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Young women's strong preference for children and subsequent occupational gender segregation

What is the link?

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Abstract

Purpose – The purpose of this paper is to analyse how and whether young women's strong and early preference for having children relates to the degree of occupational segregation of the careers they envisage for themselves and the careers they actually enter by the time they reach age 23.

Design/methodology/approach – Drawing on theories predicting that young women act to replicate gendered social stereotypes in their career choice and to anticipate careers they perceive to be reconcilable with future motherhood, the authors conduct quantitative analyses using panel data from the Transitions from Education to Employment Survey, a longitudinal survey of young people in Switzerland. OLS regression analyses how expressing a strong desire to have children at age 16 impacts: the proportion of women in the career engaged in at age 23 and the career anticipated age 16, relative to women not expressing this strong preference. Logistic regression examines whether selection into wanting children could be held responsible for the results. Finally the authors explore how initial expectations and later outcomes relate to each other.

Findings – Women who express a strong interest in having children (Kinderwunsch) at age 16 anticipate and enter occupations with a substantially higher proportion of women. Differences in objective labour-market characteristics, such as academic attainment, ability and psychosocial factors, namely self-efficacy, are not related to having a strong desire for children at an early age. Family factors have multifaceted effects.

Research limitations/implications – This research uses data from a cohort who were age 16 in 2000. The rapidly changing social context of Switzerland necessitates updating this analysis at regular intervals across cohorts.

Practical implications – Discussion is required to expand young women's understandings of the implications of different career choices and to broaden the range of options that they consider and to which employers provide access.

Social implications – Wanting to have children is one of the factors that fuels occupational gender segregation. Although women might envisage that more gender-segregated occupations would allow them to combine work and family life, this may not be the case in reality.

Originality/value – This paper explores the important but previously under-explored relationship between early fertility preferences and occupational entry for women.

Keywords Secondary education, Family roles, Sex and gender issues, Women workers, Work identity, Career development

Paper type Research paper

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Introduction

The transition to young adulthood is a pivotal period when people make decisions about key life events, such as work, marriage, and family (Crimmins *et al.*, 1991). A large body of research illustrates how these choices are highly gendered (e.g. Eccles, 2005; Gottfredson and Lapan, 1997). Little is known, however, as to the long-term career consequences of early preferences, for example, in relation to fertility. Wanting to have children is closely related to actually having children (Schoen *et al.*, 1999), and having children is a major source of women's labour-market disadvantage (Goldin and Rouse, 2000; Williams, 2001; Cahusac and Kanji, 2014). If women's fertility planning follows Fishbein and Ajzen's (1975) theory of reasoned action and planned behaviour, then young women who express at an early age a strong preference for having children will make career decisions anticipating their future with children. Thus even the preference for having children could start shaping women's career development (Bandura *et al.*, 2001).

The consequences of this early and strong preference for children, what we term *kinderwunsch*, may lead women to enter occupations which are more highly gender-segregated than the occupations of their female peers. Gender segregation in occupations matters, because it is a fundamental driver of women's labour-market disadvantage (Hadas and Semyonov, 2005). This is not to claim that women who want children choose disadvantage; on the contrary, they can be expected to evaluate what is possible and acceptable within their societal structure (see e.g. Ajzen, 1991; England, 2005). Women may confront recruitment practices blocking their entry into certain occupations, a practice that has been uncovered in countries with vocational (Heinz *et al.*, 1995) as well as general educational systems (Marini and Fan, 1985). In terms of what is possible, young women may avoid occupations in which they perceive that a career interruption would devalue their skills (Martin Garcia, 2010).

Of course, women who want children may have particular characteristics that make them more likely to choose "feminised" occupations or more "feminised" fields of study. In this case, it is hard to separate the effect of wanting children from characteristics that might jointly determine occupational and fertility preferences. Most studies are unable to investigate the causal direction between wanting children and occupational outcomes, because they lack panel data that go back to the teenage years, a critical time in women's occupational decision making. The Swiss Transitions from Education to Employment Study (TREE) enables us to link early preferences with subsequent outcomes, because each year it follows a cohort of young people who were age 16 in 2000. Exploiting this resource, this paper examines how expressing a strong early preference for having children marks out young women in terms of the degree of segregation of their occupations at age 23.

