

## Why still marry?

### The role of feelings in the persistence of marriage as an institution

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## ABSTRACT

Despite cohabitation becoming increasingly equivalent to marriage in some of the most “advanced” Western European societies, the vast majority of people still marry. Why so? Existing theories, mostly based on various approaches tied to cognitive decision-making, do not provide a sufficient explanation of the persistence of marriage, when cohabitation is the alternative. In this article, we argue that feelings attached to marriage, i.e. the affective evaluation of those involved in a partner relationship concerning marriage as opposed to cohabitation, explain the persistent importance of marriage as an institution. We argue that socialization, biological and social-structural factors affect these affective evaluations. We provide a test of our hypotheses using a longitudinal study of young adults in the Netherlands. The results of our analyses are consistent with a central role of feelings in the decision to marry, as well as with a role for key moderating factors such as gender.

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Age at marriage has significantly risen on both sides of the Atlantic, and the majority of young adults opt for unmarried cohabitation rather than for direct marriage (Billari and Liefbroer 2010; Heuveline and Timberlake 2004; Kennedy and Bumpass 2008; Kiernan 2002). These trends are consistent with the spread of a “Second Demographic Transition” that influences new living arrangements (see, e.g., Lesthaeghe 2010) or of “pure relationships” detached from social recognition (Giddens 1991; Giddens 1992). The process of de-institutionalization of marriage (Cherlin 2004), in combination with the declining normative disapproval of unmarried cohabitation (Liefbroer and Billari 2010; Thornton and Young-DeMarco 2001) and the increasing legal equalization of cohabitation and marriage (Bradley 2001; Perelli-Harris and Sánchez Gassen 2012), lead to the question why young adults would still marry. Cohabitation, in fact, seems to affect the postponement of marriage rather than the final prevalence of marriage (Kalmijn 2007). While legal and economic incentives to marry still play a role (e.g., Baizán, et al. 2004; Moffitt, et al. 1998), it is unlikely that decisions to marry are nowadays solely based on a rational, cognitive evaluation of the advantages and disadvantages of cohabitation and marriage. For instance, Cherlin emphasizes the symbolic importance marriage may still carry: “if marriage is now optional, it remains highly valued. As the practical importance of marriage has declined, its symbolic importance has remained high and may even have increased” (Cherlin 2005). This view suggests that affective and symbolic considerations matter a great deal in marriage decisions today, next to, or even instead of, rational considerations.

We here suggest that in countries where unmarried cohabitation has become a ‘standard’ element in the transition to adulthood, the decision to marry is the outcome of both cognitive and affective evaluations of the advantages and disadvantages of marriage compared to cohabitation. If that is the case, in order to better understand the persistence of marriage as an institution it is

paramount to study the social origins of cognitive and affective evaluations, and the social differentials in their relative importance. Our theoretical framework draws on several different strands of literature – social demography and economics, the sociology of emotions and social-psychological theories of decision-making. We shall focus specifically on heterosexual partnerships, although our arguments may also apply to same-sex partnerships.

We illustrate our theoretical ideas by presenting the results of longitudinal analyses on a unique panel dataset of Dutch young adults, through which we aim to answer three related research questions. First, do both affective and cognitive evaluations of cohabitation and marriage influence whether and when Dutch young adults marry, net of other relevant background factors? Second, do cognitive and affective evaluations of cohabitation and marriage differ by social background and current social position? And third, does the relative importance of cognitive and affective evaluations in predicting entry into marriage differ by young adults' social background and current social position?

### **Cognitive and affective considerations in marriage decision-making**

Several scientific traditions provide building blocks in our development of a framework to understand the relative role of cognitive and affective considerations in the decision to marry. These approaches have arisen as separate traditions, which we present in turn.

*New home economics and social demography*

In the “new home economics” tradition, theoretical thinking about marriage, developed originally by Gary Becker (1973; Becker 1974), starts from the idea that prospective partners are rational decision-makers acting in a marriage market. In this approach, spouses gain from marriage like countries gain from trade. Since Becker, the economic approach to marriage has developed considerably, and the recent treatise by Browning et al. (2014) – while also stating that emotional “gains from marriage” are important – lists five broad sources of potential gains from marriage: the sharing of public (nonrival) goods; the division of labour to exploit comparative advantage and increasing returns to scale; extending credit and coordination of investment activities; risk pooling; and coordinating childcare. Cohabiting partnerships may be able to provide the same benefits, but the importance of marriage as a formal contract that regulates the complex relationships between two partners is emphasized in the transaction cost approach (Ben-Porath 1980; Lundberg and Pollak 1993; Pollak 1985).

A substantial part of the recent sociological and demographic literature on marriage arises as a reaction to Becker’s “gain from trade” approach. With female educational expansion, decreases in gains-from-marriage lead to decreases in the attractiveness of marriage (Oppenheimer 1997). Oppenheimer (1988; 1994) gives a central role to the fact that work structures young people’s lifestyles and therefore early work careers, especially for men, constrain their choices to marry. Blossfeld and Huinink (1991) argue that marital choices are constrained by sequencing norms, prescribing that marriage cannot take place as long as young adults are enrolled in education.

The “Second Demographic Transition” thesis, proposed by Lesthaeghe and van de Kaa (Lesthaeghe 1995; Lesthaeghe 2010; Lesthaeghe and van de Kaa 1986; van de Kaa 1987; van de Kaa 2001) puts the emergence of cognitive considerations about marriage at its heart, as it posits

the “rational “utility” evaluation of marriage in terms of the welfare of both adult partners first and children second” (Lesthaeghe 2010). The proponents of the Second Demographic Transition also emphasize the importance of secularization in shaping demographic choices, and marriage in particular. In fact, several researchers have documented the role of religiosity in shaping marital attitudes and behavior (Clarkberg, et al. 1995; Kalmijn 2007; Lesthaeghe 2010; Manning and Smock 2002; Manting 1996; Wilcox and Wolfinger 2007).

Within the “new home economics” and social demography tradition, research has therefore emphasized the importance of different types of constraints in the decision to marry, viewing this decision as the result of (potentially subjective) rational considerations of advantages and disadvantages of marriage compared to other living arrangements. This tendency to view decision-making mainly as the outcome of rational considerations has been explicitly criticized by the Basu (2006): “Birth, death and marriage, underlying staples of demographic research, are heart-over-head matters. And yet, if there is one organ that is palpably missing from the discourses of demography, it is the heart”. To overcome this one-sidedness, insights from other traditions are needed.

### *The sociology of emotions*

Although early sociologists like Durkheim already paid attention to human emotions in their theories (Fisher and Chon 1989; Shilling 1999), the sociology of emotions has mainly flourished since the last decades of the twentieth century (Hochschild 1979; Kemper 1981; Shott 1979). According to Turner and Stets (2006) “the analysis of emotions can be seen as one of the cutting edges in theoretical work in sociology” (see also Thoits (1989)).

The social embeddedness of emotions has been one of the prime foci in this area, with an important emphasis on various dimensions of social stratification. In the work of Hochschild (1979), the socialization process leading to emotions management is an instrument of social reproduction: middle-class families better prepare their children for emotion management than lower-class families do. Social contexts contain “emotion cultures”, with normatively appropriate feelings and expressions of feelings on specific situations, and this appropriateness is socially stratified, including by gender (Simon 2014). In Giddens’ (1992) view, emotional ties are crucial in the definition of pure relationships, with women leading the way..

Marriage can be specifically analysed from the point of view of “dramaturgical” theories of human emotions, considering the type of embodied emotions that have to be experienced and expressed during the process leading to marriage (e.g., when communicating the decision to marry to relevant others such as parents), if not at the wedding ceremony *per se*. Religious upbringing, in particular, might instil in individuals “appropriate” feeling rules about wedding ceremonies (Hochschild 1983). Marriage can also be analysed from the “interaction ritual” set of theories of human emotions, inspired by the work of Durkheim and Goffman (Turner and Stets 2005).

