The Childhood Echo: How Romantic Biographies Reflect Early Life Events and Abilities

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October 18, 2023 11:53am

Abstract

Objective We examined how childhood experiences predicted the development of romantic partnership trajectories and how personal characteristics moderated the relationship.
Background Childhood experiences are linked with a variety of adult outcomes. Our understanding of how different childhood experiences foreshadow romantic biographies has been limited.
Method We drew upon retrospective interviews from the Survey of Health Ageing, and Retirement in Europe (N=26 469) and employed Latent Class Growth Modelling to construct romantic biography typologies between ages 15–50. We assessed how childhood experiences predicted arriving at different trajectory typologies with Confirmatory Factor Analysis and Multinomial Logistic Regression.
Results Positive childhood experiences were associated with higher likelihood of belonging to trajectories characterized by stable first marriages, negative experiences with all other types of trajectories. Among women, individuals with high socio-cognitive capabilities appeared to be less susceptible to positive or negative experiences.
Conclusion Our results underscore the enduring link between childhood experiences and romantic relationship biographies, independently of socioeconomic background. The findings align in part with the resource substitution theory, demonstrating that deficits in certain resources may be compensated for by other assets.

Keywords romantic biography · childhood experiences · socio-cognitive capabilities · resource substitution · cumulative disadvantage

Introduction

Childhood sets the tone for life courses. Experiences early in life echo into adult health (Pakpahan et al., 2017), wealth (Wolke et al., 2013), social networks (Goldman, 2022) and careers (Lorenti et al., 2020; Obschonka et al., 2012). Differences accumulate from early childhood throughout adolescence and are reflected in subsequent life trajectories (O'Rand, 2009; Winding & Andersen, 2019).

Positive or negative childhood experiences may not, as such, fully determine life courses, but personal characteristics may influence how individuals react to life events. Some children thrive at school and later in life despite adversities (Garmezy, 1993), while others will not despite favorable childhood conditions (Duckworth & Gross, 2014). Likewise, men and women react differently to childhood adversities: boys tend to react with behavioral and girls with psychological problems (Sandstrom & Huerta, 2013).

Given the extensive literature on childhood circumstances, social and intellectual abilities, it is surprising how little their interplay with adult life outcomes has been studied (Liu, 2019). More specifically, understanding the driving mechanisms of partnership formation is crucial not only because romantic relationships tend to be the closest and most important ones to individuals (Luyckx et al., 2014; Wängqvist et al., 2016) and a source well-being throughout the life course (Mäki et al., 2022; O'flaherty et al., 2016; Zimmermann & Hameister, 2019), but also because the childhood of the next generation is very much dependent on the relationship patterns of the previous generation.

Current research has chiefly overlooked how childhood experiences are associated with the formation of romantic relationship *trajectories*, let alone how intellectual or social competence might alter that relationship. Some studies have looked at childhood family composition and concluded that the complexities in childhood family structure predict complexities in romantic biographies (Hiekel & Vidal, 2020; Valle & Tillman, 2014; Wolfinger, 2003)

In order to increase our understanding of the determinants of family life courses, we examine how childhood experiences, positive or negative, predict the formation of relationship trajectories for men and women from the age of 15 until 50, and how socio-cognitive capabilities moderate the relationship. We are especially interested in signs of either resource multiplica-

tion or resource substitution—or whether personal characteristics may amplify or reduce the assumed impact of childhood events (Ross & Mirowsky, 2006).

We started our analysis by creating relationship trajectory typologies jointly for men and women with latent class growth modeling (LCGM). Then we classified childhood information with confirmatory factor analysis and, finally, examined how they predicted the formation of romantic biographies with multinomial logistic regression. Our sample consisted of retrospective SHARELIFE interviews (N=26 469) from the Survey of Health, Ageing and Retirement in Europe (SHARE).

Advantageous childhood experiences were associated with romantic biographies that ended in stable first marriages. Adverse childhood experiences were associated with all other relationship trajectory typologies. Among women, negative and positive childhood experiences predicted relationship patterns more for individuals with low socio-cognitive capabilities.

Our study pioneers on three fronts: First, we are not aware of previous studies that would have examined the relationship of multiple childhood circumstances and the development of romantic relationship trajectories. Second, to our knowledge, earlier studies have not examined the interaction effects of childhood experiences and socio-cognitive capabilities on any family life outcomes. Third, this should be the first study to model the romantic biographies of men and women jointly while allowing for sex-specific variation within the trajectories.