We build on two previous studies of how early career choices relate to subsequent occupational gender segregation in the context of Switzerland (Buchmann and Kriesi, 2009, 2012). Interest in the topic of early occupational choices has been particularly marked in Switzerland because these choices are so binding, as is found across vocational education systems, which are also linked to more gender-segregated occupations (Estévez-Abe, 2005). Reinforcing gender segregation in Switzerland, care is still largely constructed as women's responsibility (Levy *et al.*, 2002), which is upheld by short primary school hours, limited childcare availability and taxation that penalises double incomes (Stähli *et al.*, 2009). The high proportion of women in part-time paid work (82.8 per cent in 2009 according to the OECD, 2011) points to potential restrictions in choosing jobs that require full-time participation.

Theoretical background and research hypotheses

We draw on theories that have explained differences in career outcomes between men and women to explain career differences between women who expressed a strong preference for children at an early age and those who did not. Because motherhood is a defining gender role we explore whether an early strong preference for children is associated with more gendered outcomes than not having this preference. We examine stereotyping, choosing what seems possible and preferences as potential conduits through which women who want children might be channelled into occupations with a higher concentration of women than other women. Of course stereotyping also applies to men but the focus of this paper is young women's outcomes in relation to theories that help to distinguish between women. For a more general overview of the career-choice literature from which the theories we use are derived (see Herzog *et al.*, 2006).

Stereotyping

Studies suggest that young women choose careers that reflect societal stereotypes about appropriate occupations for women (Marini and Fan, 1997). Gender stereotypes derive from the different activities that men and women engage in. Because these activities require the use of different traits, they fuel ideas that men and women innately differ in their possession of achievement-related traits (Heilman, 2001). The stereotypes are of men displaying agentic traits such as self-assertion, manifest in high self-efficacy, and women showing communal qualities such as concern for others (Bakan, 1966). Stereotypes extend to prescriptions of what men and women should do and, importantly, what they should not do (Heilman, 2001). Gottfredson (1981) argues that young people choose occupations according their ranking on a spectrum of masculinity-femininity as well as in relation to their social desirability (Gottfredson and Lapan, 1997).

Stereotypes play an important role in occupational gender segregation, as Cejka and Eagly's (1999) work shows. They relate stereotypical images of occupations to the extent of the occupation's gender segregation. Furthermore, many, though not all, studies show that the higher the concentration of women in an occupation the less well rewarded are women working in that occupation (Buchmann and Kriesi, 2009). Thus, in gravitating towards occupations in which there is a high concentration of women, women orientate themselves away from societally defined goals of success and achievement (Eccles, 2005). Women's belief in their ability to engage in what are stereotypically thought of masculine type occupations is also, in part, compromised as a result of the internalisation of stereotypes resulting in bias self-assessments (Correll, 2001).

In Switzerland, early career choices have long-lasting consequences because a Vocational Education Training (VET) diploma is a precondition for working in most occupations and therefore, changing occupations is less straightforward than in many other contexts. Young people who enter their occupation through VET, which applies to about 70 per cent of school leavers (SKBF, 2011), make career choices at an age when they are particularly sensitive to social norms about appropriate gender behaviour (Leemann and Keck, 2005). Women in VET are concentrated in health, education and services, whereas men predominate in industrial-technical areas (Schafroth, 2004). Stereotypes relate not only to young people's sex-typed aspirations but also to those of recruiters in training organisations (Buchmann and Kriesi, 2012; Imdorf, 2013; Heinz *et al.*, 1985). In general, countries with a VET system experience greater gender segregation in occupations, though even in the Swiss tertiary-education track there is high gender segregation (Charles and Bradley, 2009).

Choosing what seems possible

The second group of theories maintain that women who want children choose more feminised occupations to alleviate perceived future difficulties in managing work and motherhood, as Van Bavel (2010) argues and for which Leemann and Keck (2004) find supporting evidence in Switzerland. Eccles (1994) argues that women are likely to value work that is thought to be compatible with both having children and expressing their gender identity. In doing so, they exercise a degree of behavioural control, meaning that their belief in their ability to combine certain types of work and care affects their intention to engage in that particular work (Ajzen, 1985). Women's perceived compatibility of work and family life is at stake rather than their actual capacity to combine family life and employment in a particular occupation.

Both of these mechanisms, identifying with stereotypical gender roles and anticipating what a combination of motherhood and work would look like, provide a rationale for why women pursue sex-segregated occupations. We put forward the first two hypotheses to explore whether these processes impact women at an early stage of career planning:

H1. Women who express a desire for children at an early age end up in occupations that are more feminised than the occupations of other women.

