or higher should thus be more likely to have the children intended. Given the rise in infertility with age, this can however be questioned.

Research questions

- From which age do persons who strongly wanted a child “give up” on the idea, or become uncertain? Among those who declare that they intend a child, the proportion uncertain that they will manage is expected to increase from age 35, but also the proportion who wants a child very quickly.
- From what age does age-related infecundity take up on childbearing and does the realisation of strong positive fertility intentions start declining? Persons with strong positive intentions at later ages should be those most engaged into having a child and thus be more likely to have the child they intend. This competes however with the age-specific decrease in ability to procreate.

2.3. Factors of Fertility Intentions, Realisation and Change

Women’s educational and work trajectories are becoming increasingly similar to men’s, and thus family trajectories are also getting more and more alike (Widmer and Ritschard 2009; Waren and Pals 2013). Though the age of their partner matters, men are not subject to the same biological constraints as women: they become infecund less quickly than women with age (Fisch and Braun 2005; de La Rochebrochard et al. 2006). Women are thus more constrained by the biological clock than men (Beaujouan et Solaz, 2013 ; Billari *et al.*, 2011), and male fertility is overall certainly less affected by postponement than female fertility. This could create an unequal possibility to become a parent at later ages for the two sexes.

Realisation of fertility intentions as well as their reversal depend on parity. Mothers less often plan a birth than childless women, but parents realise a short term positive childbearing intention more often than those without children (Dommermuth et al. 2015; Harknett and Hartnett 2014). Also, the higher the parity, the more likely to renounce having a child (Kapitány and Spéder 2012). The fact that most people want two children

certainly reinforces the importance of parity in the study of late intentions and realisation or abandonment.

Fertility intentions change with life circumstances, and are particularly dependent on the partnership status (Gray et al., 2013 ; Hayford, 2009 ; Iacovou et Patricio Tavares, 2011 ; Liefbroer, 2009): those who are in a partnership usually display higher and more certain intentions. They are also more likely to realise them (Spéder and Kapitány 2013). In addition, evidence from Italy and France shows that women with positive intentions who get married are least likely to renounce their intention (Régnier-Loilier and Vignoli 2011). Finally, given this strong interdependency, realisation and change in intentions certainly depend on the change in partnership status that can occur in the meanwhile. Particularly, partnering would boost childbearing and a separation would impede it.

Besides educational enrolment, higher education as such seems of importance in delaying childbearing (Lappegård and Rønsen 2005; Neels et al. 2017), but particularly whether it takes place at all. While the proportion of low educated women being childless changed little in Austria between the cohorts born 1950-54 and 1960-64 (around 12.5%), the proportion childless among the highly educated women jumped from 15.7 to 23.5% (Cohort Fertility and Education database). In the studies available, once parity and age are accounted for, short term realisation depends little on educational level (Pailhé and Régnier-Loilier 2017; Spéder and Kapitány 2013). Still, highly educated women are less likely than their lower educated peers to renounce having a child within three years (Kapitány and Spéder 2012).

Research questions

- When women could become increasingly constrained by age-related infecundity, do men appear to experience the same type of limitation? We expect that women who desire children at age 35-44 will have them less frequently than men.
- Do we observe differences in fertility intentions, realisation and change by parity? Women and men with no or one child are supposed to express more often a very strong engagement towards having children (very sure and within 3 years), but among those with a very strong intention those who already have a child should be more likely to realise their intention.
- Is partnership status important? We expect that those in a partnership are more likely to want a child, particularly if they are married. We also expect that those who enter a (new) partnership are most likely to change their mind or to have a child.
- Do we observe differences by level of education? Possibly, women with high education level will strongly wish and have a second child more often than their less educated peers (at equivalent age), because of the “time squeeze” (they started having children later so accelerate the next birth). However, they could be more often constrained by biological limits. No such effects are expected for men.

3. Data and Method

3.1. Data

Fertility intentions

In Austria, fertility intentions questions are captured in two important data sources: The Austrian Micro-Census (every five years from 1986 onwards until 2016) and the Generation and Gender Surveys (waves 1 in 2008/09 and 2 in 2012/13).

Austrian Micro-Census data allow to draw time series of intentions. Indeed, the same question was asked over time, and particularly pre-codes of this question did not change. Intentions were asked of women aged 20-45 (or older), but were restricted to women up to age 40 in 2006. Given the nature of fertility intention questions, we dropped proxy answers, i.e. the answers that were given by another member of the household for the person targeted when this person was absent. Depending on the year, between 2686 and 6613 women were thus asked questions on fertility intentions in the Austrian Micro-Census. For exact wording of the questions in German we refer to Appendix 1. The question we use in the current study translates in English to: *“Do you wish to have one or several (additional) child at some point in your life? Please count ongoing pregnancies.”* Possible answers were: *yes, no, don’t know*. This question is used to calculate the proportion of women who do not wish a child (anymore), and together with the number of children asked afterwards, the total number of children intended.

In the 2006 Micro-Census, an extra question on the time frame of the next intended birth was asked (among those who answered yes to the first question), which we use in order to study whether a sense of urge develops with age, and from what age (see Appendix 1 for the full question in German).

The first wave of the panel “Generation and Gender Survey” (GGS) took place in Austria in 2008/09, interviewing face to face a sample of men and women representative of the Austrian population. A few filters applied (see also Beaujouan 2014) so that 1781 men and 2711 women aged 18-45 were eventually asked the questions on fertility intentions (all questions and preliminary questions are available in Appendix 1). The second wave (2012/13) included the same fertility intention questions and available data allow reconstructing the partnership and fertility events that took place between the waves. Due to attrition, in total 1132 men and 1871 women were interviewed in the two waves and allow to study realisation of and change in fertility intentions.

The main questions on intentions are translated as: (1) *“Do you want yourself an (additional) child now?”* Possible answers: *yes, no, don’t know*. (2) *“Do you intend to have a child in the next three years?”* Possible answers: *certainly not, probably not, probably yes,*

certainly yes. (3) "In case you don't have a child in the next three years, do you want one afterwards anyway?" Possible answers: *certainly not, probably not, probably yes, certainly yes.*¹

In the current study of late fertility we are particularly interested in understanding whether those wishing children very strongly actually had them even when they were reaching less fertile ages. We are also interested in a possible shift from certain to uncertain or negative intentions as one ages. We thus focus on those who are the most likely to try and realise their intention. Accordingly, our intention variable is constructed the following way: people who want a child right now or within three years and are certain about their positive intention constitute our category "Yes very sure". All the other persons with positive intentions are classified as "Yes unsure". All those with negative intentions as "No more".

Other variables for the longitudinal study of intentions in GGS

Age is the age of the interviewee at the first wave. Parity is based on the number of children the individual declares at the first wave. Level of education was constructed based on the highest diploma obtained at the first wave, and recoded using the ISCED 1997 scale (low 0–2, medium 3–4, and high 5–6).² Beside marital status at the first wave (married, in cohabitation, living alone), we take into consideration change in partnership, based on the partnership situation at first and second wave (without a partner at both waves, with a partner at both waves, with a partner at wave 1 and then separated, without a partner at wave 1 then with a partner). Though change in partner between the waves would have been interesting to study, "with a partner at wave 1 and without at wave 2" was combined with "with a different partner at wave 2" into "with a partner at wave 1 and then separated" because the numbers in the cells were too small to detail this. A summary of all the covariates and numbers in the model is given in appendix 2.

3.2. Method

In a first instance we analyse the change over time in aggregate intentions at age 35-39, 40-42 and 43-44 in the Micro-Censuses. In addition, we evaluate the gap between "late" fertility intentions and actual fertility at the aggregate level in each cohort (five-year cohort groups between 1950 and 1974), and whether this changes from one cohort to the other. To do so we pool all the Micro-Censuses and study indicators within five-year groups of birth cohorts (instead of the usual period study). We calculate the difference between mean intended family sizes at age 35-39 and mean completed family sizes (i.e. average number of children at age 40 to 49) within the same cohort group. We do the same between proportion eventually childless and proportion who intends no child to

¹ Along the text, we refer to the answers to the questions of the Micro-Census and of the GGS using "want", "wish" and "intend" interchangeably. In this case, it does not make much difference as the aim of all the questions is the same, i.e. to evaluate the "Kinderwunsch".

² Find ISCED mapping for Austria under <http://uis.unesco.org/en/isced-mappings>.

estimate the share who are “unwillingly childless”. The estimates are weighted to account for survey design and non-response. We also study uncertainty at later ages using GGS as well as the 2006 Micro-Census where more refined question on fertility intentions timing were asked.

In a second instance we study whether the realisation of strong positive fertility intentions varies with age for both men and women, using the panel feature of the Austrian GGS. We also study change to uncertain or negative fertility intentions with age. Finally, we explore the factors of realisation and change in intentions. We first show the age profile of fertility intentions by parity at the first wave of GGS. We look at the factors of intentions using a logistic regression. We then use the second wave of the GGS in order to calculate the age profiles of realisation and change in intentions between 2008/09 and 2012/13, depending on the original intention (Yes very sure, Yes unsure, No). We estimate multinomial models with three outcomes (birth or (partner) pregnant, change in intention, no change in intention).

4. Results

4.1. At Later Ages, Women Have Less Children and Want More Than Before

We first assess whether there was an increase in the share of women who wish a child at late and very late ages, intentions very likely not to be realised. In Table 1 we provide the proportion of women who still wish a child in the age groups 35-39, 40-42 and 43-44, and show how it evolved over time. Results reveal that the share of women wishing (further) children strongly increased in all the age groups featured. Particularly, at age 43-44 the proportion of all women desiring a child rose from 0.3% in 1986 to around 4% in the recent years, while the chances of still having a child are extremely small at that age. Parity is an important factor of intentions at those ages: childless women have always been much more likely to wish a child than women with one child, themselves wishing more often a child than those with two or more children. The share wishing a child has however increased to an equivalent extent at all parities: women have postponed family formation so that an increasing share wish for a (further) child at older age.