Background

We theorize that childhood experiences predict romantic biographies through a pathway outlined in Figure 1. (We will use romantic biographies and relationship trajectories interchangeably throughout this article.) As positive and negative experiences in childhood give different foundations to form and sustain romantic relationships, they will subsequently tend to lead to different biographies of romantic relationships. Childhood socioeconomic status (SES) confounds the relationship through better material conditions and the transmission of human capital. Individuals with different socio-cognitive capabilities might react differently to childhood adversity and advantages. Likewise, boys and girls have characteristic ways to react to childhood adversities. Therefore, we stratified the analysis for men and women, and further for individuals with

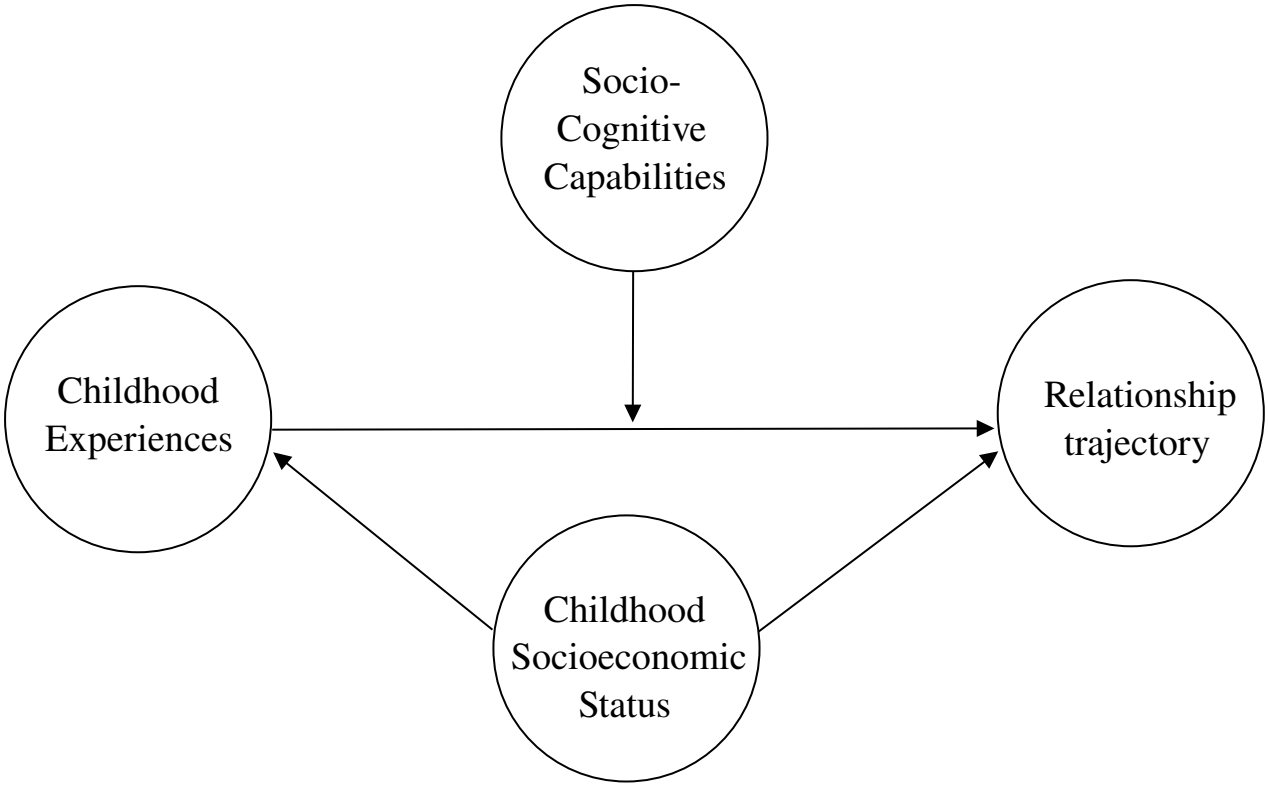


FIGURE 1. A CONCEPTUALIZATION OF THE HYPOTHESIZED PATHWAY BETWEEN CHILDHOOD EXPERIENCES AND THE FORMATION OF RELATIONSHIP TRAJECTORIES

high and low socio-cognitive capabilities. What follows is a more thorough overview into the mechanisms between childhood factors and romantic biographies.