H2. Women who express a desire for children at an early age envisage themselves at this early stage in occupations that are more feminised than the occupations other women envisage.

In order to understand the answers to our first two hypotheses, we also need to probe whether women who express at an early age a preference for children possess particular characteristics that make them more likely to express this preference and also to choose more gender segregated occupations independently of wanting children. If this were the case, these women would comprise a selected group and we would have to refine out interpretation that wanting children leads to more feminised occupations. Studies find that women in both teaching and health-care fields of study have higher fertility than others at the same level of educational attainment, suggesting that there may be characteristics (though largely unidentified) jointly determining the choice of field of study and occupation (Lappegard and Ronsen, 2005; Hoem *et al.*, 2006). Self-efficacy has been found to predict which women enter occupations with higher rewards or in which a higher proportion of men work (Cobb-Clarke and Antecol, 2013). Thus, it could be that women with lower self-efficacy both enter more gender-segregated occupations and express at an early age a preference for children. A further distinguishing characteristic might be educational attainment. A cross-cohort study conducted in the UK found that women without children had higher levels of human capital than women with children (Joshi *et al.*, 1999). Such an effect could operate in Switzerland, where a high proportion of women do not have children, particularly those with higher levels of education. Women who know they want children when they are 16 may have lower levels of human capital which makes them settle for more feminised occupations because these have lower entry requirements:

H3. Women who express at an early age a preference for children have lower self-efficacy, ability and educational performance than other women.

A third and different line of argument derives from the notion that women who express an early desire for having children may hold different sets of preferences from other

women. Differences in preferences between men and women are increasingly identified as drivers of the gender wage gap. Previous studies have shown that the desire for children is related to wanting material goods or leisure suggesting that women who express an early desire for children might have preferences that orient them away from wanting to make money or enjoy leisure (Crimmins *et al.*, 1991; Barber, 2001). To investigate whether preferences play a role in sorting women who express an early desire for children from others, we propose *H4*:

H4. Women who express a strong preference for children at age 16 have different preferences for children relative to leisure or money.

Biographical changes in gender segregation

If women who want children do not initially envisage that they will enter more feminised occupations, they could subsequently compromise when they realise what occupations are possible (Gottfredson, 1981) or they experience the personal and social costs of following an occupation in which a higher proportion of men work as being too high. A study of women in mathematics and sciences in the USA shows that over time, these women moved to less masculine occupations (Frome *et al.*, 2006), while women's career orientation diminishes in Germany (Fischer *et al.* 2000). Furthermore, employer prejudices may prevent women from entering or continuing in male-dominated fields (Goldin and Rouse, 2000; Reskin, 1988; England, 2005).

Alternatively, in Switzerland, early choices and occupationally specific training may result in little difference in the degree of feminisation between what is originally chosen and the final path taken (Leemann and Keck, 2004). There is a direct and strong correlation between the occupational training young people undertake and their final occupation. Buchmann and Kriesi (2009) find, however, that women end up in less gendered occupations than they had originally envisaged, endorsing the theory that women are more susceptible to complying with gendered norms during the teenage years than later.

If gender-role socialisation is an important determinant of the degree of occupational sex segregation, we would expect to see consistency between the proportion of women in the job aspired to and that actually attained. Jacobs (2001) finds the consistency to be surprisingly low. Imdorf (2013) shows that women aspire to jobs typically undertaken by men, and more often than men aspire to female-typed jobs, but women achieve their aim less frequently than men. To determine the relative strength of these potential explanations for women entering occupations with either a higher or lower concentration of women over time, we put forward the fifth hypothesis:

H5. Women who want to have children enter an occupation or a field of study associated with an occupation that has a higher concentration of women than the occupation they had originally envisaged.

Other factors

Drawing on the literature we recognise that other factors may play a role. While these are not central to our analysis, we consider that it is important to control for them. As embedded social actors, individuals are strongly influenced by kin and peers (Bernardi *et al.*, 2007), thus the number of siblings and the extent of social communication with parents are likely to influence childbearing aspirations. Parents' views and the examples of what parents have done are highly influential, but sometimes difficult to unravel. Leemann and Keck (2004) report an unresolved conflict in which parents urge

their daughters to work, while at the same time they rank motherhood as being very important. Buchmann and Kriesi (2012) find that when parents' sex-type their children's abilities the choice of a male- or female-dominated occupation is more likely, while Schwiter *et al.* (2011) show that parents are often instrumental in their daughters' decisions to enter stereotypically male occupations. Parents' education also seems to play a role in whether they support untypical choices or not (Buchmann and Kriesi, 2012).