Table 1 Share of women who wish a child, by survey year

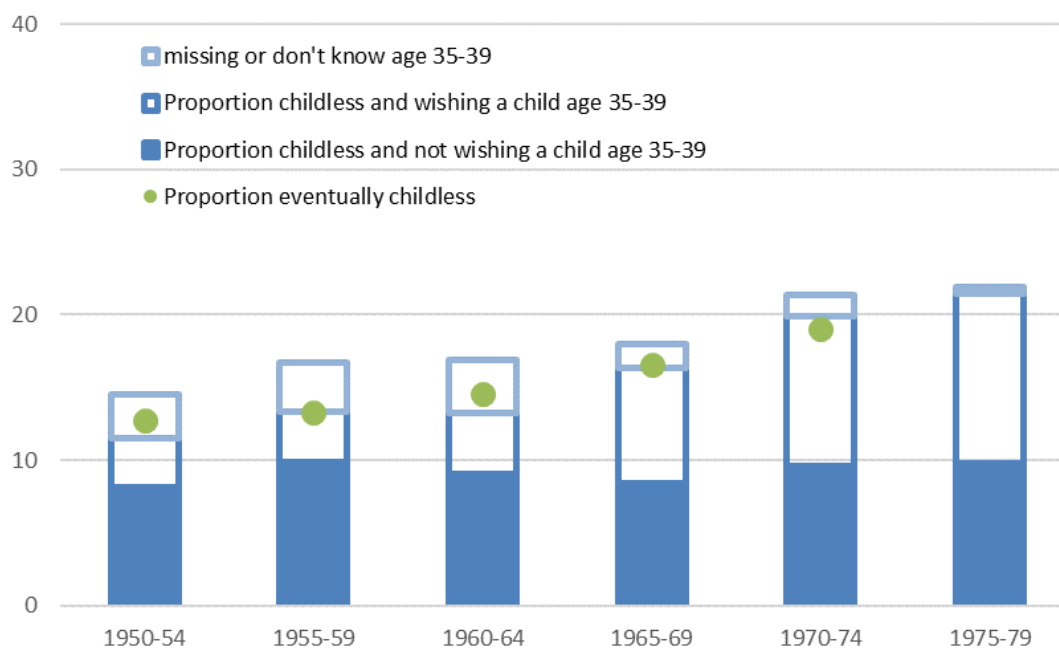
	1986	1991	1996	2001	2006	2012	2016
<i>Age 35-39</i>							
All parities	6.5	9.9	7.5	13.4	21.0	24.4	24.4
Childless women	21.1	25.6	16.4	34.3	47.1	49.7	62.3
Women with one child	10.2	15.7	11.4	17.7	32.9	30.8	31.7
Women with more children	2.9	3.2	3.5	5.7	6.7	9.9	6.8
<i>Age 40-42</i>							
All parities	1.3	1.3	2.4	3.1	-	8.4	11.6
Childless women	3.5	6.0	9.1	14.3	-	21.2	29.8
Women with one child	1.3	1.6	2.5	2.8	-	8.5	14.9
Women with more children	0.9	0.2	1.3	1.0	-	3.8	3.6
<i>Age 43-44</i>							
All parities	0.3	0.7	1.4	2.9	-	4.1	3.6

Source: Austrian Micro-Census

Note: the sample size was not large enough to decompose intentions at age 43-44 by parity. In 2006, intentions were asked only to women aged 40 or less. Also because of that, we display intentions by survey year and not by cohort.

Next, we compare within birth cohorts the proportion of childless women who declare not wishing a child at age 35-39 with the proportion of women eventually childless (age 40-49), using data across several Micro-Censuses. The total share of women who were childless and not wishing children remained rather stable between 8 and 10% in the 1950-79 birth cohorts (Figure 2). In parallel, the proportion of women childless at that age continued increasing, so that the proportion of women childless and wishing to have a child at age 35-39 increased from 3.3% in the 1950-54 birth cohort to 11.6% in the 1975-79 cohort. Final childlessness increased strongly in these cohorts as well, and these results suggest that less and less of the childless women who still wanted children at age 35-39 eventually had them. The gap between the proportion of women saying they did not wish a further child at age 35-39 and the proportion of eventually childless women in the same cohorts (Table 2) confirms this. In percentage of all women the proportion “unwillingly childless” increased from around 1% among women born in the 1950s to 8.6% among those born in the 1970s. In these calculations, missing & don’t know were evenly distributed between the group wishing and the group not wishing a child: if in fact they are more often rather wishing a child, then we are underestimating the gap, otherwise we are overestimating it.

Figure 2 Proportion of women childless wishing a child and wishing no child at age 35-39, proportion of women childless at age 40-49, in Austria



Source: Austrian Micro-Census

Note: the percentage eventually childless is calculated in each cohort using the average proportion without children across the 40-49 age group from the Micro-Censuses.

Table 2 Gap between % eventually childless and % childless and wishing no child at age 35-39 among women, by birth cohort

	1950-54	1955-59	1960-64	1965-69	1970-74	1975-79
% childless & wishing no child at age 35-39	11.0	13.1	12.6	10.0	10.4	10.1
% eventually childless	12.7	13.3	14.6	16.6	19.0	
Gap (% "unwillingly" childless)	1.7	0.2	2.0	6.6	8.6	

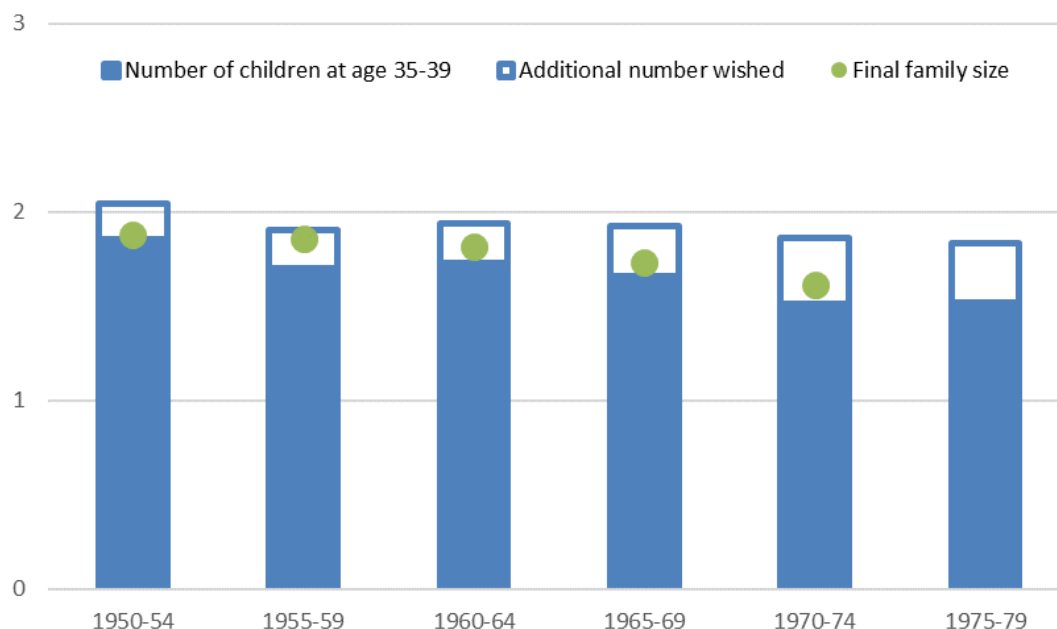
Source and note: as in Figure 2

Note: Missing and don't know are evenly distributed between wishing and not wishing

Finally, we compare in the same birth cohorts the number of children born and the number of additional children intended at age 35-39 on the one hand, and completed fertility on the other. Austrian women born in 1950-54 had 1.85 children per woman when aged 35-39, but those born in 1975-79 had only 1.52 children at that age (Figure 3). The total number of children intended at age 35-39 decreased to a lesser extent, from 2.04 to 1.83. Despite the surge in the additional number of children intended, the number of children born between 35-39 years and the end of the fertile life (average over ages 40-49) did not increase much. This left an increasing gap between late intentions and realisation,

which passed gradually from a deficit of around 0.04 children in the 1955-59 birth cohort to a deficit of 0.25 children in the 1970-74 birth cohort (Table 3). This confirms that the decrease in completed fertility across cohorts did not entirely reflect decreasing wishes in terms of family size.

Figure 3 Number of children intended at age 35-39 among women, by birth cohort



Source: Austrian Micro-Census

Note: Final family size is calculated in each cohort using the average number of children across the 40-49 age group from the Micro-Censuses.

Table 3 Gap between cohort fertility at age 40-44 and total intentions at age 35-39 among women, by birth cohort

	1950-54	1955-59	1960-64	1965-69	1970-74	1975-79
Number of children wished at age 35-39	2.04	1.90	1.94	1.92	1.86	1.83
Final family size	1.88	1.86	1.82	1.73	1.62	
Gap	-0.16	-0.04	-0.13	-0.19	-0.25	
Gap in % of children not had	-7.8	-2.1	-6.4	-9.9	-13.2	

Source and note: as in Figure 3

Uncertainty at older ages

Uncertainty is inherent to fertility intentions, and its study should give further indications on the perception of constraints to childbearing at later age. In addition, intentions change with age and fertility schedules change with time, leading to the large selection effects

described earlier. Intentions at later ages and their realisation cannot be studied in isolation of the earlier ages.