### *Theories of decision-making under risk and uncertainty*

Psychological and economic theories of decision-making are also relevant for understanding marriage choices. As Loewenstein and Schkade put it, “getting married involves a prediction of one’s long term feelings towards one’s spouse” (1999). However, the affective dimension is noticeably missing from the Theory of Planned Behaviour (TPB) developed by Fishbein and

Ajzen (1975) and Ajzen (1988; Ajzen 1991) that has guided a series of studies on family choices. According to the TPB, behaviour is influenced by two ‘proximate’ determinants, viz. the behavioural intention and the actual control over the behaviour under scrutiny. In addition, three more ‘distal’ factors play a role, viz. attitudes or beliefs, subjective norms and perceived behavioural control. These factors directly influence people’s intentions and indirectly influence their behaviour. Liefbroer and de Jong Gierveld (1993) use this approach to study the choice between cohabitation and marriage and Billari and Liefbroer (2007) use it to study young adults’ choice to leave home (e.g. in order to live with a partner). However, this type of theory has been criticized for being *consequentialist*, and therefore viewing feelings as epiphenomenal, as a mere consequence of cognitive activities (Loewenstein, et al. 2001). An extensive discussion of the limitation of Fishbein and Ajzen’s theory as applied to fertility decision-making is provided by Bachrach and Morgan (2013), who explicitly call for inputs from cognitive and decision sciences.

Several non-consequentialist theories of decision-making have been developed. Building on the TPB, Perugini and Bagozzi (2001) suggest that desires provide a direct impetus for intentions. Desires are themselves a function of the three determinants mentioned in the TPB (attitudes, subjective norms and perceived behavioural control) and an additional determinant, i.e. anticipated emotions about the behaviour. Anticipated emotions can also be seen as expressing the “affective” dimension of attitudes. A related framework is the “risks-as-feelings” model developed by Loewenstein and colleagues (Loewenstein, et al. 2001), in which feelings complement cognitive evaluations in decision-making. This distinction between cognitive and affective evaluations fits in nicely with the more general social-psychological literature showing



that cognitive beliefs and affective beliefs are distinct (Trafimow and Sheeran 1998; Van den Berg, et al. 2005).

Additional contributions on the role of emotions, outside an expected utility framework, are found at the intersection of behavioural economics and neuro-experimental psychology. According to de Souza, emotions enable to choose among options none of which is rationally superior to the other (de Souza 1987). The somatic marker hypothesis (Damasio 1994) has a fundamental tenet: “emotions play a role in guiding decisions, especially in situations in which the outcome of one’s choices, in terms of reward and punishment, are uncertain” (Naqvi, et al. 2006). Researchers interested in consumers’ behaviour have also discussed the use of feelings as a heuristic that is adopted for effective consumer decisions. Schwarz and Clore defined the “How-do-I-feel-about-it?” (HDIF) heuristic (Schwarz and Clore 1988), in which affective evaluations are seen as important pieces of information in decision-making.

### *Evolutionary biology*

A further field that can provide a better understanding of choices in the family domain and for the transition to adulthood is that of evolutionary biology (Seltzer, et al. 2005; Shanahan 2000). While it is clear that mating plays a crucial role in evolution—a role that is so central that it has in practice shaped the evolution of human nature (Miller 2000), there is no specific evolutionary reason for marriage. Stable parental partnerships are advantageous to children’s survival, but in cases in which the stability of partnership and support may be guaranteed also within cohabitation, there is no specific place for marriage. However, biology can help explaining the importance of emotions in union formation. As an instance, some neurotransmitters are

associated with human romantic passion (Buss 2003; Fisher 2004; Lieberwirth and Wang 2014) and there is recent evidence that variation in oxytocin receptor genes are associated with pair bonding (Walum, et al. 2012).

## **Context and hypotheses**

### *The context: cohabitation and marriage in the Netherlands*

The popularity of unmarried cohabitation has increased steadily in the Netherlands since the 1960s. Among cohorts born in the 1940s, less than 20 per cent of all first unions started as an unmarried cohabitation, but this has increased to over 80 per cent among cohorts born in the 1970s. This percentage is comparable to that in countries like Norway and France and is among the highest in Europe (Hiekel 2014). Thus, among recent cohorts, only a small minority enters into marriage without previous cohabitation. At the same time, the median duration of cohabitation has increased from 24 months among cohorts born in the 1940s to 46 months among cohorts born in the 1970s (Hiekel 2014). Still, for the large majority of people, unmarried cohabitation is a temporary living arrangement, either followed by marriage or by separation. In 2008, more than 70 per cent of all cohabiters aged 18 to 29 intended to marry their partner in the near future (de Graaf 2010).

In the Netherlands, cohabitation has developed into a legally and socially accepted alternative to marriage (Poortman and Mills 2012; Soons and Kalmijn 2009). From a legal point of view, cohabitation and marriage have become increasingly similar. However, quite some variation among cohabiters remains in the legal arrangements that they have made about their cohabiting relationship. Three main categories can be distinguished: cohabiters without any legal

contract, cohabiters who have drawn up a cohabitation contract, and cohabiters who have officially registered their partnership. What all these three categories of cohabiters have in common is that they are treated the same way as married partners with regard to tax regulations and social security benefits. The government bases its arrangements in these matters on whether people live in the same household rather than whether they are officially married or not. At the same time, there are clear differences between the three categories of cohabiters as well. A cohabitation contract is drawn up by a notary and consists of financial regulations concerning income, wealth and inheritance. If cohabiters want to acquire a mortgage for buying a house, a cohabitation contract stipulating joint financial responsibility usually is a prerequisite. Since 1998, it is also possible for cohabiters to enter into a registered partnership (Boele-Woelki, et al. 2007). A registered partnership secures cohabiters equal rights as married people – with the exception of regulations concerning parenthood – and is entered into at the town hall. The key difference between all three categories of cohabitation and marriage is linked to fatherhood. If cohabiters have children, the father has officially to recognize the child and the couple has to apply for joint parental authority. Although both of these actions can be arranged without much effort, they do need the cooperation of both partners. Only if partners marry, are these issues related to fatherhood automatically resolved. Over time, the percentage of cohabiters who have not made any legal arrangements at all has decreased. The percentage with a cohabitation contract has gone up from 45 per cent in 2003 to 50 per cent in 2008 (de Graaf 2010). At the same time, the number of registered partnerships between heterosexual partners has increased as well, from about 1,300 in 2000 to about 9,000 in 2013. Still, this number is much smaller than the number of marriages that are contracted (63,000 in 2013) (Statistics Netherlands 2015).

Thus, the Netherlands can be viewed a society in which the incentives to marry have to a large extent – but not yet completely –diminished. Almost everybody enters his or her first union without being married. At the same time, marriage is still a preferred choice for most people – even cohabiters – at some stage of their life course. Therefore, the Netherlands constitutes an ideal country to study which factors predispose young people to make the choice to enter marriage.

### *Hypotheses*

The context of our research is the Netherlands and this will also influence the formulation of our hypotheses. Integrating the different strands of literature discussed above with reference, our central assumption is that the persistence of marriage, in an era of individualization and of widespread cohabitation, cannot be explained solely by the (subjective) expected utility of marriage. Of course, in societies in which legal or financial incentives to marry are large, these incentives are expected to be crucial, even if emotions will generally still play a role. The role of affective evaluations, in line with Cherlin's idea, may become increasingly important in societies where the economic and legal incentives to marry keep decreasing. In such societies, emotions linked to marriage, in general *feelings* about marriage, could become the key factor that explains the persistence, and potentially the future, of marriage.

As we learn from research on the sociology of emotions, feelings are influenced by, and interact with, biological, cultural and social factors. Feelings about marriage should be no exception. Parents, religious organizations, the state and the market all play a role in maintaining (or dismantling) these feelings.