Data

To test our hypotheses, we use data from the TREE, which followed a nationally representative sample of students who participated in the Programme for International Student Assessment (PISA) and were at the end of their compulsory schooling in 2000. The PISA cohort was followed annually. In 2001 (T1), one year after compulsory schooling was completed, the cohort had an average age of 16.5 years, and at this stage, the sample comprised 5,528 young people (2,436 males and 3,092 females). We use data from PISA, T1, and T7 (seven years after compulsory schooling), which took place when the average age of the cohort 23.5 years, and there were 3,979 respondents remaining (1,751 males and 2,228 females). We employ survey weights (Sacchi, 2011) and use multiple imputations.

Variables

For the different analyses, we use four dependent variables:

To test *H1*, the first dependent variable is the *proportion of women in the occupation* in which the woman is engaged at age 23. About 29 per cent of the women in the cohort were in tertiary-level education at this time point, about 44 per cent were employed or engaged in a mix of vocational training and employment (and had attained an upper-secondary certificate), 6 per cent were employed (without an upper-secondary certificate), 9 per cent were in neither employment nor education (including 34 women who were not working because they were at home with a child, making up just under 2 per cent of the sample), and 7 per cent were engaged in intermediate solutions, such as taking a language course (Hupka-Brunner *et al.*, 2011). Only 39 women had had a child and were working at this time (about 2 per cent of the sample); including or excluding this group made no material difference to the results and the reported results include these women. For those women who were still in education and had not entered employment by 2007, we recoded the field of study into the occupation to which the education would lead (so e.g. studying psychology would be coded according to the proportion of women in the occupation of psychologist)[1]. We translated these occupational codes[2] into equivalent International Standard Classification of Occupations (ISCO) codes which were matched to the proportion of women in the occupation as provided by the Swiss Federal Statistics Office (SFSO), based on the Swiss Census of 2000, the Volkszählung. We chose to use a continuous variable rather than defining cut-off points for whether an occupation is to be regarded as "masculine" or "feminine", because our main interest is simply to make a comparison between the occupations chosen by those with a strong desire for children and those chosen by other young women.

The second dependent variable is the proportion of women in the occupation that the respondent envisaged that she could have at age 30 in the year 2000 matched with the proportion of women in the occupation, as above (testing *H2*).

To test *H3* and *H4*, the third dependent variable is termed *Kinderwunsch*, a binary variable based on answers to the question, if you think of your future as an adult, how important is it to you to have children? Having a strong preference (very important) for

children at T1 when the cohort was on average 16.5 years old, is coded as 1, as we consider it to be qualitatively different from the other answers (totally unimportant; rather unimportant; rather important), which are coded 0.

The fourth dependent variable is constructed to test whether, over time, women tend to move towards occupations with a higher share of women than they had previously envisaged (*H5*). The variable is the proportion of women in the occupation at age 23 minus the share of women in the occupation they had envisaged in 2000 that they would be in when they reached age 30, this "gap" is measured for each individual woman.

Explanatory variables

The definitions of the following indices collected in PISA studies are fully described in Adams and Wu (2002).

Parents' educational attainment is adapted from the International Standard Classification of Education (ISCED): no schooling, nursery, and primary (ISCED 1 or below); lower secondary (ISECD 2); upper secondary (ISECD 3); and degree level (ISCED 5, the reference category). PISA 2000 did not ask for ISCED level 4.

Parents' highest occupational score corresponds to the higher value of the mother's or father's occupation, scored according to the PISA Socio-Economic Index of Occupational Status (ISEI).

Literacy WLEREAD is the PISA maximum-likelihood estimate of reading literacy, which can be treated an unbiased estimate of a student's ability (for further details see Adams and Wu, 2002).

An index of *family wealth* was derived from students' reports on: the availability within their home of a dishwasher, a room of their own, educational software, and a link to the internet, and the number of cell phones, televisions, computers, automobiles, and bathrooms at home. This is a standardised score based on maximum-likelihood estimates, with negative values indicating fewer wealth-related possessions.

Culture is a standardised index derived from students' responses to whether classical literature (examples were given), books of poetry and classical art (examples were given) were available in their homes. Frequency in relation to each score was measured on a five-point scale of never or hardly ever, a few times a year, about once a month, several times a month, and several times a week. Positive values denote higher frequency and negative values lower frequency of cultural activities during the year.