According to the 2008/9 GGS, among women who declare wanting a child uncertainty grows until age 30-34 when almost 50% of them are uncertain, but then decreases quickly as a large share of women shift their intention to no (further) child. Additional explorations show that this decrease also takes place among childless women. Women become less certain that they will have a child from age 35 maybe due to their life circumstances, e.g. the absence of partner, associated with the observation that they are reaching less fertile ages. Results confirmed selectivity among women, as females who continue giving a positive intention and constitute the core of the yeses are those most certain. There is less selectivity among men: a larger share than among women keeps positive intentions at least until age 35-39, but the share uncertain is generally larger, and remains large until later ages. Between 40 and 50% of men are uncertain about their positive intention to have a child at all ages.

Table 4 Prevalence of uncertainty

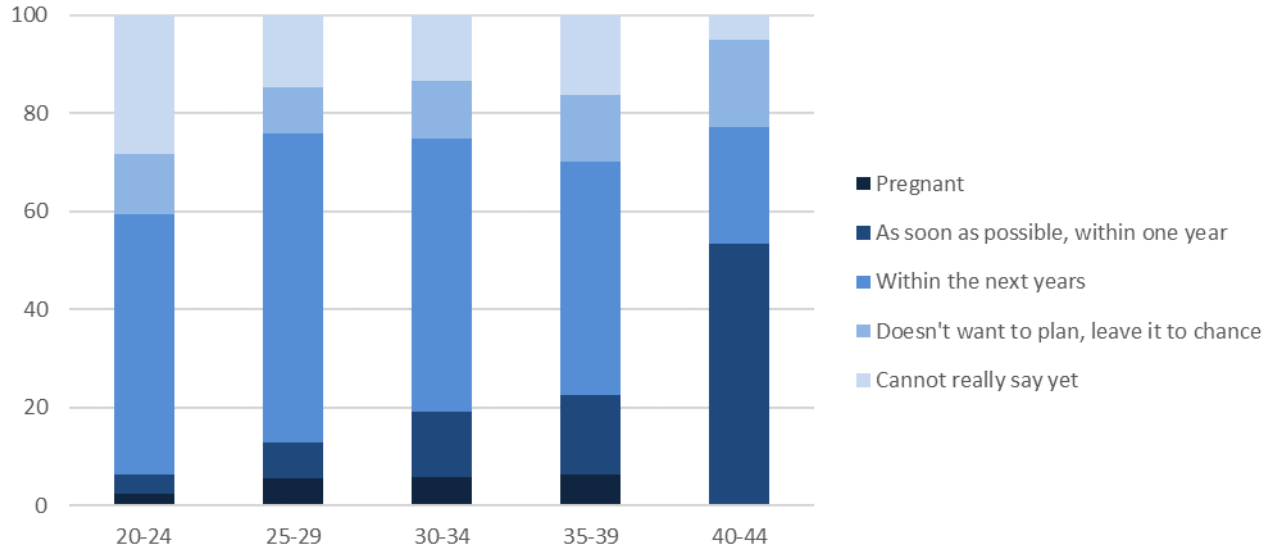
In %	20-24	25-29	30-34	35-39	40-45
<i>Uncertain among yes (certain and uncertain)</i>					
men	45.8	51.3	40.0	52.3	40.9
women	37.7	45.7	48.9	34.6	19.7
<i>Total share of yes (certain and uncertain)</i>					
men	88.9	80.3	63.8	45.6	23.3
women	84.9	74.4	52.2	27.5	12.3

Source: Austrian Generation and Gender Survey 2008/09

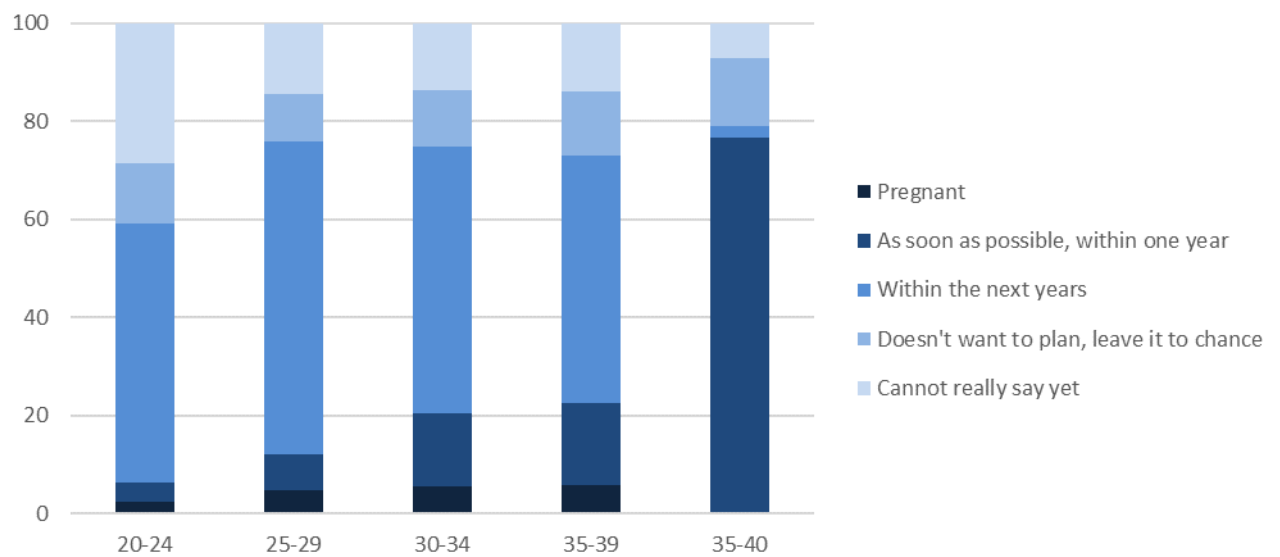
The question on the time frame of the intended next birth asked in the 2006 Micro-Census deepens our understanding of the transformation of positive fertility intentions with age (Figure 4a). Our analysis indicates that there is an increasing sense of urge, as the proportions pregnant or wanting a child as soon as possible grow with age. Results are the same when limiting the study to those with no or one child (Figure 4b). In addition, at age 40-44, the proportion who cannot really say yet is smaller than ever, but the proportion leaving it to chance is actually higher than at other ages, reaching almost 10%. Finally, the proportion giving a blurred answer (within the next years) decreases with age after representing two third of women with positive intentions at age 25-29. Eventually, at age 40-44 we can consider that half of those who say they wish a child are in fact seriously thinking about it, and almost four out of five women with no or one child.

Figure 4 Distribution of time frame of next birth among those who intend to have a child, women by age

(a) All parities



(b) Parity 0 or 1



Source: Austrian Micro-Census 2006

4.2. Age Profile and Factors of Fertility Intentions

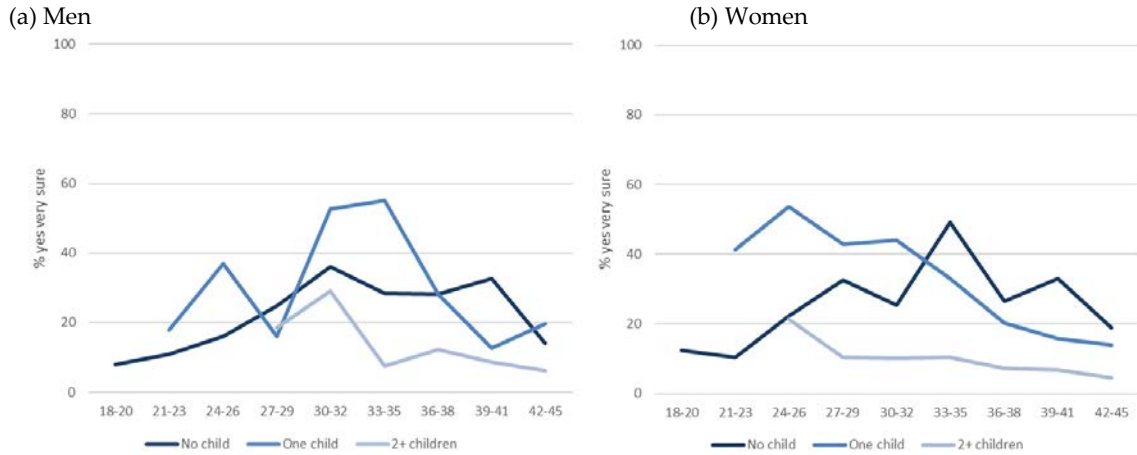
This section intends to give more information about the levels and factors of intentions, and the following section (4.4) about the level and factors of realisation. The construction of the intention variable is described in the method part.

Preliminary analyses show that parity is key to the variation in childbearing intentions with age. At all ages and for both sexes, age specific intentions display extremely different levels depending on the number of children already born (Figure 5). The other explored covariates – i.e. partnership status and level of education – also change with age but are not so strongly correlated to age regarding the intention expressed (results not shown).

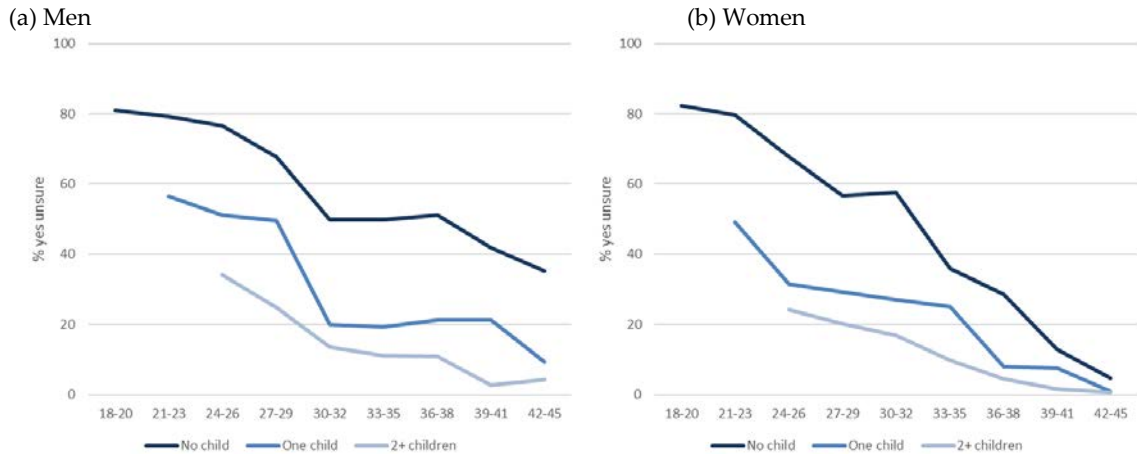
While young childless women mostly do not want a child quickly and with certainty (Figure 5), childless women who have reached their late 20s up to late 30s have the highest intentions. The peak is at 50% for women aged 33-35. Childless men display an equivalent picture with a lower peak. When the sample size becomes large enough to observe them (age 21-23), women with one child are by far the most numerous to want a further child quickly. This remains so until their early 30s. For men the observations are similar but with an age shift, as they tend to have their children later. Because of the two-child norm, men and women with one child tend to have a second one, and it seems that they also want it strongly and rapidly, particularly when they are young (and their first child is still young as well). In the late 30s, less than 20% of those who already have one child surely want another one, still more than those with two or more children. The latter wish a further child in very low proportion compared to the other parities. Certainly, those who really wanted another one already had it (proportions are slightly higher before age 30), but simply most people stop at two children.