To formulate testable empirical hypotheses, we start from the general idea that the decision to marry is constantly weighted against cohabitation. This is in contrast to the approach of Manning and Smock (2005), who state that the decision is cohabitation versus being single rather than cohabitation versus marriage. In our view, Manning and Smock's idea may be relevant in a society where cohabitation is mainly viewed as a relatively short-term, temporary living arrangement, but is less important in the Netherlands.

*Hypotheses on feelings about marriage (versus cohabitation)*

Our first set of hypotheses is on the factors that influence people's affective evaluation of marriage and cohabitation. We hypothesize that culture and socialization play a key role in shaping how individuals feel about marriage. A relevant socialization agency is the church, and a key cultural factor is religion (Wilcox and Wolfinger 2007). Religious education might explicitly or implicitly emphasize the ritual, and emotional meaning of marriage, and religious upbringing might provide feeling rules that trigger marriage (Hochschild 1983). Therefore we hypothesize that:

*H1A: Individuals with a religious family background have a more positive affective evaluation of marriage than other individuals.*

Another crucial socialization factor is the example of parents (Amato 2000). Given that the experience of a parental separation or divorce almost invariably elicits negative feelings among children, it could also negatively influence affective evaluations about marriage. Therefore our subsequent hypothesis on the origins of feelings is as follows:

*H1B: Individuals with separated or divorced parents have a more negative affective evaluation of marriage than other individuals.*

*Hypotheses on the effect of the affective evaluation of marriage on the propensity to marry*

Our second hypothesis focuses on the actual effect of affective evaluations on behaviour. Our general expectation is that affective evaluations matter in addition to the actual social-structural position of individuals, and to the cognitive evaluation of the pros and cons of marriage and cohabitation. This is consistent with theories concerning the relevance of affective factors in decision-making (Loewenstein, et al. 2001; Perugini and Bagozzi 2001) and with the idea that emotions play a specific role when material rewards are less clear (de Souza 1987). More specifically:

*H2: The affective evaluation of marriage influences the propensity to marry, net of other factors.*

*Hypotheses on social differentials in the effect of the affective evaluation of marriage on the propensity to marry*

Until now, we assumed that the effect of affective evaluations of marriage and cohabitation is the same for all young adults. In this section, this assumption is relaxed and hypotheses are formulated on social differentials in the strength of this effect.

In Giddens' (1992) framework, women lead the way to allow emotions to shape pure relationship. From that idea, one would expect affective evaluations to matter more for women than for men. A similar effect could be hypothesised by starting from a feminist perspective,

considering the decision to marry as reinforcing traditional differences between gender (Jamieson 1999). However, research on the sociology of emotion has cast doubt on the usefulness of juxtaposing emotions and reason (Turner and Stets 2005). Based on Hochschild's (1983) statement that women are better in "emotion management", one could even argue that women may be less influenced by affective evaluations in decision-making. Therefore, we formulate two competing hypotheses:

*H3A: The effect of affective evaluations on the propensity to marry is stronger for women than for men.*

*H3B: The effect of affective evaluations on the propensity to marry is stronger for men than for women.*

Above, we already discussed that we expect people with a religious upbringing to hold more positive affective evaluations about marriage. We also expect that people with a religious upbringing are more inclined to rely on feelings in their choice to marry—this might be linked to the fact that they might be socialized using feeling rules (Hochschild 1983) that allow marriage to be linked with emotions more than to rational calculations. Therefore, we hypothesize:

*H3C: The effect of affective evaluations on the propensity to marry is stronger for individuals with a religious upbringing than for other individuals.*

The literature on the sociology of emotions, and in particular Hochschild (1979), emphasizes the role of formal education in teaching individuals how to manage emotions. At the same time, the higher educated are constantly trained in rational reasoning and decision-making. In our framework, this idea translates in a hypothesis that human capital is interacting with the

effect of feelings, so that individuals with higher human capital are less affected by emotions when choosing to marry.

*H3D: The effect of affective evaluations on the propensity to marry is stronger for lower educated than for higher educated individuals.*

A final hypothesis concerns the interplay between partnership status and emotions. Cohabiting couples are already in a *de facto* marriage-like situation, and it could be expected that they are rather continuously weighting the pros and cons of whether or not to marry, i.e. are more involved in decision-making about marriage. In other words, for cohabitators the question “Why marry?” is of more immediate relevance (Manning and Smock 1995). According to the somatic-marker hypothesis, emotions, which are marked by changes in bodily states are elicited during decision making so “to ‘mark’ certain options as advantageous and other options as disadvantageous” (Naqvi, et al. 2006). Feelings should therefore matter more for cohabiting individuals than for individuals who are single or in a dating relationship. Therefore, we hypothesize:

*H3E: The effect of affective evaluations on the propensity to marry is stronger for cohabitators than for individuals who are single or dating.*

## ***Methods***

### *Data*



Our data that are from the Panel Study on Social Integration in the Netherlands (PSIN) (Liefbroer and Kalmijn 1987), a panel study designed to examine the process of social integration of young adults within the life-domains of living arrangements and family formation on the one hand, and education and occupation on the other hand. It consists of six waves of data collection among a sample of Dutch young adults from the birth cohorts 1961, 1965 and 1969. Data were collected in 1987 (Wave 1), 1989 (Wave 2), 1991 (Wave 3), 1995 (Wave 4), 1999/2000 (Wave 5), and 2005/2006 (Wave 6). Respondents were approximately aged 18, 22, and 26 at the time of the first survey wave in 1987.

In 1987, a two-stage stratified random sample of Dutch males and females (approximately equal in number) born in 1961, 1965 and 1969 was drawn. In the first wave 1,774 interviews were conducted. The response rate was 63.4%. In the oldest cohort married respondents were somewhat overrepresented. Furthermore, students and those living in large cities were somewhat underrepresented. Apart from the underrepresentation of students, a comparison with data from other surveys showed that the educational attainment of the sample corresponded quite well with that of other surveys. In Wave 2, 1,410 respondents participated (79.9% of the original sample), in Wave 3, 70.9% of the original sample participated, in wave 4 54.2%, in wave 5 47.1% and in the last wave, 43.4%. The most important cause of attrition was change of address, as many respondents were students at the start of the study and moved a lot without leaving new addresses. In the current study, all independent variables are measured at the time of the first wave, whereas the dependent variable of interest (the timing of the first marriage) is based on information from subsequent waves. Respondents who have not experienced a first marriage at their last participation in the panel are censored at that time. In this way, the influence of panel attrition is reduced. Respondents who already experienced a first

marriage before the first wave of the panel are excluded from the analyses. In all, information on 1,083 respondents is available. Liefbroer and Kalmijn (1997) provide a detailed description of sampling, fieldwork procedures, non-response patterns and representativeness.

### *Analytical strategy*

The two variables of primary importance are respondents' cognitive and affective evaluations of the consequences of the choice for marriage. Given that in a country like the Netherlands most young adults cohabit unmarried before they enter into marriage (Manting 1996), and if they do not yet cohabit, the choice is between cohabitation and direct marriage, the main evaluation respondents have to make when deciding whether or not they want to marry is how marriage compares to unmarried cohabitation. Therefore, we compare respondents' evaluations of unmarried cohabitation and marriage and use the difference in that evaluation as the basis for the main independent variables of interest.

Within social psychology, a multitude of different ways to measure the cognitive and affective evaluation of objects can be distinguished. The key difference between the two types of evaluations is that affective evaluations focus on feelings or emotions that are associated with an object, whereas cognitive evaluations focus on thoughts or beliefs associated with it (Haddock and Huskinson 2004; Van den Berg, et al. 2005; Verplanken, et al. 1998) This has clear implications for the way in which these two types of evaluations are measured. For instance, Verplanken et al. (1998) in a study on attitudes towards brand names, measured respondents affective evaluations by inquiring into the 'feelings' that the brands elicited on a number of

bipolar adjectives, including positive-negative, whereas cognitive evaluations were measured by inquiring into their 'thoughts' on bipolar adjectives as well, e.g. useful-unuseful.