Self-efficacy is measured by an index derived from students' responses to questions about their studies: "I am certain I can understand the most difficult material presented, I am confident I can do an excellent job on assignments and tests, and I am certain I can master the skills being taught". Scale scores are standardised *Warm* estimates, where positive values indicate a higher sense of perceived self-efficacy and negative values, a lower sense of perceived self-efficacy.

Social communication is the PISA index derived from students' reports of the frequency with which their parents engaged with them in the following: discussing how well they were doing at school, eating the main meal with them together around a table, and spending time talking to them. Frequency was measured on a five-point scale of never or hardly ever; a few times a year; about once a month, several times a month, and several times a week. Scale scores are standardised maximum-likelihood estimates, where positive values indicate higher frequency of social communication and negative values indicate lower frequency of social communication.

Education is a measure of students who attended a gymnasial or academic educational track at the age of 16, all others form the reference category.

Ambition, money, security, and *leisure* derive from questions in 2001 that ask respondents how important these factors are to them. The responses are categorised according to a four-point scale: 1 = totally subordinate; 2 = rather subordinate; 3 = rather important; 4 = very important.

Analytical method

As a first step and testing *H1*, we conduct a multiple regression analysis on the proportion of women in the occupation or educational path that women were actually in at age 23 (T7) in relation to explanatory variables that relate to the home environment, individual-level competencies and human capital (results presented in Table I column 2). Excluding

	Proportion of women in:			
	Model 1 Age 30 occupation envisaged at age 16-17		Model 2 Actual occupation or educational path, age 23	
	b	SE	*b*	SE
Kinderwunsch age 16-17	5.92***	1.47	6.34***	2.18
Parents' highest occupational ISEI	−0.05	0.06	−0.04	0.10
Father's education ISCED				
Ref = degree level				
Level 1 or 0	7.02*	3.97	−1.53	6.69
Level 2	0.27	2.64	3.07	3.07
Level 3	0.74	1.85	4.19	4.19
Mother's education ISCED				
Ref = degree level				
Level 1 or 0	−3.77	5.24	4.80	6.54
Level 2	0.96	2.68	1.53	3.03
Level 3	0.66	2.05	1.19	3.05
Family wealth	−0.87	0.98	−4.34*	2.25
Culture in the home	−0.36	0.78	−0.72	1.28
Social communication with parents	0.86	0.86	3.65***	1.08
Number of siblings	0.19	0.26	0.11	0.39
Lives with 2 parents	4.24***	1.65	−0.05	4.32
Reading score (WLEREAD)	−0.03**	0.01	−0.02	0.02
Education				
Ref: not gymnasium				
Gymnasium	−10.81***	1.84	−5.88**	2.75
Self-efficacy	−0.76	1.29	−1.31	1.38
Positive attitude	0.72	0.84	−0.20	1.45
Ambition	−2.26	1.09	−2.59	2.15
Money	−2.28	1.72	−4.45**	1.94
Security	2.13	1.40	4.94	3.07
Leisure	0.29	1.42	−0.13***	2.03
Language region				
Ref: German				
French and Italian migration background	−5.09***	1.73	−0.13**	2.68
Ref: two parents Swiss				
1st generation migrant	−2.48	2.09	4.66*	2.52
2nd generation migrant	0.49	2.70	−2.88	4.30
n	3,012		1,968	

Notes: ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Table I. OLS regression of proportion of women in envisaged and actual occupations

censored groups of women who are not in education or employment (NEET) at this time or who are in "intermediate solutions" (meaning they have not entered a career path but are engaged in a stop-gap solution, such as learning a language or undertaking casual work) results in an analysis sample of 1,871 observations. Excluding these censored groups could result in a potential bias, which we minimise by using multiple imputations (Jenkins *et al.*, 2011). We impute using chained-equation values of the proportion of women in the occupation that women might have had, if they had not been censored. To further ensure valid statistical inference (Rubin, 1996), we also impute using chained-equation values for missing values of the explanatory variables, excluding reading scores and self-efficacy, which cannot reasonably be imputed by reference to other variables, in our view. After multiple imputations, our analysis sample consists of 1,968 observations. The results using imputed variables do not differ substantially from those obtained by excluding missing observations.