The proportion who wants a child with less certainty (positive unsure) decreases almost linearly and to very low levels for women. The contrast is extremely strong by parity at young ages for both men and women: childless are the most numerous to answer they want a child but are uncertain, then those with one child, and finally those with more children. Differences between parities remain strong among men as they age, but proportions converge towards 0 among women of any parity. In parallel, negative intentions to have (further) children increase in prevalence also at any parity, the proportions being the lowest among childless and the highest among those with two or more children. Particularly among childless women, the proportion not intending a child shoots up from age 36 onwards, possibly because they have had the children they intended to have or most probably because they switched from a positive to a negative intention when reaching less fertile ages. Among childless men the sudden increase takes place later, at age 42-45. Finally, men like women with one child see a gradual but ultimately strong increase in negative intentions with age.

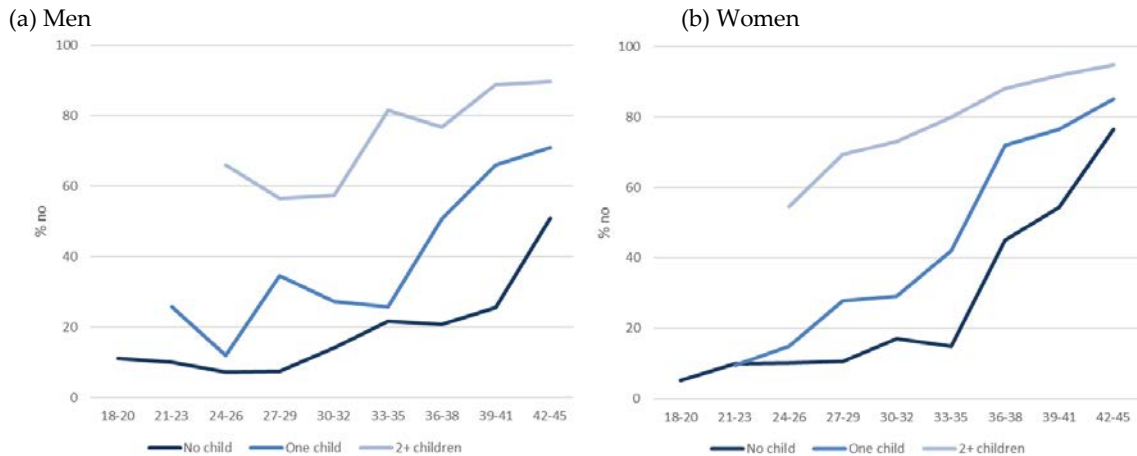
Figure 5 Percentage with a given intention in 2008/09, men and women by parity, Austria
(1) Yes very sure (certain and within three years)



(2) Yes unsure (4+ years or uncertain)



(3) No more (certain or not)

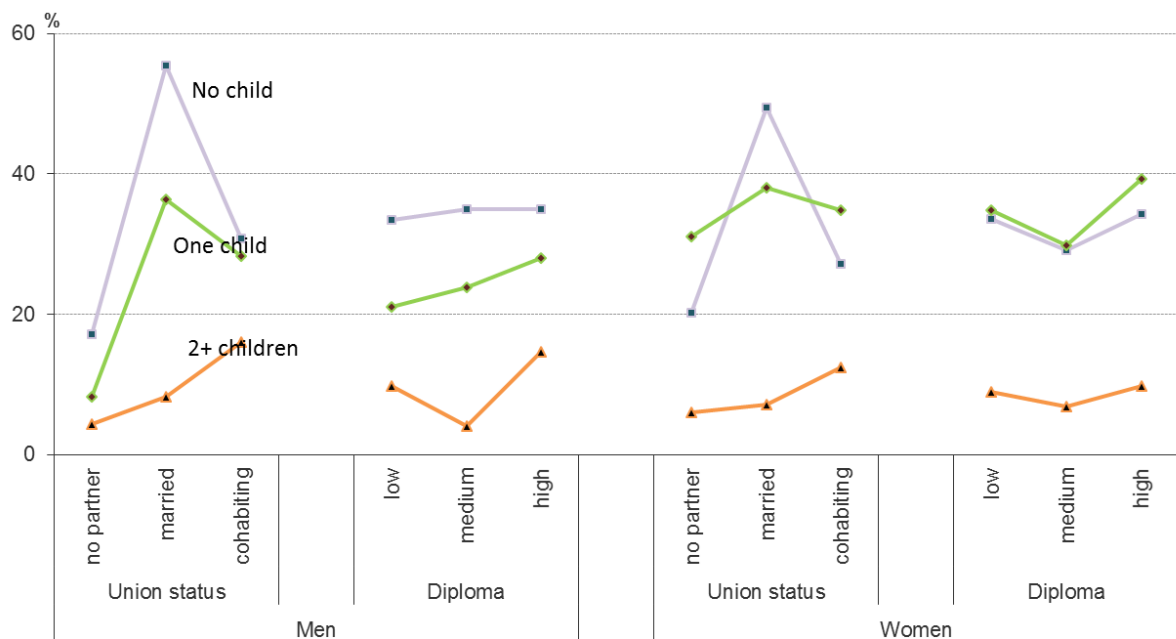


Source: Austrian GGS wave 1 (2008/09)

Note: the number of observations is generally large enough to be reliable for the information displayed in these graphs (mostly between 60 and 200, by age and parity). However, the information about men with one child is based on few observations (between 20 and 50) at most ages and is therefore less reliable.

Multinomial regressions were carried out to study the characteristics of those who want children very quickly and very certainly, decomposed by parity (Figure 6). Clearly, those who do not have a partner display the lowest estimated probability of having a definite intention to have a child, especially among men. Level of education, once age and parity are taken into account, is not linked to strong childbearing intentions (significance calculated in simple regressions, see Appendix 3). Note that the shape of the estimated age curve (not shown) is completely similar to the shape of the curve of intentions proportions by age.

Figure 6 Estimated probabilities of strongly wanting a child, calculated in a multinomial model with uncertain positive intention and negative intention as competing events, models for men and women by parity (6 models)



Source: Austrian GGS wave 1 (2008/09)

Other control: age

Note 1: Models are unweighted because there is currently no R package that allows using survey weights for multinomial regressions.

Note 2: In order to get an idea of the significance of the coefficients in these models, we ran the equivalent logistic regressions for wanting a child very strongly versus the other outcomes. The results are presented in Appendix 3.

4.3. Realisation among Those with Strong and Less Strong Positive Fertility Intentions

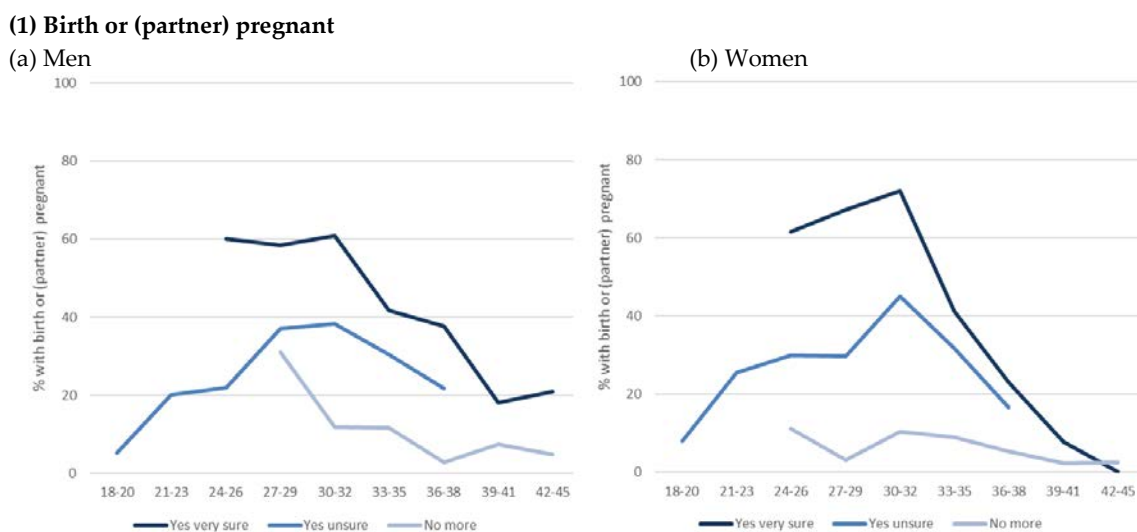
Using GGS panel data, we are able to observe what has happened four years after the first wave, depending on the initial intention (Figure 7). The outcome is very age and sex dependent, and strongly depends on the initial intention. Those who had expressed a certain and short-term intention are most likely to have a child, up to 70% of women at

age 30-32 and 60% among men. However, among women from that age onwards, a deep decrease takes place so that almost no woman aged 42-45 in 2008/9 has had a child by 2012/13. For men the decrease is less steep, and in their 40s one fifth of them still have the child they strongly intended. Though women and men who are positive but uncertain about having a child have less often one, still up to 40% in their early 30s have one, and in the late 30s the frequency of realisation tends to converge towards the frequency among the very certain. Finally, though they had said they did not want a child (sure or unsure) at wave 1, a substantial share of men in their early 30s had one at wave 1 (around 20% of those who had said no). Among women the proportions remain below 10% and decrease faster.