In this study, we constructed an index of respondents' *cognitive evaluation* of marriage and cohabitation, based on a set of five items in which they were to rate on a five-point scale separately how suited unmarried cohabitation and how suited marriage was for realizing a set of important life goals. These goals included 'opportunities to raise children in a responsible manner', 'your freedom to do as you please', 'your sense of feeling secure', 'the attention you can pay to your education or career', and 'your contacts with friends'. A sample question was 'How much attention could you pay to your education or career if you are married', and answers could range from 'little' (1) to 'much' (5). Next, the same question was posed for cohabitation. In a different part of the interview, respondents were asked to rate on a five-point scale how important each of these goals were in their lives. The overall cognitive evaluation of marriage was constructed by subtracting their score on each cohabitation item from their score on the corresponding marriage item, multiply this score by the importance they attach to that particular goal and summing the resulting score over all five goals. A positive score implies that respondents have a more positive cognitive evaluation of marriage than of unmarried cohabitation, whereas a negative score implies the opposite. The score on this measure can potentially range from -20 to +20. The mean score is 0.07, and the standard deviation is 1.42. On average, most people see little difference between unmarried cohabitation and marriage with respect to realizing a set of important life goals. The evaluations on the five cognitive aspects are only weakly correlated (between -0.08 and +0.30), so the items constitute an index rather than a scale.<sup>i</sup>

Respondents' *affective* evaluation of marriage was based on their response to a question about their feelings about marriage and unmarried cohabitation. Specifically, they were asked to evaluate what their overall feeling was about being married and about cohabiting unmarried on a seven-point scale ranging from 'negative feeling' (1) to 'positive feeling'(7). Their score on the question about unmarried cohabitation was subtracted from their score on the question on marriage. The positive score implies that respondents hold more positive feelings about marriage than about unmarried cohabitation. A negative score implies the opposite. The score on this measure can potentially range from -6 to +6. The mean score of respondents on this affective evaluation measure is -0.22 with a standard deviation of 2.26. So for both the cognitive and the affective evaluation the mean is close to the middle of the scale, but the variation in the affective score is much larger than in the cognitive score. To be better able to compare the effects of respondents' cognitive and affective evaluations, both measures were standardized.

The key dependent variable of interest is the duration between the first wave and the timing of entry into a first marriage. This is measured in months since the first wave. The median duration between Wave 1 and the timing of marriage was 128 months, so between 10 and 11 years after the first data collection.

[ TABLE 1 ABOUT HERE ]

A number of additional categorical variables are used in the analysis, either for substantive reasons or as mere controls. They are listed, together with the distribution of respondents in each of their categories in Table 1. The construction of most of these variables is straightforward, but a few remarks are in order. Relatively few respondents born in 1961 are included in this study, because some have already married before entry into the panel study. Respondents were classified as highly educated if they were – at age 16 – enrolled in a secondary

education track preparing them for entry into university or a comparable type of tertiary education. It was decided to use educational attainment at age 16 rather than at wave 1, because of the age differences between respondents of different birth cohorts. If respondents indicated that their parents were reasonably or strongly religiously involved when the respondent was aged 16, respondents were classified as having 'religiously involved' parents. Information on whether parents were separated or divorced was provided by respondents.

To test our first set of hypotheses, t-tests were performed on subgroup differences in the scores on the cognitive and affective evaluation dimensions. To test the second and third set of hypotheses, Kaplan-Meier estimates of survivor functions by subgroups and a series of Cox hazard regression models for the timing of entry into marriage were estimated.

## **Results**

### *Social differences in affective and cognitive evaluations of marriage*

To test hypothesis H1 on differences in feelings towards marriage among respondents with or without a religious upbringing (H1A) and among children with or without separated/divorced parents (H1B), results on differences in affective evaluations of marriage for these subgroups are presented in Table 2. In addition, information for some other relevant categories, and for differences in cognitive evaluations are presented as well.

[ TABLE 2 ABOUT HERE ]

Table 2 shows that respondents whose parents were religiously involved have a more positive affective evaluation of marriage than respondents whose parents were not very religiously involved. This confirms H1A. At the same time, children of religious parents also

have a more positive cognitive evaluation of marriage than children of parents who were not or only marginally religiously involved. Feelings about marriage of children of separated/divorced parents are significantly more negative than the feelings of their counterparts, in accordance with H1B. Whether a respondent's parents had divorced or not did not influence the cognitive evaluation of marriage.

Results in Table 2 also show that highly educated respondents hold less positive affective and cognitive evaluations of marriage than respondents with a relatively low level of education. Whether respondents cohabit or not and their gender does not seem to influence their cognitive evaluation of marriage, but gender and whether respondents already cohabit clearly matters for their affective evaluation score. Female respondents' affective evaluation is – on average – less positive than that of males, whereas cohabiting respondents also evaluate marriage less positive than respondents who are not cohabiting at the time of Wave 1. For both results, selection could play a key role. Because females – on average – enter into a union two to three years earlier than males, more females than males with very positive feelings towards marriage could already have married before the study started. Respondents who are cohabiting could also be a selective group, in the sense that strong positive emotions towards cohabitation could lead to early entry into cohabitation and to less impetus to transform that cohabitation into a legal marriage.

*The effect of affective evaluations about marriage on the propensity to marry*

[FIGURES 1 AND 2 ABOUT HERE ]

A descriptive analysis of the transition to marriage by subgroups is provided in Figure 1 (where subgroups are defined according to their score on cognitive evaluations) and in Figure 2 (where subgroups are defined according to their score on affective evaluations). Estimates are obtained

from Kaplan-Meier survivor functions separately by gender, and defining groups as having the most favourable evaluations (score higher than 1), medium evaluations (score between -1 and 1), and the least favourable evaluations (score lower than -1). As predicted by H2, individuals with the more favourable affective evaluations are indeed marrying earlier than other individuals. The same is true for cognitions; those with more favourable cognitive evaluations marry earlier than others. Between-group differences are always statistically significant at  $p < 0.02$  using the standard log-rank test of equality between survivor functions.

[TABLE 3 ABOUT HERE ]

Table 3 presents the results of a series of Cox proportional hazards models on the timing of marriage where H2 is tested by controlling for a progressively larger set of factors. We start our discussion from Model 1 in which only affective and cognitive evaluations about marriage are included. It turns out that the cognitive evaluation of marriage has a positive influence on the transition rate to marriage. However, the effect is almost twice as strong for affective evaluations, with the hazard ratio increasing by 23% per standard deviation.

In Model 2, a number of antecedents to evaluations about marriage are included. When controlling for these antecedents, the effect of affective evaluations becomes larger, while the effect of cost-benefit evaluations is diminished. The other effects in Model 2 are largely in line with previous findings in the literature. Respondents who are young, highly educated and male, enter into marriage at a lower rate than their counterparts. Children of separated or divorced parents have a slower transition to marriage. The same is true for children of highly educated parents, while neither parental religiosity nor paternal occupation have a significant effect.

In Model 3, partnership status at wave 1 is included. This variable is clearly related to the variable of interest, as cohabiters in particular are more likely to be self-selected among

individuals with more negative dispositions about marriage, and therefore might absorb the effect of evaluations. While this is the case for cognitive evaluations, the effect of affective evaluation remains and becomes even stronger. In addition, partner status clearly matters – respondents who are dating at Wave 1 enter into marriage sooner than respondents who do not have a partner at Wave 1, and cohabiting respondents have the highest rate of entry into a first marriage.

*The differential effect of affective evaluations about marriage on the propensity to marry*

In hypotheses H3A through H3E, it is suggested that affective evaluations are not equally strong predictors of entry into marriage for all people, that their importance varies by gender, religious background, level of education and partner status. To test these hypotheses, we added interactions between these statuses and affective and cognitive evaluations to the Cox regression models. Results are graphically displayed in Figures 3A through 3D, where the effects on a log-hazard scale, together with 95% confidence intervals, are shown.