To test the second hypothesis, we analyse the proportion of women in the occupation that women envisaged at the baseline (results presented in Table I, column 1). Non-response on the variable that measures the occupation a woman wants to enter accounts for 8.8 per cent of the sample ($n = 208$). Only 3 per cent of women state they want to be a housewife, and 11.8 per cent of women ($n = 407$) say they do not know what occupation they envisage. Although non-response and saying that one does not know are qualitatively different answers, further analysis shows both categories to be missing at random, which provides an argument for treating these categories together as censored. After multiple imputations on both the dependent and explanatory variables (see explanation above), the final analysis sample consists of 3,012 women.

As a test of the third hypothesis, we estimate a logistic regression equation to analyse whether young women who express a strong interest in having children at T1 are different in characteristics from their peers (*H3*) or have a different set of preferences (*H4*). Item non-response reduces the available sample to 2,336 women, and after multiple imputations, the sample consists of 3,012 observations. Results do not differ substantially between imputed and non-imputed data.

In a fourth analytical step, testing *H5*, we estimate the "gap", comparing the proportion of women in the occupation that each individual woman was engaged in at age 23 with the proportion of women in the occupation she had previously envisaged (results presented in Table II). We use a multiple regression to model this gap across all women (this is normally distributed) using the explanatory variables outlined above.

Results

As summarised in *H1* and *H2*, our interest is in comparing the occupational aspirations and paths of young women who express a strong interest in having children when they are between ages 16 and 17 (one year after the PISA study in 2000) with other young women. The results shown in Table I column 1 indicate that women with *kinderwunsch* at this age entered occupations with a higher proportion of women by age 23 than did other women, bearing out *H1*. The difference amounts to an average of 6.34 percentage points in the proportion of women in the occupation, even after controlling for a wide range of other factors, such as reading score and being in the gymnasial school track. Women who expressed *kinderwunsch* at T1 had also already envisaged that they would be in occupations with a higher proportion of women by age 30, bearing out *H2*. These findings imply that an early preference for having children is strongly associated with the type of occupation entered, as well as with the type of occupation envisaged at an early age.

OLS regression	*b*	SE
Kinderwunsch	−0.61	1.83
Parents' highest occupational ISEI	−0.02*	0.07
Father's education ISCED		
Ref = degree level		
Level 1 or 0	−0.52	4.62
Level 2	−1.13	2.82
Level 3	−3.05	2.28
Mother's education ISCED		
Ref = degree level		
Level 1 or 0	9.56**	4.59
Level 2	0.94	2.74
Level 3	1.20	2.31
Family wealth	−2.71**	1.20
Culture in the home	0.11	1.02
Social communication with parents	0.29	1.09
Number of siblings	0.17	0.30
Lives with 2 parents	−6.84***	2.28
Reading score (WLEREAD)	0.02	0.01
Education		
Ref = not gymnasium		
Gymnasium or other academic	5.35**	2.13
Self-efficacy	−0.29	1.11
Positive attitude	−0.38	0.95
Ambition	2.06*	1.24
Money	0.46	1.53
Security	1.22	1.79
Leisure	−0.46	1.33
Language region		
Ref = German		
French and Italian	3.20**	2.08
Migration status		
Ref: two parents Swiss		
1st generation migrant	1.21	2.21
2nd generation migrant	−2.40	3.33
n	1,968	

Notes: Dependent variable: proportion of women in occupation attained at age 23 minus proportion of women in the occupation the woman envisaged she would be in at age 30 when she was age 16. ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Table II. Comparison of attained and envisaged occupations for each woman

H3 asks the important question of whether selection processes mark out women who want children as having fewer employment prospects than other women at the outset. Table III shows the lack of significance of the reading score, a measure of ability, in the logistic regression exploring the characteristics of those women who express a strong desire for children at T1 relative to those who do not. Furthermore, having attended the gymnasial track at age 16, an important indicator of educational performance, is not associated with lowering the odds of wanting children. Women who want children are also not less ambitious than other women. Parents' higher socio-economic status seems to lessen the likelihood of women having a strong preference for children at T1. Women's *kinderwunsch* is associated with higher levels of family social communication compared to other women.