The proportion of women (and to a lesser extent of men) with strong positive intentions who change their intention to wanting one less strongly or not wanting a child increases with age. Since women with the weaker intention leave the group of those wishing a child strongly, those who are still in this group after their mid-30s are certainly those with the strongest will to have children. Despite this, they are the least likely to have children. Note that among those with negative intentions before age 30 in 2011, a substantive share switches to a positive intention (30% of men and 10% of women).

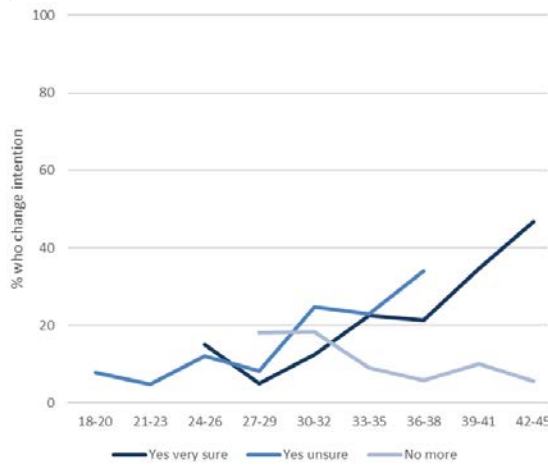
Finally, the proportion constantly wanting a child strongly at both waves is rather stable between 20 and 40%. There is still a rebound in the mid-thirties that seems to be explained by lower realisation, i.e. more people conserving their strong intention because they have not had the child yet but are really intending to have it. Those who do not wish a further child are the most likely to keep their negative intention (up to 90%). However, men and women with positive but uncertain intentions leave this group at an increasing rate with age: they can either become strongly positive about having a child if their life course unfolds in this direction, or switch to a negative intention (particularly after their mid-30s).

Figure 7 Childbearing and change in intention between 2008/09 and 2012/13 depending on the original intention, men and women, in percent

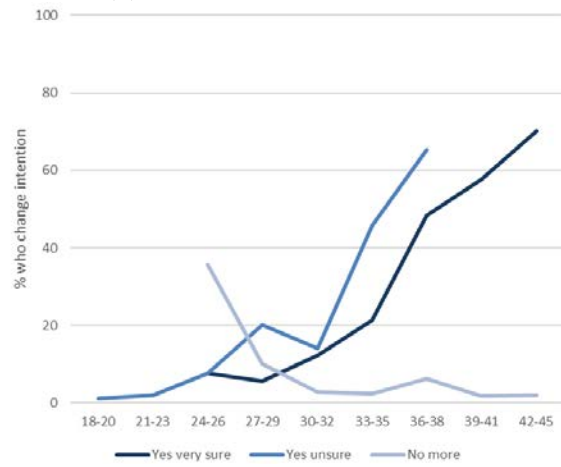


(2) Change of fertility intention

(a) Men

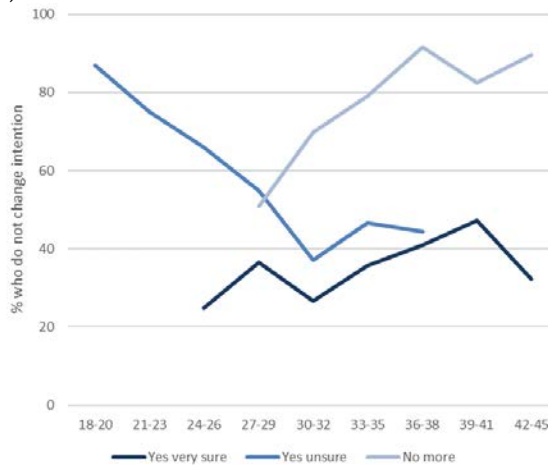


(b) Women

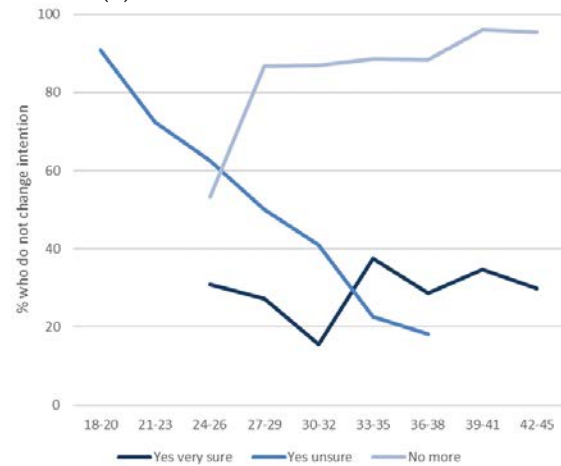


(3) No change of fertility intention

(a) Men



(b) Women



Source: Austrian GGS wave 1 (2008/09) and wave 2 (2012/13)

Note: the sample size is smaller than in Figure 5, given the attrition between the waves. Among men all ages together, the sample size is 284 for yes very sure, 410 for yes unsure and 515 for no more (among women respectively 369, 473 and 1089). We do not display information when less than 20 persons answered the question. In general the sample in the cells displayed is around 40 to 70 answers, which is not very large, but the continuity across ages reinforces the results.

The predicted probabilities of the factors of realisation and of changing intentions by original fertility intention are calculated in a multinomial regression and featured in Figure 8 and Figure 9.³ As multinomial models do not provide significance between covariate categories in R, an approximation was calculated in simple regressions for information and is presented in appendix 4. The estimated age profiles by original

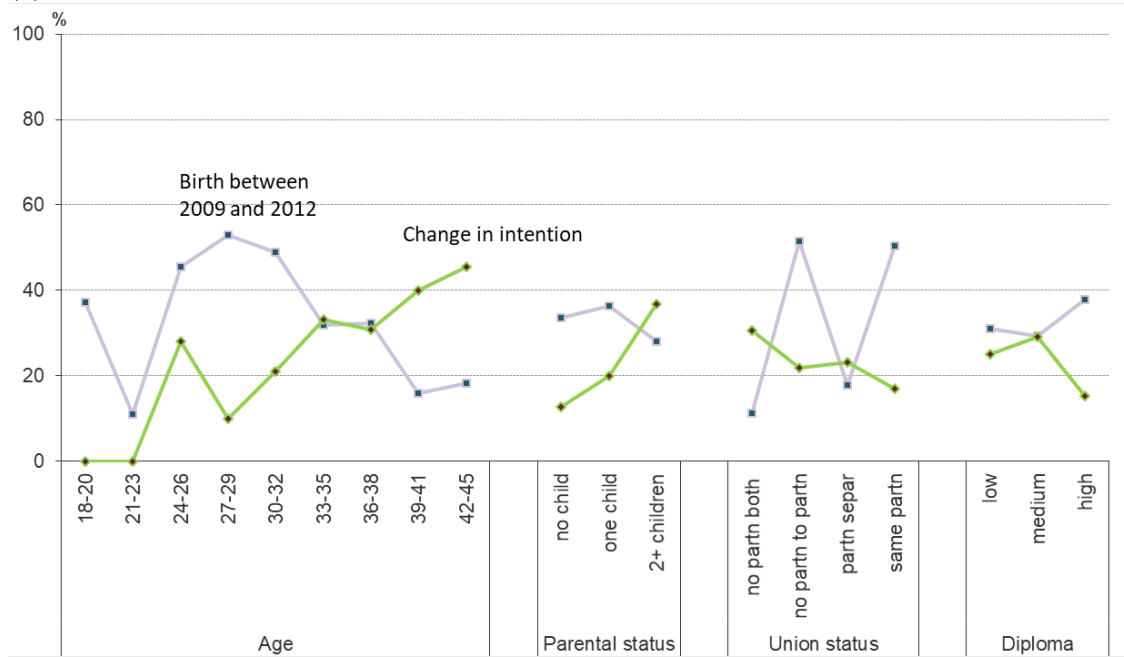
³ Given the research question, we are showing results for each initial intention separately. The introduction of the intention variable in an overall model of childbirth between the waves improved the model accuracy for men like for women. Notably, the area under the ROC curve (AUC) increased from .78 to .82 for men and from .82 to .86 for women.

intention remain about the same as in descriptive, meaning that the shape was not influenced by underlying observed factors. Parity has no significant effect on realisation of strong positive intentions, but has one for women who wish a child less strongly: those with two or more children already are the least likely to have one and are very likely to shift intention. Changing intention does depend on parity, displaying a positive gradient: the more children, the more prone to change intention. We find a general link between change in partnership status and realisation of a positive intention (strong or less strong): those with the same partner at both waves and those who get a partner are most likely to have a child between the waves. They are also somewhat less likely to change intention. Among those without a partner at both waves the realisation probability is very low. Women who separated still often had the child they wished, while men had it less often.⁴ Finally, level of education was a bit more important than for intentions themselves: controlling for age and parity, highly educated women with strong fertility intentions and men with moderate fertility intentions were more likely to have the child they intended than their less educated peers. Highly educated men were also changing intention less often than in the other educational groups.