[ FIGURES 3A THROUGH 3D ABOUT HERE ]

Figure 3A displays results on gender differences in the effect of affective and cognitive evaluations. As predicted by H3A, and contrary to H3B, the effect on the transition to marriage is stronger for women than for men—however the difference is only statistically significant at the  $p < 0.10$  level ( $p = 0.083$ ). There is no significant gender difference in cognitive evaluations.

Figure 3B displays the results of the model in which interactions are included between evaluations and religious upbringing. While there is no significant difference for cognitive evaluations, affective evaluations have a stronger effect ( $p = 0.045$ ) for respondents with more religious parents, consistently with H3C.



Figure 3C shows the results of models including interactions between the effect of evaluations and respondent's education. These results do not support H3D, i.e. the effect of affective evaluations is not significantly different according to educational level. However, cognitive evaluations are significantly important only for the highly educated—therefore the relative importance of affective vs. cost-benefits evaluations is larger for lower educated individuals.

H3E, on the difference between cohabiters and individuals who are either single or in a dating relationship, is tested in Figure 3D. Consistent with this hypothesis, cohabiters are more strongly influenced by affective evaluations than single or dating respondents—indicating that feelings are more relevant for individuals who are more advanced in the decision-making process about marriage.

## **Discussion**

In this article, we argued that, in contemporary advanced societies where unmarried cohabitation has become a viable alternative to marriage, the choice of when and whether to marry is based on both cognitive and affective evaluations of the value of marriage compared to that of cohabitation. Our empirical analyses provide empirical support for this thesis. The implications are far-reaching. Even if financial, legal or normative incentives to marry would wane, as long as the emotional content of positive feelings attached to marriage (versus unmarried cohabitation) persists and is socially reproduced, marriage will persist. Our analyses focus on the Netherlands, a society in which the path towards diminishing incentives to marry has been already taken and in which marriage is still a vastly majoritarian choice.

Results of our analyses were in accordance with the hypothesis that individuals with a religious background and without the experience of parental separation or divorce have more positive feelings for marriage vs. cohabitation. This might indicate that the persistence of positive feelings might decrease over time if secularization and marital instability increase over time, thereby challenging the potential of affect as a force influencing the persistence of marriage. In addition, higher educated young adults evaluated marriage less favourable, both in affective and cognitive terms, than young adults with a low level of education. This could suggest that higher educated young adults value tradition less strongly than their lower educated counterparts.

The key finding of our analyses is that affective evaluations of marriage and cohabitation are better predictions of the actual entry into marriage than cognitive evaluations, suggesting that the choice between cohabitation and marriage is more strongly dependent on emotions than on rational considerations. Our additional hypotheses on the differential strength of affective evaluations for different population subgroups met mixed evidence, with larger effects observed for women (albeit only statistically significant at the  $p < .10$  level), for individuals with religious parents and for people who are currently cohabiting. At the same time, cognitive evaluations were found to be more influential for higher educated young adults than for young adults with a low level of education.

Our finding that affective evaluations are strong predictors of marriage behaviour might have more general implications for research on life course transitions and decision-making. We expect that such evaluations are relevant for other life course choices, such as parenthood, leaving home and divorce or separation, as well. However, more theoretical reflection and empirical data collection is needed in this area. For instance, our own empirical analysis has been

conducted using data that are not explicitly designed for the purpose of assessing the role of emotions and affective evaluations in the propensity to marry. Future research should aim to specify and test the association between emotions and marriage behaviour more thoroughly, with multiple methods. Future research would also profit from a more purposively designed empirical strategy, and in particular more comprehensive measures of affective and cognitive evaluations. Although we applied a panel approach and controlled for several important antecedent factors that affect both feelings and the transition to marriage in our hazard analysis, our analysis is still vulnerable to endogeneity issues. It would also be interesting to supplement our approach with more qualitative research on the accounts of young adults themselves on why – and under which circumstances – they opt for cohabitation or marriage. Finally, neuroscientific experiments could be useful to improve our understanding of the role of emotions in the decision to marry or not to marry.

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Table 1. *Descriptive statistics for covariates (N=1,100)*

	Mean	s.d.
<i>Characteristics of the respondent</i>		
Born in 1961 <sup>a</sup>	0.20	
Born in 1965	0.36	
Born in 1969	0.44	
Female <sup>a</sup>	0.49	
Male	0.51	
Not highly educated <sup>a</sup>	0.50	
Highly educated	0.50	
In education <sup>a</sup>	0.40	
Employed	0.53	
Non-employed	0.07	
No partner <sup>a</sup>	0.48	
Dating	0.36	
Cohabiting	0.16	
<i>Characteristics of the parental family</i>		

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Occupational status of father	-0.14	0.96
(min=-1.71, max=2.21)		
Importance of religion for parents	3.03	1.31
(min=1, max=5)		
Parents' highest educational level lower than secondary <sup>a</sup>	0.52	
Parents' highest educational level greater or equal to secondary	0.48	
Neither separated nor divorced <sup>a</sup>	0.89	
Separated or divorced	0.11	

<sup>a</sup> Reference category

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Table 2. *Scores on cognitive and affective evaluations for marriage vs. cohabitation for selected subgroups: comparison of means (standardized variables)*

	Cognitive evaluation		Affective evaluation	
High parental religiosity	0.134	a	0.272	b
Lower parental religiosity	-0.087	a	-0.180	b
Parents neither divorced nor separated	0.020		0.036	c
Parents divorced or separated	-0.164		-0.299	c
Men	0.018		0.067	d
Women	-0.019		-0.070	d
Highly educated	-0.089	e	-0.094	f
Not highly educated	0.087	e	0.094	f
Cohabiting	-0.026		-0.519	g
Not cohabiting	0.004		0.097	g

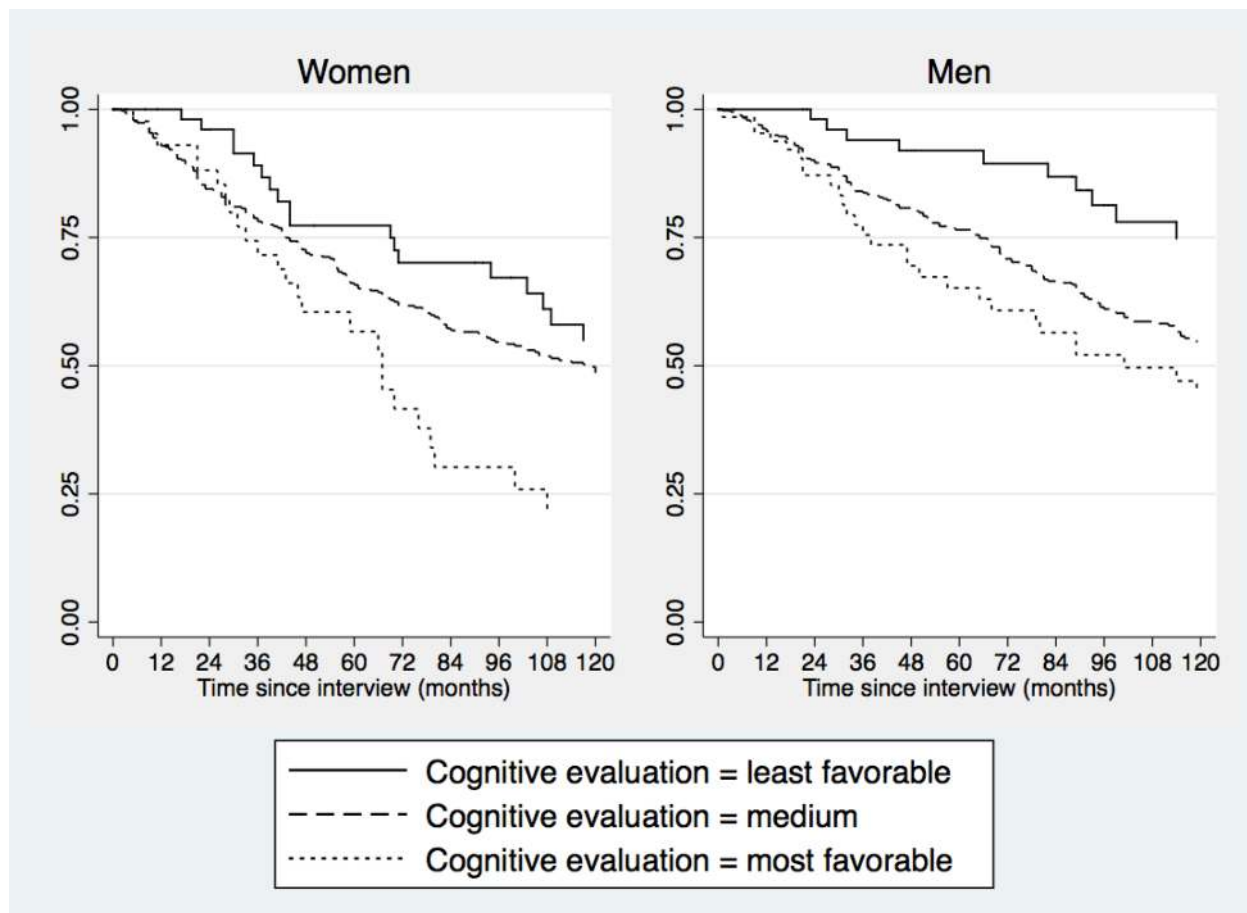
Note: Groups with the same superscript differ at  $p < .05$