Dependent variable: *kinderwunsch* = 1, 0 otherwise	Log odds ratio *b*	SE
Parents' highest occupational ISEI	−0.01*	0.00
Father's education ISCED		
Ref = degree level		
Level 1 or 0	0.22*	0.27
Level 2	−0.08	0.15
Level 3	0.01	0.14
Mother's education ISCED		
Ref = degree level		
Level 1 or 0	−0.19	0.30
Level 2	−0.06	0.37
Level 3	−0.15	0.16
Family wealth	0.15**	0.11
Culture in the home	−0.02	0.06
Social communication with parents	0.19**	0.07
No of siblings	0.0***	0.09
Lives with 2 parents	0.00	0.16
Reading score (WLEREAD)	0.00	0.00
Education		
Ref = all non-academic		
Gymnasium or other academic	0.17	0.12
Self-efficacy	−0.08	0.07
Positive attitude	0.09	0.07
Ambition	0.11	0.08
Money	0.00	0.12
Security	0.49***	0.13
Leisure	0.26***	0.11
Language region		
Ref: German		
French and Italian	0.59***	0.18
Migration status		
Ref: two parents Swiss		
1st generation migrant	0.02	0.16
2nd generation migrant	0.01	0.23
Observations	3,012	

Notes: ***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Table III.
Logistic regression of women with *kinderwunsch* relative to other women

Regarding family wealth, higher levels predispose women to want children, perhaps because family wealth indicates financial security and a lack of the experience of financial hardship. Moreover, the variable for wanting security seems to go together with *kinderwunsch*. Contrary to *H4* that wanting children, leisure, and goods reflect competing desires (Crimmins *et al.*, 1991; Barber, 2001), we find that having a preference for leisure is also associated with having a preference for children. Crimmins *et al.* (1991) and Barber (2001) note that relative preferences vary by cohort, as each cohort is socialised under a particular set of circumstances and social conditions. Recent research suggests that parents are increasingly combining leisure with caring for children (Bianchi *et al.*, 2006) as parental roles are redefined.

It is difficult to provide a definitive answer to *H5*, which addresses whether women who expressed early *kinderwunsch* actually entered an occupation with a higher concentration of women than the occupation they had originally envisaged. Overall,

women with *kinderwunsch* attained occupations that had about the same degree of "feminisation" as those they had envisaged, on average (see Table I). This does not seem to bear out Buchmann and Kriesi's (2009) finding that women, on average over time, work in less gendered occupations, but this may be due to differences in the age groups compared. Further investigation reveals that the correlation between the proportion of women in the occupation envisaged and that actually realised at age 23 is around 0.56 and that the degree of feminisation of the occupation envisaged at age 16 explains about 32 per cent of the variation in the degree of feminisation of the occupation at age 23. In line with Jacobs (2001), we find a high degree of dynamism in occupational choices, even in Switzerland's inflexible occupational system.

Table II reports the regression of the gap in the degree of feminisation of the attained occupation and the envisaged occupation for each individual woman. Entering an occupation with a higher proportion of women than envisaged is predicted by coming from the gymnasial track, possessing higher initial ambition and coming from the French and Italian language regions. The significance of these predictors points to women with higher ambition and prospects, as denoted by having attended the gymnasium, encountering serious constraints. The data, however, do not permit us to distinguish between the employer discrimination they encounter and women's own circumscribing of their aspirations.

In line with other research, the results highlight the importance of parents and the ways in which parents are influential. Living with both parents is indicative of entering a much less gendered occupation than initially envisaged. Family wealth has little association with what is envisaged but a strong association with the path women actually take (see Table IV); the strength of the effect indicates how family assets, which are essentially material goods, transmit into more "successful" career outcomes for young women. In contrast, social communication with parents elevates the degree

	Women	
	Mean	SD
Kinderwunsch at age 16-17	0.32	0.47
Parents' highest occupational ISEI	50.15	16.05
Father's education (ISCED)	3.98	0.94
Mother's education (ISCED)	3.84	0.93
Family wealth	0.01	0.80
Culture in the home	−0.03	0.97
Social communication with parents	−0.01	0.88
Number of siblings	2.26	3.15
Lives with 2 parents	0.76	0.43
Reading score (WLEREAD)	521.14	85.61
Attends gymnasium	0.32	0.47
Self-efficacy	−0.03	0.86
Positive attitude	4.49	1.09
Ambition	3.08	0.78
Money	3.13	0.69
Security	3.70	0.54
Leisure	3.02	0.70
Language region (French and Italian; ref German)	1.53	0.50
Migrant (0 = 2 Swiss parents, 1 = 1st gen., 2 = 2nd gen.)	1.52	0.72

Table IV. Summary statistics

to which the actual occupation is feminised, but this was not the case when the young women were age 16 and were envisaging their future occupation.