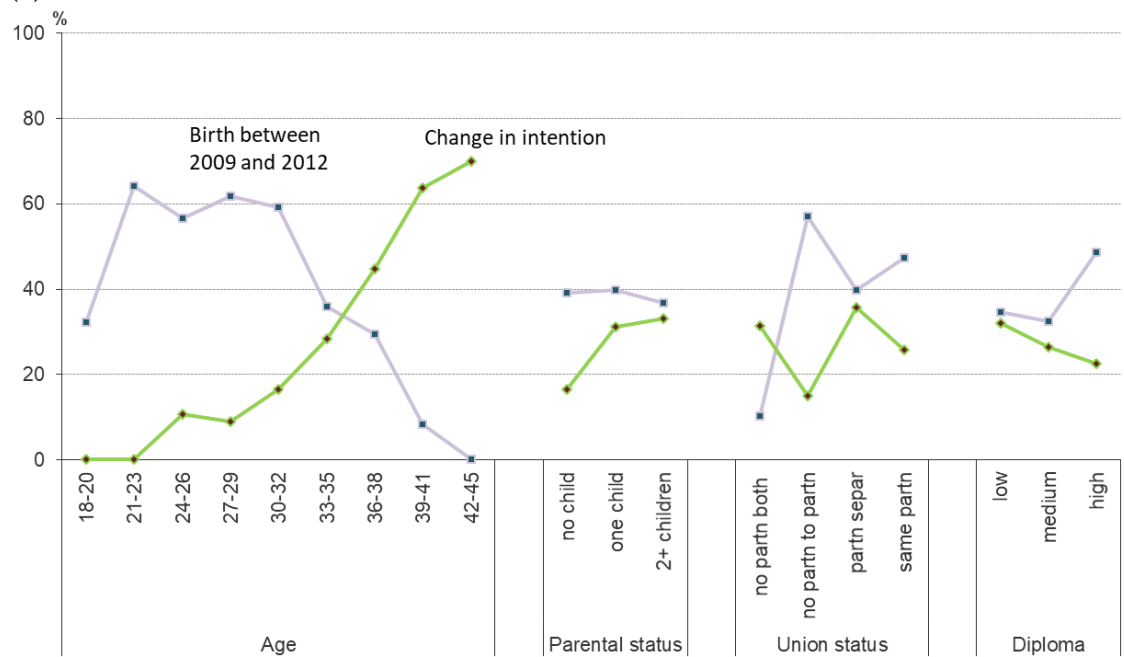
⁴ Additional modelling shows that married men and women were more likely than those without a partner to have a child, and also cohabiting men but not cohabiting women. This might correspond to the fact that those married at the first wave were already in the process of trying and thus would have higher success rates than those then cohabiting.

Figure 8 Estimated probability to have a child, to change intention, between 2008/09 and 2012/13 for those who initially strongly intended to have a child, by sex

(a) Men



(a) Women



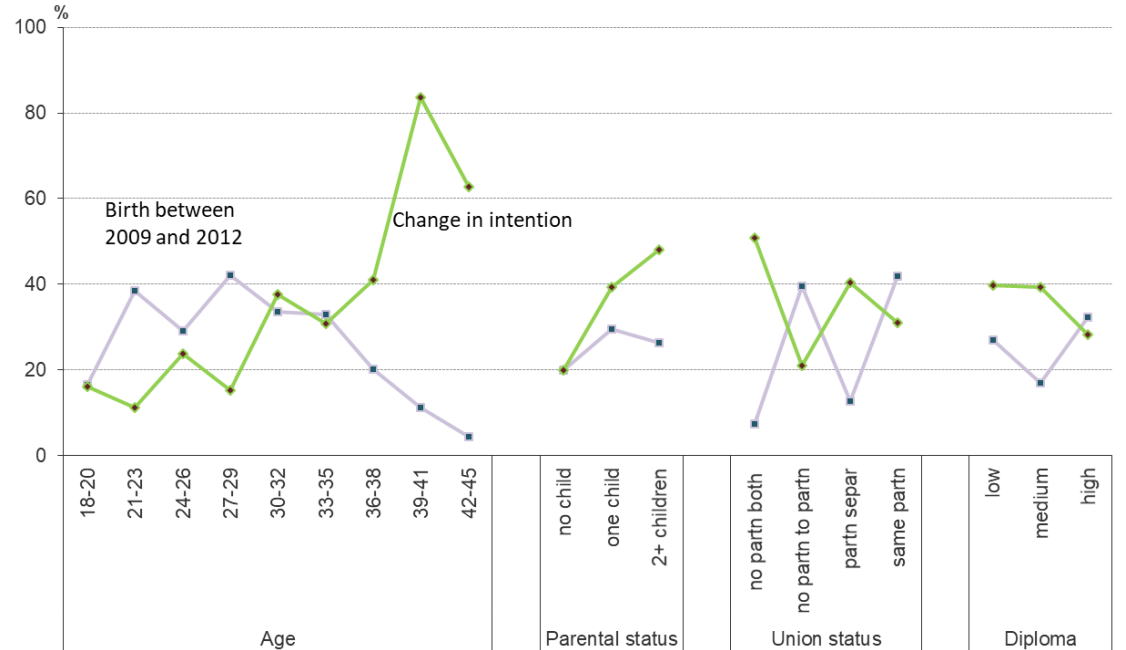
Source: Austrian GGS wave 1 (2008/09) and wave 2 (2012/13)

Note 1: The models are unweighted because there is currently no R package that allows using survey weights for multinomial regressions

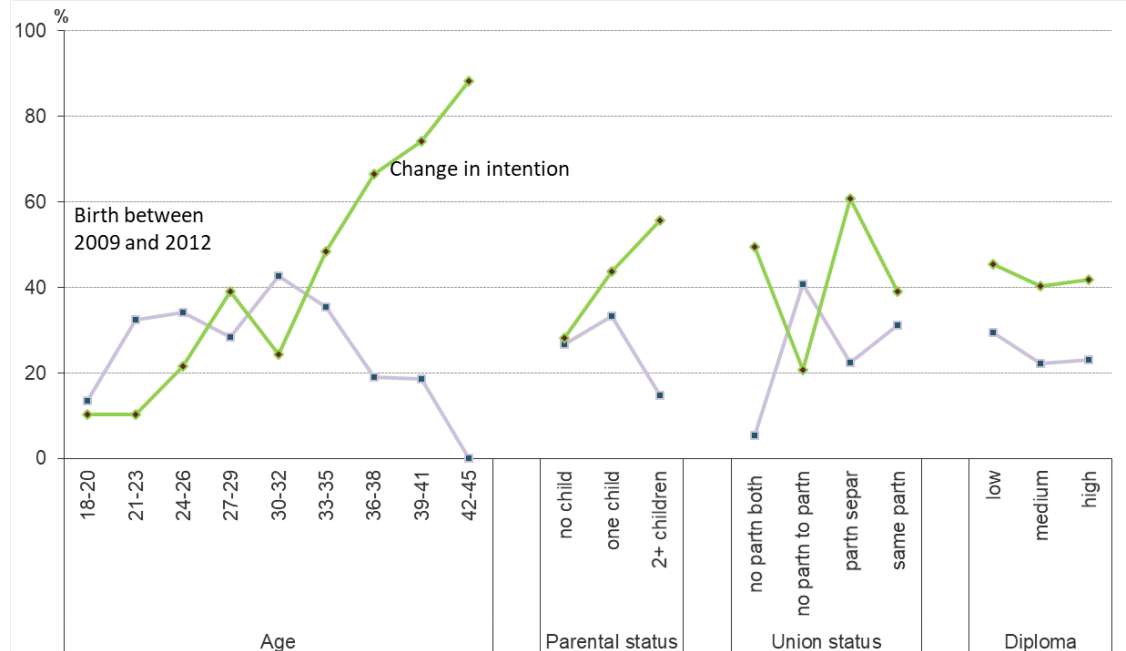
Note 2: In order to get an idea of the significance of the coefficients in these models, we ran the equivalent logistic regressions for wanting a child very strongly versus the other outcomes. The results are presented in appendix 4.

Figure 9 Estimated probability to have a child, to change intention, between 2008/09 and 2012/13 for those who initially intended to have a child but were less certain, men and women

(a) Men



(a) Women



Source and notes: like in Figure 8.

5. Discussion

This exploration of late fertility intentions and late childbearing in Austria has brought about results of key importance for the understanding of postponement and of the consequences of postponement for fertility. First, more and more people have not yet “completed” their fertility when they (or their partner) reach less fertile ages, so that more of them intend a child above age 35 at each parity. Fertility at age 35+ has increased but not sufficiently for people to catch up with their delay and to fulfil these later intentions. Second, almost all women with no or one child who still have positive intentions at age 40-44 want children as soon as possible, and thus seem conscious of the biological age limits to childbearing. Though the sense of urge only appears at that age, from age 35 onward already a selection of women more certain among those with strong positive intentions seems to operate. This selection operates later and to a lesser extent among men.

Third, age was confirmed as a central element of intentions and of realisation. On a narrow definition of very sure positive intentions (certain and within three years), intentions were extremely dependent on age, with a large share of “yes, unsure” at young ages, of “yes, sure” in the mid-30s and a large shift to “yes, unsure” and no afterwards. Realisation in 2012/3 of the positive intention declared in 2008/9 decreased strongly with age for women but only slowed down among men. Births within four years decreased from 60% (yes, very sure) or 40% (yes, unsure) at age 30-32 to 0% at age 42-45 among women. Almost one fifth of men with very sure intentions at age 39-41 and 42-45 still had a child. Certainty about a positive intention was an important factor of its realisation, but less of its change between the two waves of observation. Our study confirmed that late childbearing is constrained by biological age limits in a larger extent for women than for men.

Parity also turned out essential to explain the strength of the initial intention. Persons with one child were in fact the most numerous to have strong positive intentions, until their mid-30s when they were overtaken by those childless. In a country where most families are two-child families, it is not surprising that those who already have one child want the following one quickly and with certainty. At later ages however, childless people start displaying stronger intentions to have children quickly, either because they have reached a phase in their life-course where they can start thinking about having children, or because of the desire of being parent at least once still prevalent in most European societies. The realisation of a very strong positive intention depended little on parity, but those who had more children were more prone to change intention.