Table 3. *Cox proportional hazards model of entry into marriage: estimates of regression coefficients*

	Model 1		Model 2		Model 3		
	b	se	b	se	b	se	
Cognitive evaluation	0.11	** 0.04	0.07	†	0.04	0.05	0.04
Affective evaluation	0.21	** 0.05	0.31	**	0.05	0.44	** 0.05
Born in 1965			-0.11		0.12	0.06	0.12
Born in 1969			-0.90	**	0.13	-0.41	** 0.14
Highly educated			-0.18	†	0.10	-0.16	0.10
Male			-0.43	**	0.10	-0.29	** 0.10
Parental religiosity			-0.02		0.04	-0.01	0.04
Parents separated or divorced			-0.59	**	0.20	-0.84	** 0.20
Parents highly educated			-0.18	†	0.11	-0.21	† 0.11
Father's occupational level			0.00		0.06	0.04	0.06
Dating						0.90	** 0.11
Cohabiting						1.88	** 0.14
-Log likelihood	2587.4		2803.4		2711.11		
number of respondents	1083		1083		1083		
number of marriages	458		458		458		

Note: \*\*  $p < .01$ , \*  $p < .05$ , †  $p < .10$

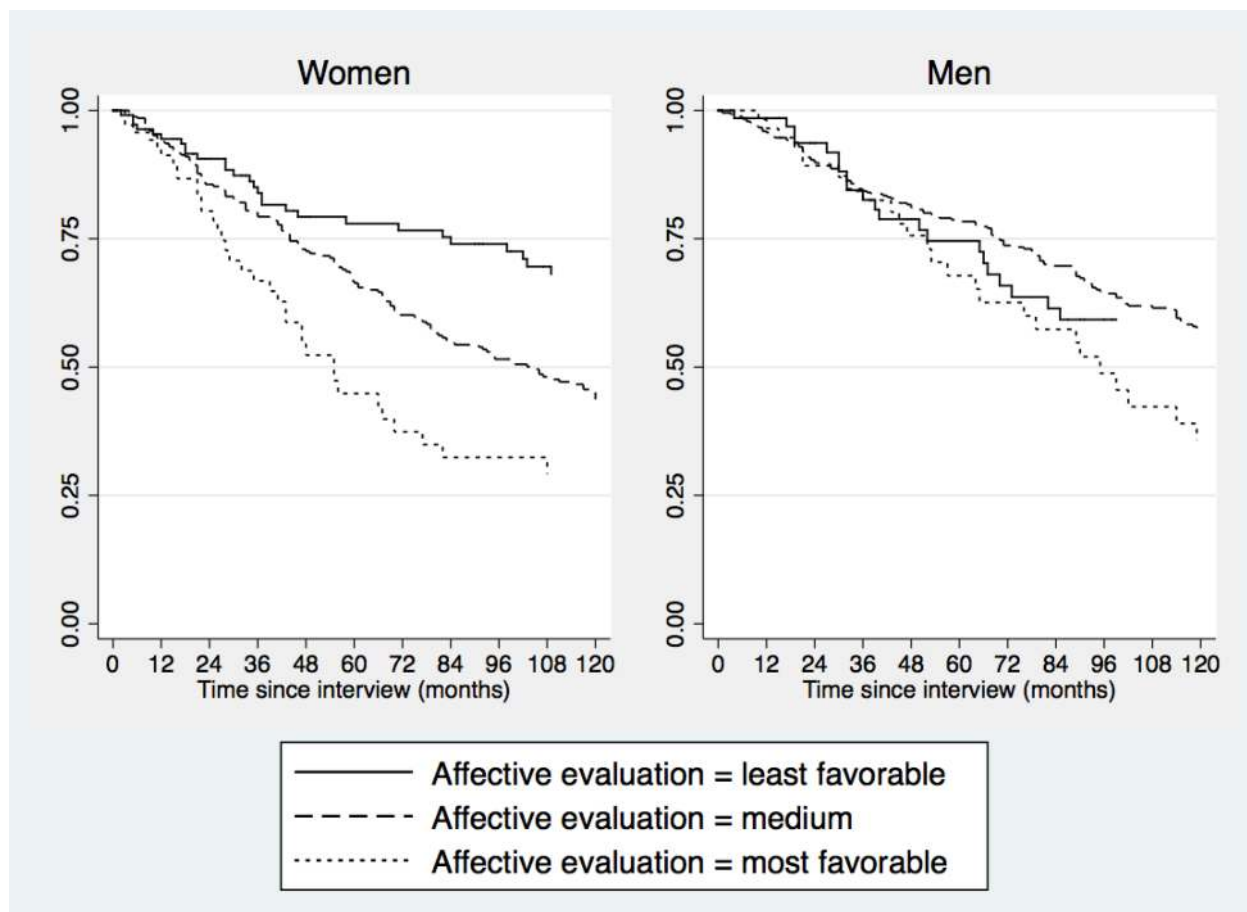
Figure 1. *Timing of marriage by cognitive evaluation of marriage and gender (Kaplan-Meier estimates of survivor function)*



Note: log-rank test for the equality of survivor functions  $p=0.0110$  for women,  $p=0.0053$  for men.