Language region is highly relevant, in that women in the French- and Italian-speaking areas of Switzerland envisage themselves in substantially less feminised occupations than those in the German-speaking part, but they do not go on to realise this difference, potentially because there are fewer labour-market opportunities in these regions (Bertschy *et al.*, 2008). Previous research has also highlighted that region plays a strong role in realised fertility as Bonoli (2008) shows, in part attributing differences to the varying social and family policies in the different cantons of Switzerland. Additionally, cultural differences regarding working mothers and day care also could play a role. Clearly, the regional differences in Switzerland are intriguing and present an opportunity for future research to explore further how culture, policy, education, and economic circumstances shape women's aspirations and opportunities.

Discussion and conclusion

In this study, we examined whether young women who expressed at an early age a strong preference for having children differed from other young women in their career aspirations and initial career path. We found that young women both aspire to and actually enter occupations with a substantially higher concentration of women if they expressed a strong interest in having children when they were age 16, making visible a neglected link between production and reproduction. Classical career choice theories (Eccles, 2005; Gottfredson and Lapan, 1997) point to the importance of gender stereotypes in shaping students' aspirations, which then fuel occupational segregation. Occupational segregation matters because it is a conduit of women's labour market disadvantage (Hadas and Semyonov, 2005; Buchmann and Kriesi, 2012) and limits women's choices, impacting their potential for financial independence across the life course.

Thus, potentially negative career consequences are set in motion for young women who have a strong preference for having children, even before they enter the labour market. This finding emphasises the importance of providing career advice and mentoring in a form that is meaningful to young women at the lower-secondary level, before the critical point of decision making. Young women may have little conception of how their choices carry long-term financial and career consequences, which also bear on a future that includes having children. Moreover, career advice should question whether stereotypically female occupations are actually more family friendly, because at present, little is known about which jobs best enable young women and men to combine work and care. Young women may be unaware of the feasibility of career paths other than those that have been stereotypically female and, understandably, they may have little idea of how to combat exclusionary hiring practices. At a policy level, influencing these work-place organisations is clearly not an easy task, but raising awareness of such policies is a necessary first step. From a national perspective, the productive use of human resources requires a focus on the forms of women's participation.

It is important to note that young women who want to have children are not less ambitious, nor do they have lower educational attainment or ability (as marked by their reading scores) than other women. Their negative career outcomes occur through socially constructed processes. With our data, we cannot definitively distinguish whether the process of entering more segregated occupations is fuelled by replicating societal stereotypes around femininity or by women anticipating the family friendliness of occupations. Insight into which of these processes is more pertinent is to be gained, however, from the fact that women already envisage at the end of compulsory

schooling being in occupations in which a higher proportion of women work. Moreover, women with *kinderwunsch* do not systematically enter more or less feminised occupations over time, as one might expect if they were to gravitate over time towards occupations perceived to be more "family friendly" because more women work in them, even if in reality these occupations are not more conducive to combining work and care.

The strength of socialisation is exemplified by the influence of parents, whom our results show to be key stakeholders, consistent with findings from a range of studies (Schwiter *et al.*, 2011; Leemann and Keck, 2005; Buchmann and Kriesi, 2012). Parent effects are multifaceted. On the one hand, social communication with parents elevates the proportion of women in the actual but not the envisaged occupation, consistent with parental sex-typing of abilities (Buchmann and Kriesi, 2012). One the other hand, however, higher parental wealth and living with two parents are associated with an occupation with a lower concentration of women, consistent with a higher status outcome and a less gender-stereotypical outcome. Parents may not be aware of the labour-market consequences or even of the impact of their advice and therefore can become part of the solution in terms of career guidance.

Occupational gender segregation is clearly fuelled by a number of interrelated factors. A so-far-neglected aspect is how expressing early a preference for having children can lead women to choose more segregated careers. In this paper we showed that there is a marked influence of this strong desire for children, expressed at an early age, on the degree of later occupational gender segregation. Moreover this difference in the degree of segregation of the careers of women with and without *kinderwunsch* starts with the occupations they envisage for themselves when they are only age 16. In this regard, further research is required to understand what drives young women's career aspirations and to reveal what they value in potential careers. What is clear is that this process starts early and its consequences extend throughout the life course.

Notes

1. We exclude from the sample women who were engaged in the small proportion of degree courses that cannot be linked to a specific profession (only 200 out of 1,775 women), creating some risk of bias from missing observations.
2. The occupation is first matched to an "Erwerbsstammcode", which is a list of approximately 18,000 occupations from the SFSO.

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