Men initially in a partnership were much more likely to display strong positive intentions than those without a partner, while the partnership situation played much less for women by parity and once age was controlled for. Of course those without a partner at both waves were least likely to have a child, but men who separated also had very low chances to have a child. Women with a partner at first, second or both waves had

however close chances to have children. This gender differences in the importance of partnership seems to reflect the sense of urge of women to have a child when in a partnership given that they have less time to have their children. In addition, men certainly feel more reliant than women on having a partner for having a child (Kuhnt and Buhr 2016).

Level of education played in a small extent for realisation, but in view of the amplitude of the other effects its contribution was small and little significant. No such effect was observed among men. Mostly, highly educated women with very strong intentions were most likely to have a child between the waves. Since age groups and parity are controlled for, this does not necessarily correspond to the “time squeeze” effect, though larger sample and interactions would be necessary to show that. This may also be due to better control over one’s reproduction among highly educated women once they have clear intentions and the mean to reach them. At the aggregate level however, highly educated women have the largest gap between intentions in their late twenties and actual fertility (Beaujouan and Berghammer 2017): they are postponing most and are possibly more constrained than women of lower educational attainment in their earlier wish to have children.

Change in declared intentions varied across age groups. Particularly at later reproductive ages, the proportion of women (and in a lesser extent of men) with strong positive intention changing their intention increased strongly up to 70%, mostly towards not wanting a child. This is further evidence that intentions cannot be taken as static, and we can consider that they are adapted to the circumstances (Gray et al. 2013; Kuhnt and Buhr 2016; Liefbroer 2009). Does this mean that women and men who shift their positive intention to a negative intention when reaching the end of their fertile window do not want a child anymore? Self-selection into groups of intentions depending on a perceived ability to have the child one would like seems great at late ages, and could be large earlier as well. This shows how far the analysis of intentions should be taken with caution.

The question of the consequences of postponement appeared vivacious for childless women. Though late intentions trends were rising stably and very strongly to the same extent whatever the number of children between 1986 and 2016, the observation of childless women shows that they are in particular situations. Childless women intend to have a child far more often than those with children at age 35-39, and at age 40-42 still 30% of them desire a child, of which very few will have one given their age. Beaujouan and Sobotka (2017) show at the aggregate level that 57% of childless women will not have the child they intended at age 35-39, against 37% of all women. Though the overall effect of parity on intentions realisation was not significant, it would be necessary to dispose of panel data with larger sample size in order to observe particularly the late realisation rate of childless women versus parous women. Still, we do observe that childless women are increasingly likely not to have a child they desire, and always more than women who already have children. Our observations also suggest that this is much less the case among men.

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Appendix

Appendix 1: Questions on fertility intentions in the surveys

Questions in the 2012 Micro-Census (same as in all the previous Micro-Censuses)

Haben Sie den Wunsch, irgendwann in Ihrem weiteren Leben (noch) ein oder mehrere Kind(er) zu bekommen? Bitte rechnen Sie eine allfällige gegenwärtige Schwangerschaft (M: Ihrer Frau oder Partnerin) mit!":

- 1 „Ja"
 - 2 „Nein" → Ende
 - 3 „Weiß nicht" → Weiter mit XK4b
- RF, DK

XK4a Wie viele Kinder wünschen Sie sich (noch)?

1..15, RF, DK

XK4b Und wenn Sie gebeten werden, doch eine ungefähre Zahl anzugeben, wie viele Kinder wünschen Sie sich (noch)? Sie können auch eine Von-bis-Anzahl angeben:

_____ [String]

RF
DK

Question specific to the 2006 Micro-Census

XK5 Innerhalb welchen Zeitraums möchten Sie Ihr erstes bzw. nächstes Kind?":

- 1 „Derzeit schwanger",
- 2 „Ehebaldigst (innerhalb eines Jahres)", 3 „Innerhalb der nächsten Jahre",
- 4 „Will nicht planen, überlasse es dem Zufall",
- 5 „Kann ich noch gar nicht sagen"

Questions in GGS 2008/09

611 Möchten Sie selbst jetzt ein (weiteres) Kind?

- 1 – ja
- 2 – nein
- 99 – weiß nicht

622a. Wie stark würde Ihre Entscheidung, ein (weiteres) – Kind zu bekommen, von den folgenden Einstellungen abhängen? Wählen Sie bitte Ihre Antworten anhand dieser Skala.

	überhaupt nicht	ein bisschen	ziemlich stark	sehr stark
a. sich bereit dafür zu fühlen	1	2	3	4
b. Der Bereitschaft meines Partners/ meiner Partnerin (lt. Regblatt 102b Geschlecht or 309)	1	2	3	4

622b. Ich habe Sie zuvor gefragt, ob Sie derzeit ein Kind möchten. Ich möchte Sie nun zu Ihrem Kinderwunsch in den nächsten 3 Jahren fragen. Haben Sie vor, in den nächsten drei Jahren ... ein Kind zu bekommen...?

- 1 – ganz sicher nicht
- 2 – wahrscheinlich nicht
- 3 – wahrscheinlich ja
- 4 – ganz sicher ja

Erläuterung:

Es gilt der Kinderwunsch für die nächsten drei Jahre ab Befragungszeitpunkt.

Es gibt Paare, die trotz Unfruchtbarkeit von befragter Person und deren/dessen Partner/in verhüten, oder trotz Verneinung eines derzeitigen Kinderwunschs fruchtbarkeitsfördernde Maßnahmen setzen. Z.B. die Rückführung einer Sterilisation (egal ob Mann oder Frau) ist eine der fruchtbarkeitsfördernden Maßnahmen. Die Partner können dies z.B. beschlossen haben, aber derzeit noch kein Kind wollen. Der Kinderwunsch innerhalb der nächsten drei Jahre ist aber dennoch relevant.

623. Haben Sie vor, in den nächsten drei Jahren ... ein Kind zu adoptieren oder ein Pflegekind aufzunehmen?

- 1 – ganz sicher nicht
- 2 – wahrscheinlich nicht
- 3 – wahrscheinlich ja
- 4 – ganz sicher ja

Erläuterung:

Adoptivkinder erhalten nach rechtlicher Anerkennung der Annahme durch die Adoptiveltern den Status eines leiblichen Kindes, was eine gänzliche Integration in die für sie neue Verwandtschaft bedeutet.

Pflegeeltern nehmen Kinder in Betreuung, die (vorübergehend) nicht bei den leiblichen Eltern leben.

If 622b oder 623 Code 3 or 4 then 625 else 624.

624. Nehmen wir einmal an, Sie würden in den nächsten drei Jahren kein Kind bekommen, möchten Sie denn überhaupt ein Kind / noch weitere Kinder?

- 1 – ganz sicher nicht→ Filter to 627
- 2 – wahrscheinlich nicht→ Filter to 626
- 3 – wahrscheinlich ja.....
- 4 – ganz sicher ja

Erläuterung:

Von Interesse ist der generelle Kinderwunsch der/ des Befragten. Frage richtet sich an jene, die in den nächsten 3 Jahren keine leiblichen Kinder/ Adoptiv- oder Pflegekinder haben möchten.

625. Würden Sie (als nächstes Kind) lieber einen Buben oder ein Mädchen haben?

- 1 – Buben
- 2 – Mädchen
- 3 – Das Geschlecht des Kindes ist für mich nicht wichtig

626. Wie viele Kinder möchten Sie insgesamt noch haben? Ob diese leibliche, Stief-, Adoptiv- oder Pflegekinder sind, spielt dabei keine Rolle.

_____ Kinder

Erläuterung:

Es ist die Gesamtzahl der gewünschten zukünftigen Kinder zu erheben.

Appendix 2: Sample size

Table 5 Number of men and women available for the study of fertility intentions (by parity), Austria

	Men no child	Men one child	Men 2+ children	Women no child	Women one child	Women 2+ children
Intention						
Yes sure	212	101	59	240	165	89
Yes not sure	565	74	41	548	103	81
No	140	146	452	219	274	1004
Age						
18-20	64	2	0	78	4	1
21-23	178	5	1	189	26	7
24-26	157	26	6	200	58	30
27-29	144	23	21	167	59	63
30-32	90	46	43	92	67	130
33-35	81	44	65	71	66	162
36-38	74	53	96	62	82	217
39-41	65	57	139	59	78	264
42-45	64	65	181	89	102	300
Partnership status						
No partner	636	49	22	625	121	136
Married	100	181	472	133	275	902
Cohabiting	181	91	58	249	146	136
Level of education						
Low	559	233	411	406	358	809
Medium	244	51	83	361	108	220
High	114	37	58	240	76	145
Total	917	321	552	1007	542	1174

Source: Austrian GGS wave 1

Table 6 Number of men and women available for the study of childbearing and change in intention between 2008/09 and 2012/13 (by original intention), Austria

	Men yes sure	Men yes unsure	Men no	Women yes sure	Women yes unsure	Women no
Intention						
Birth or pregnant	130	106	37	176	135	51
Change intention	55	80	55	92	91	49
Do not change intention	99	224	423	101	247	989
Age						
18-20	4	22	5	8	39	3
21-23	9	82	9	17	105	15
24-26	28	87	12	62	111	27
27-29	39	73	21	65	72	51
30-32	57	43	37	55	59	96
33-35	44	29	57	55	49	120
36-38	34	36	85	36	21	221
39-41	41	18	131	40	12	245
42-45	28	20	158	31	5	311
Number of children						
No child	163	332	81	178	338	145
One child	77	48	90	124	66	190
2+ children	44	30	344	67	69	754
Partnership status						
No partner both waves	51	166	69	55	139	155
No partner to partner	21	93	18	43	131	42
Partner separation	17	25	33	18	24	80
Same partner	195	126	395	253	179	812
Level of education						
Low	178	259	375	203	193	707
Medium	57	102	85	84	184	227
High	49	49	55	82	96	155
Total	284	410	515	369	473	1089