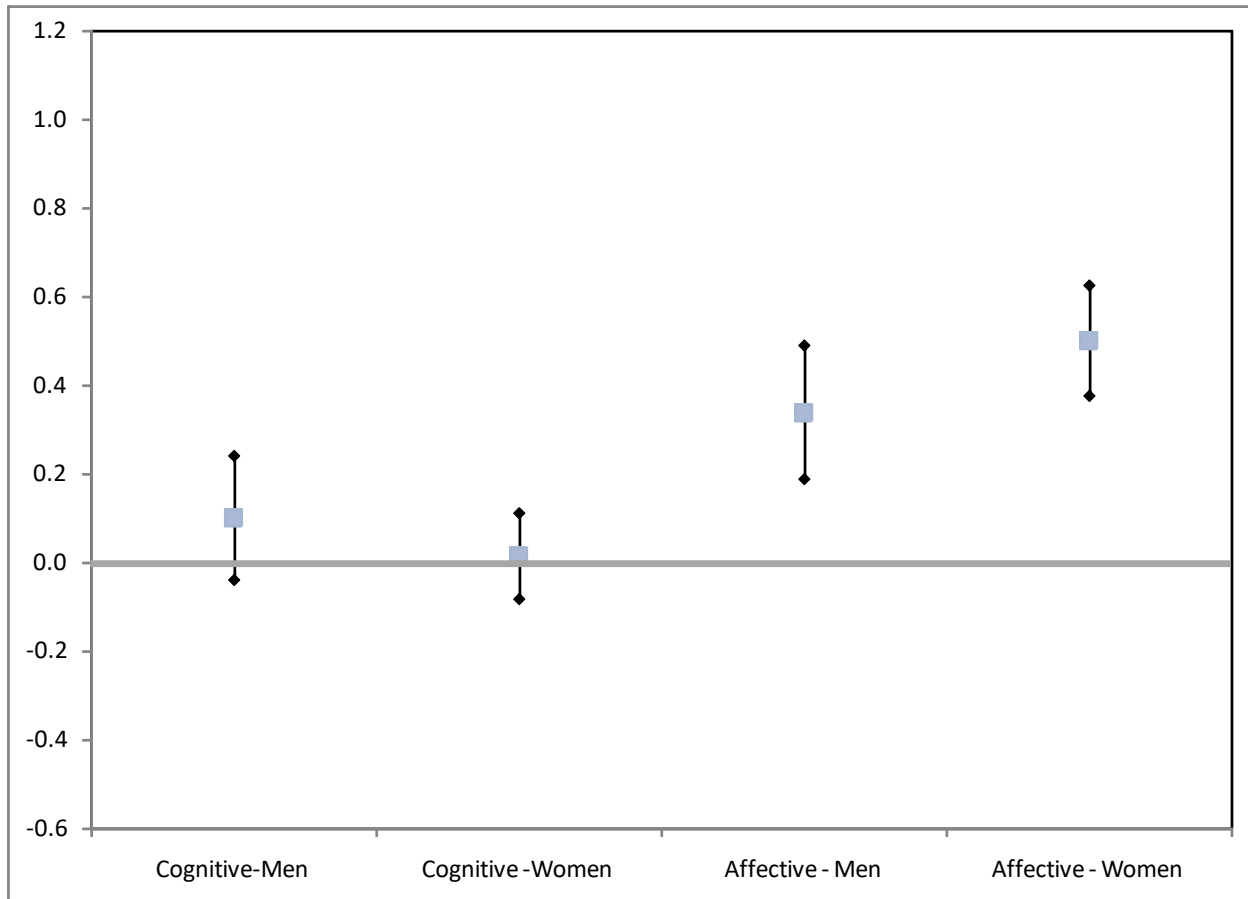


Figure 2. Timing of marriage by affective evaluation of marriage and gender (Kaplan-Meier estimates of survivor function)



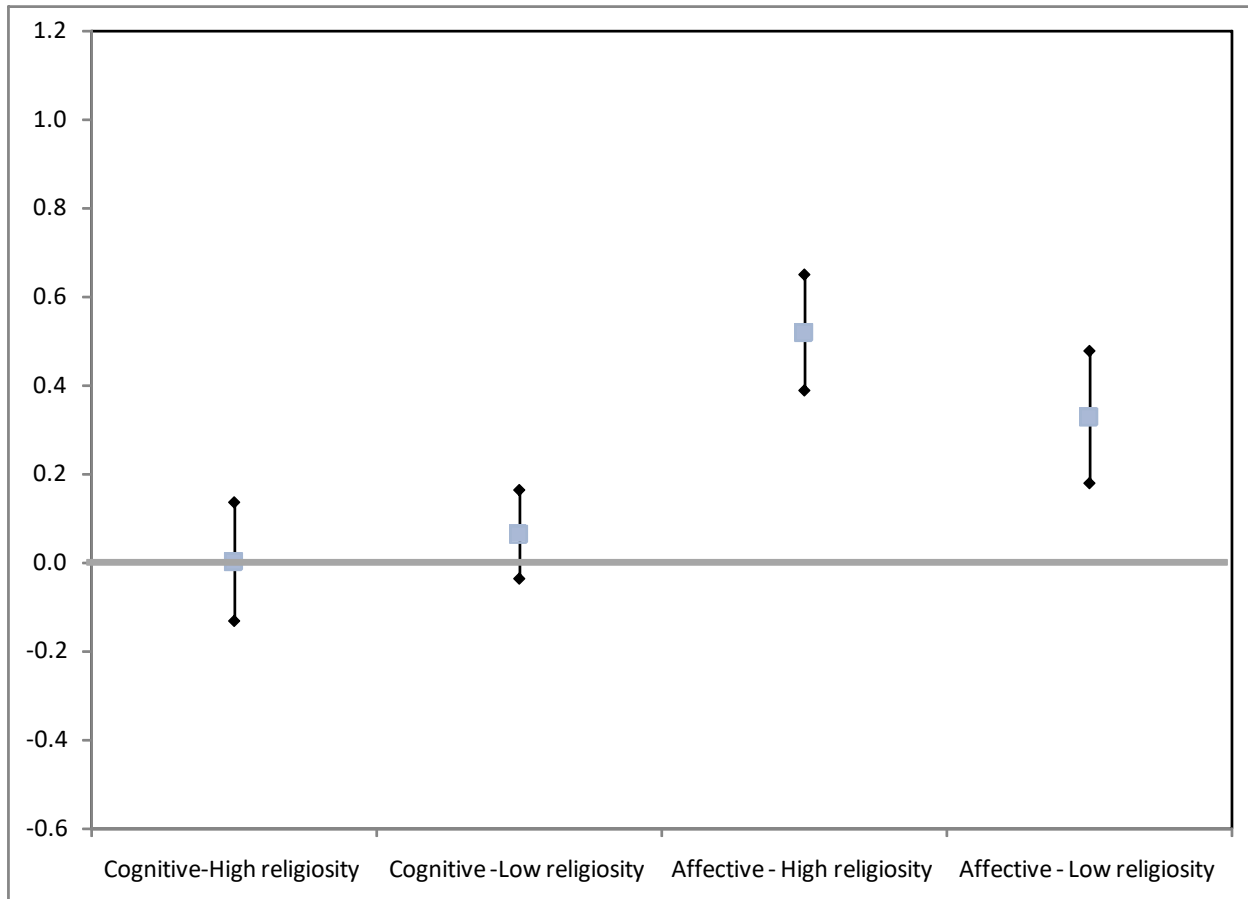
Note: log-rank test for the equality of survivor functions  $p=0.0000$  for women,  $p=0.0159$  for men.

Figure 3a. Effects (log-hazard scale) of cognitive and affective evaluations on the timing of marriage by respondent's gender



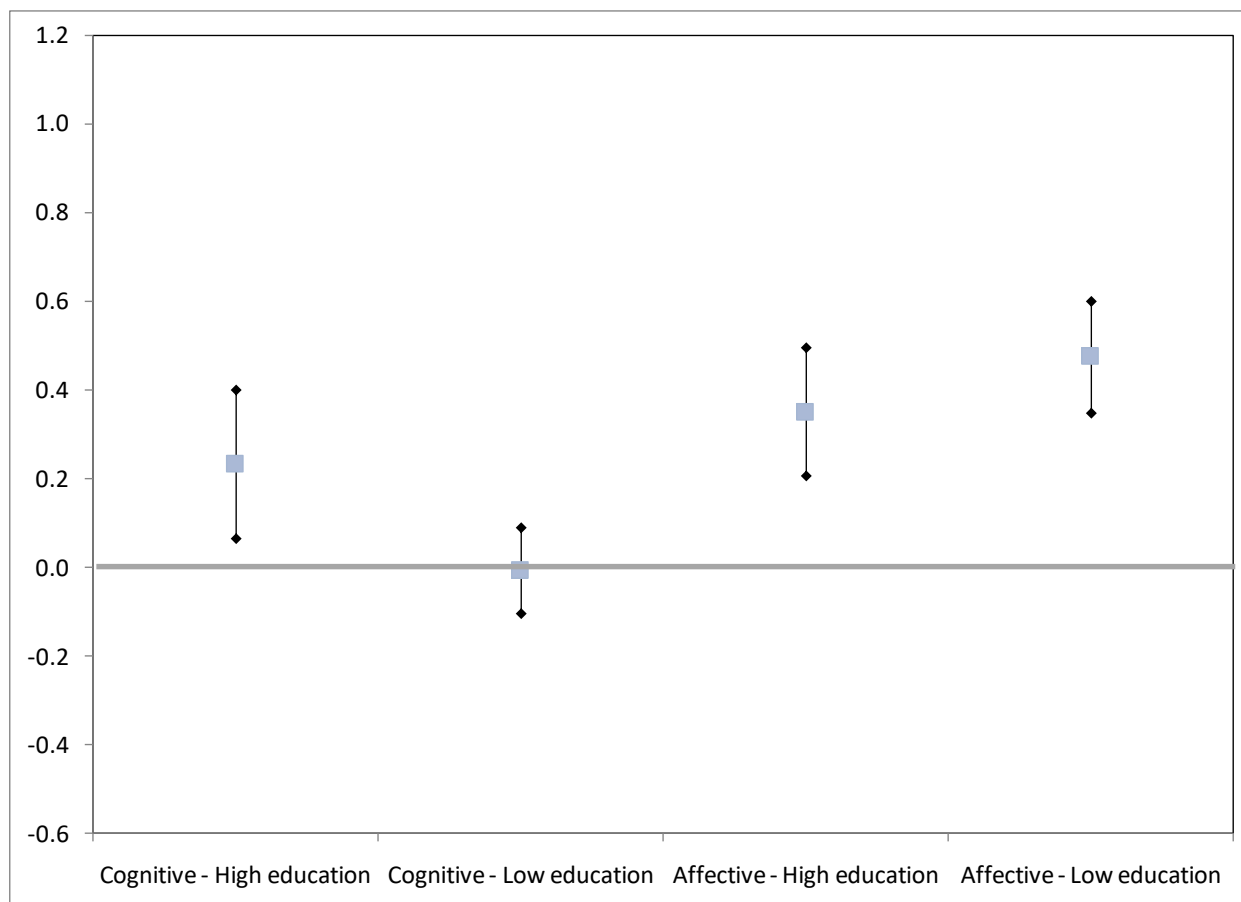
Note: the graph depicts point estimates and 95% confidence intervals of estimates from a Cox hazard regression model which includes cohort, gender, parental religiosity, parental separation or divorce, parental educational level, father's occupation, relationship status. Tests for the difference between the coefficients for men and women had respectively  $p=0.318$  for cognitive evaluations and  $p=0.083$  for affective evaluations.

Figure 3b. Effects (log-hazard scale) of cognitive and affective evaluations on the timing of marriage by level of parental religiosity



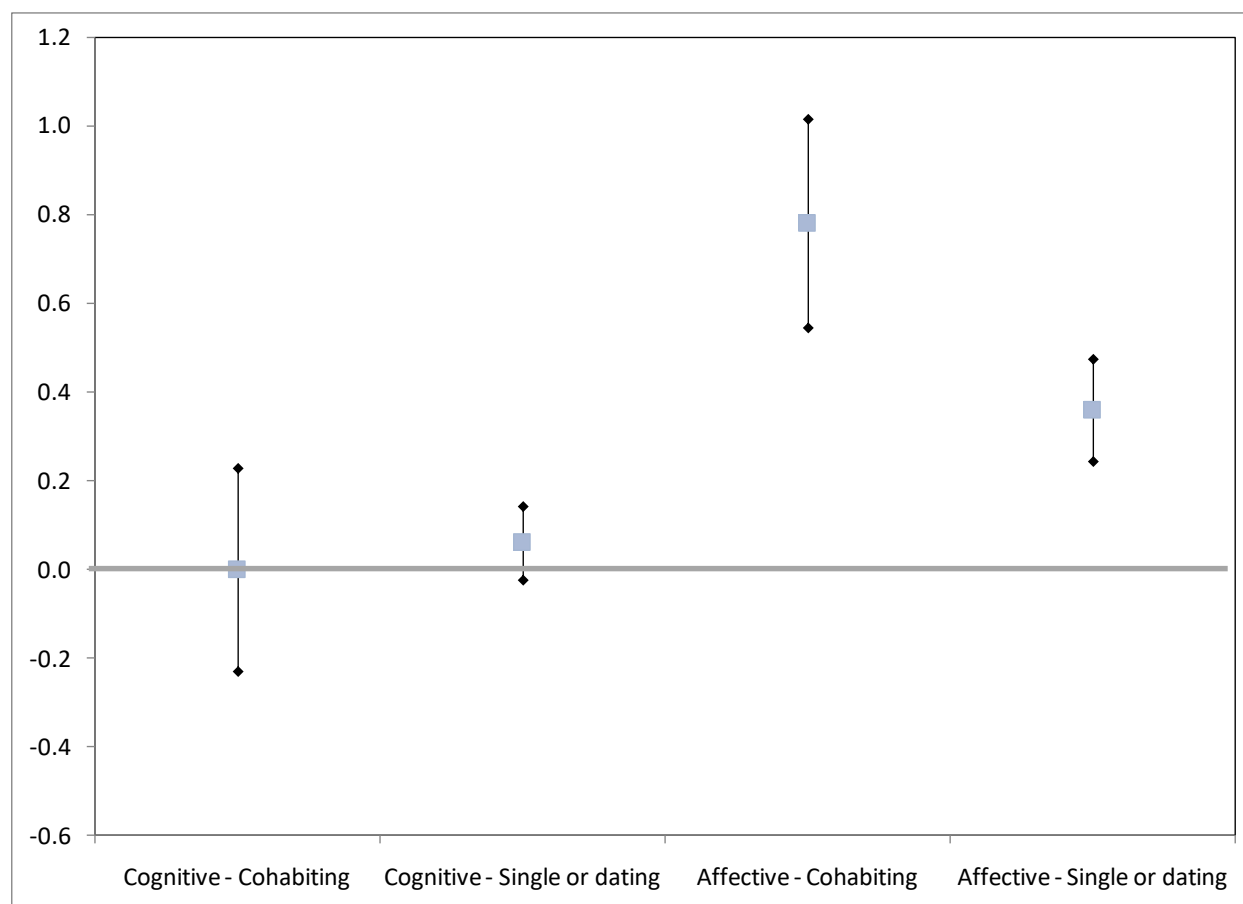
Note: the graph depicts point estimates and 95% confidence intervals of estimates from a Cox hazard regression model which includes cohort, gender, parental religiosity, parental separation or divorce, parental educational level, father's occupation, relationship status. Tests for the difference between the coefficients for low and high religiosity had respectively  $p=0.483$  for cognitive evaluations and  $p=0.045$  for affective evaluations.

Figure 3c. Effects (log-hazard scale) of cognitive and affective evaluation on the timing of marriage by respondent's level of education



Note: the graph depicts point estimates and 95% confidence intervals of estimates from a Cox hazard regression model which includes cohort, gender, parental religiosity, parental separation or divorce, parental educational level, father's occupation, relationship status. Tests for the difference between the coefficients for high and low education had  $p=0.014$  for cognitive evaluations and  $p=0.177$  for affective evaluations.

Figure 3d. Effects (log-hazard scale) of cognitive and affective evaluation on the timing of marriage by respondent's partnership status



Note: the graph depicts point estimates and 95% confidence intervals of estimates from a Cox hazard regression model which includes cohort, gender, parental religiosity, parental separation or divorce, parental educational level, father's occupation, relationship status. Tests for the difference between the coefficients for cohabiting and single/dating had  $p=0.629$  for cognitive evaluations and  $p=0.001$  for affective evaluations.

<sup>i</sup> Sensitivity analyses (results not shown) in which the separate cognitive evaluations rather than the index is used show that the effect of the affective evaluation is not sensitive to how the

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cognitive evaluation is included in the model. Among the cognitive evaluations, the consequence of marriage for one's freedom is the only statistically significant effect in that model. Just like in the models presented below in Table 2, this effect becomes statistically non-significant after introducing the sets of additional control variables. Thus our results are robust to different types of specification of the cognitive evaluation variable.