Source: Austrian GGS waves 1 and 2

Appendix 3: Logistic regressions intentions

Table 7 Logistic regression of those giving a positive very sure answer versus the others

	Men no child	Men one child	Men 2+ children	Women no child	Women one child	Women 2+ children
Age						
18-20	-1.521** '(0.531)			-0.563 '(0.464)		
	-					
21-23	1.203*** '(0.344)	-1.033 '(1.204)		-0.743* '(0.369)	-0.418 '(0.481)	
24-26	-0.682* '(0.314)	-0.55 '(0.551)		0.23 '(0.304)	-0.089 '(0.362)	1.315* '(0.517)
27-29	-0.342 '(0.302)	-1.580* '(0.644)	-0.621 '(0.664)	0.565 '(0.301)	-0.364 '(0.362)	0.437 '(0.490)
30-32	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
33-35	-0.264 '(0.343)	0.166 '(0.441)	-1.511** '(0.581)	1.063** '(0.353)	-0.684 '(0.361)	0.264 '(0.396)
36-38	-0.205 '(0.350)	-0.924* '(0.439)	-1.027* '(0.470)	0.336 '(0.390)	-1.318*** '(0.366)	-0.258 '(0.407)
39-41	-0.044 '(0.361)	-1.700*** '(0.479)	-1.365** '(0.462)	0.411 '(0.384)	-1.765*** '(0.403)	-0.298 '(0.398)
42-45	-1.236** '(0.418)	-1.441** '(0.441)	-1.434** '(0.447)	-0.506 '(0.382)	-2.006*** '(0.393)	-0.886* '(0.437)
Partnership status						
	-					
No partner	1.777*** '(0.249)	-1.701** '(0.562)	-0.54 '(1.046)	-1.436*** '(0.221)	-0.41 '(0.272)	-0.447 '(0.442)
Married	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
	-					
Cohabiting	0.860*** '(0.199)	-1.402* '(0.594)	1.291 '(1.090)	-0.517** '(0.185)	-0.207 '(0.301)	0.964 '(0.502)
Level of education						
Low	-0.036 '(0.202)	-0.125 '(0.357)	-1.056 '(0.617)	-0.311 '(0.193)	-0.14 '(0.259)	-0.404 '(0.319)
Medium	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
High	0.094 '(0.249)	0.667 '(0.408)	0.545 '(0.398)	0.041 '(0.196)	0.317 '(0.290)	0.11 '(0.348)
Constant	0.691* (0.346)	0.329 (0.421)	-2.092** (0.685)	-0.451 (0.327)	0.027 (0.324)	-2.736*** (0.417)
N	917	319	545	1007	538	1166
	-					
Log-Likelihood	438.809	-172.189	-174.357	-494.861	-300.045	-299.578
AIC	903.619	368.379	368.715	1015.721	624.09	621.156

Source: Austrian GGS wave 1

Note: *p < .05; **p < .01; ***p < .001; the models are unweighted because no package exists in R that allows using survey weights for glm models (logistic regression).

Appendix 4: Logistic regressions realisation/change intention

Table 8 Logistic regression of birth between the waves depending on the original intention, versus no birth between the waves

	Men yes sure	Men yes unsure	Men no	Women yes sure	Women yes unsure	Women no
Age						
18-20		-1.528 '(1.136)			-2.091** '(0.704)	
21-23		-0.017 '(0.505)			-0.702 '(0.404)	
24-26	-0.216 '(0.549)	-0.347 '(0.461)		-0.137 '(0.444)	-0.259 '(0.369)	-0.081 '(0.778)
27-29	0.079 '(0.503)	0.115 '(0.459)	1.156 '(0.762)	-0.006 '(0.457)	-0.427 '(0.405)	-0.766 '(0.828)
30-32	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
33-35	-0.995* '(0.455)	-0.209 '(0.569)	0.423 '(0.707)	-1.316** '(0.458)	-0.002 '(0.441)	0.05 '(0.518)
36-38	-0.89 '(0.484)	-0.965 '(0.550)	-1.017 '(0.827)	-1.868*** '(0.531)	-1.408 '(0.730)	-0.716 '(0.502)
39-41	-1.800*** '(0.498)		-0.337 '(0.673)	-3.554*** '(0.713)		-1.164* '(0.563)
42-45	-1.880** '(0.577)		-0.964 '(0.704)	-18.206 '(648.002)		-1.174* '(0.513)
Number of children						
No child	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
One child	0.167 '(0.356)	0.483 '(0.419)	0.579 '(0.651)	0.312 '(0.336)	0.602 '(0.336)	0.261 '(0.530)
2+ children	-0.529 '(0.435)	0.178 '(0.515)	-0.011 '(0.645)	-0.101 '(0.421)	-0.777* '(0.385)	-0.262 '(0.492)
Partnership status						
No partner both waves	-2.299** '(0.699)	-2.096*** '(0.416)	-1.662* '(0.822)	-2.930*** '(0.687)	-2.049*** '(0.383)	-2.445*** '(0.635)
No partner to partner	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
Partner separation	-1.825* '(0.821)	-1.287* '(0.636)	-1.331 '(0.882)	-0.575 '(0.718)	-0.288 '(0.522)	-1.683** '(0.602)
Same partner	-0.021 '(0.580)	0.496 '(0.351)	-1.754** '(0.673)	-0.589 '(0.457)	-0.08 '(0.293)	-2.255*** '(0.440)
Level of education						
Low	0.288 '(0.377)	0.828* '(0.357)	0.458 '(0.655)	-0.034 '(0.367)	0.579* '(0.263)	0.254 '(0.416)
Medium	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
High	0.844 '(0.473)	1.001* '(0.485)	1.21 '(0.749)	1.106* '(0.447)	0.044 '(0.334)	0.019 '(0.576)
Constant	0.759 '(0.650)	-1.047* '(0.518)	-1.295 '(0.997)	1.350* '(0.623)	-0.195 '(0.410)	-0.44 '(0.687)
N	271	372	489	344	456	1071
Log-Likelihood	-151.718	-172.075	-111.522	-159.627	-234.885	-175.269
AIC	331.436	372.149	249.045	347.253	497.77	378.538

Source: Austrian GGS waves 1 and 2

Note: as in Table 7

Table 9 Logistic regression of change in intention between the waves depending on the original intention, versus no change or birth between the waves

	Men yes sure	Men yes unsure	Men no	Women yes sure	Women yes unsure	Women no
Age						
18-20		-1.461 '(0.876)			-0.908 '(1.131)	
21-23		-1.865** '(0.682)			-1.253 '(0.753)	
24-26	0.477 '(0.725)	-0.818 '(0.533)		-0.665 '(0.684)	-0.232 '(0.532)	1.893* '(0.771)
27-29	-0.808 '(0.859)	-1.281* '(0.594)	0.058 '(0.755)	-0.45 '(0.685)	0.872 '(0.515)	0.731 '(0.823)
30-32	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
33-35	0.651 '(0.571)	0.086 '(0.581)	-0.67 '(0.693)	0.892 '(0.558)	1.386** '(0.511)	-0.116 '(0.855)
36-38	0.489 '(0.629)	0.425 '(0.530)	-1.246 '(0.717)	1.841** '(0.562)	2.549*** '(0.686)	0.641 '(0.676)
39-41	1.322* '(0.547)		-0.326 '(0.577)	2.943*** '(0.588)		-0.612 '(0.797)
42-45	1.366* '(0.586)		-0.965 '(0.587)	3.347*** '(0.632)		-0.617 '(0.725)
Number of children						
No child	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
One child	0.736 '(0.461)	0.975 '(0.534)	-0.371 '(0.505)	1.075** '(0.403)	1.188** '(0.459)	-0.961 '(0.513)
2+ children	1.739*** '(0.511)	1.600** '(0.617)	-1.442** '(0.498)	1.504*** '(0.453)	2.306*** '(0.457)	-1.450** '(0.446)
Partnership status						
No partner both waves	0.775 '(0.880)	1.538** '(0.575)	-0.837 '(0.764)	1.52 '(0.814)	2.315** '(0.793)	-0.32 '(0.628)
No partner to partner	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
Partner separation	0.267 '(1.032)	1.014 '(0.824)	-0.176 '(0.821)	2.045* '(0.965)	3.295*** '(0.935)	0.171 '(0.682)
Same partner	-0.309 '(0.861)	0.362 '(0.674)	-1.007 '(0.687)	1.301 '(0.743)	1.665* '(0.797)	-1.235* '(0.612)
Level of education						
Low	-0.208 '(0.435)	0.17 '(0.417)	-0.808 '(0.430)	0.479 '(0.416)	0.384 '(0.383)	0.298 '(0.473)
Medium	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>	<i>ref.</i>
High	-1.142 '(0.623)	-0.5 '(0.631)	-0.873 '(0.681)	-0.335 '(0.483)	0.268 '(0.461)	0.764 '(0.556)
Constant	-2.209* '(0.929)	-2.345** '(0.724)	0.627 '(0.866)	-4.413*** '(0.956)	-4.753*** '(0.896)	-1.869* '(0.881)
N	271	372	489	344	456	1071
Log-Likelihood	-115.73	-128.636	-125.438	-132.447	-132.552	-141.239
AIC	259.459	285.272	276.876	292.895	293.104	310.478

Source: Austrian GGS waves 1 and 2

Note: as in Table 7

Working Papers

Brzozowska, Zuzanna, Isabella Buber-Ennser, Bernhard Riederer and Michaela Potančoková, *Didn't plan one but got one: unintended and sooner-than-intended births among men and women in six European countries*, VID Working Paper 5/2018

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