Childhood Experiences

Childhood experiences could be linked to biographies of romantic relationships through several pathways. Children tend to have similar family life patterns to those of their parents (Hiekel & Vidal, 2020). Similarly, Socioeconomic Status (SES) is transmitted across generations, and SES itself predicts union formation and union dissolution patterns, especially among men (Jalovaara, 2012).

There is less direct evidence on how romantic biographies follow from other childhood events. It seems plausible that early life experiences could pave or block the way for entering and sustaining romantic relationships. The partnership trajectories would then be a result of accumulated advantages and disadvantages during life course (cf. DiPrete & Eirich, 2006).

Dannefer (2020) argues that social processes have a systemic tendency to produce inequalities. For example, people have a tendency for labeling pupils, employees, or even elder care

residents, which results in regulating access to developmental opportunities. Furthermore, organizational structures reinforce tendencies into intracohort stratification, such as with educational opportunities and pyramidal-shaped work organizations. These unequalizing processes shape the formation of partnership trajectories indirectly via exposing individuals to different schooling, workplace and social surroundings with different love life ideals. But the same mechanism also works directly as some individuals are labeled more desirable dating or marriage partners than others, such as in the case of involuntary celibates (incels) (Sparks et al., 2022) or sex symbols (Mercer, 2013).

Incels and sex symbols, arguably the two extremes of one labeling continuum, serve as fair examples for another aspect of cumulative dis/advantage: individuals' *favourable social position itself as a resource* (DiPrete & Eirich, 2006). Irregardless of personal characteristics or even if initial differences would be modest, a social position will produce further advantages or disadvantages. The process is straightforward and easy to observe in the accumulation of citations during academic careers (Merton, 1968) or research funding (Bol et al., 2018). The mechanism is slightly more complex in the context of romantic relationships. Although attractive individuals may enter into relationships more easily, their relationships tend to be more short-lived (Charvoz et al., 2008; Ma-Kellams et al., 2017).

Cumulative dis/advantages originate in childhood (O'Rand, 2009), and consequently, all significant childhood events are bound to have ramifications for adulthood. Adverse childhood experiences, such as physical punishment or poor health, predict unhealthy lifestyles (Brugiavini et al., 2022), health (Pakpahan et al., 2017), and work disability (Lorenti et al., 2020) in adulthood. In particular, events early in the life course initiate processes of cumulative dis/advantage. Haas (2008) found out that while both child and adult factors were associated with baseline levels of functional limitations, only childhood events accounted for a rate of change—or a cumulative disadvantage in functional limitations. The effects were similar for men and women in Haas' inquiry as well as in the studies reported above.

Family bonds and relationships with parents, in particular, are defining elements of childhood, and they have consequences for subsequent life courses. More warmth and less harsh parenting, a good relationship with parents and relatives in childhood all predict relationship satisfaction

in adulthood (Godbout et al., 2009; Merz & Jak, 2013; Parade et al., 2012). Those who have had good relationships with their parents may have better psychoemotional abilities but may also enjoy social advantages: Goldman (2022) discovered that childhood family happiness was associated with greater network density and more kin-centric network composition. As a result, individuals from families with good social ties have wider social circles from which to seek potential partners and receive increased social support, particularly from relatives. This support is particularly crucial for families with children.

The evidence for any gendered patterns is scarce, but the available literature on parent/child relationships has not identified notable differences between men and women. Males and females react similarly to parent/child relationships in childhood in terms of adult adjustment and developmental advances. (Mattanah et al., 2011; Raudino et al., 2013)

If the relationship with parents matters to children, so does their sheer presence or absence. Not only children of divorced parents (Amato, 2001) but also children who do not co-reside with their parent(s) for any other reason, such as death, incarceration, migration, or overseas deployment, have all similar negative consequences for children, despite the very different selection mechanisms (see discussion in Amato & Anthony, 2014). Any circumstances in which children are separated from their parents seem to increase the probability of adjustment and achievement issues. Boys experience more distress and developmental problems that are also more persistent than those of girls (Gorman et al., 2010; Hetherington et al., 1979; Simons et al., 1999). When either parent is absent, boys have a tendency for behavioral problems (delinquency, disobedience, impulsiviness) while girls have a tendency for psychological problems (anxiety, depression,sadness) (Ara, 2016; Sandstrom & Huerta, 2013; Sarkadi et al., 2008).

It is not only the shock created by parental absence, but in fact any sort of instability that the children face, whether economic, or parental employment, but also residential instability and changes in school and child-care arrangements, that have various negative outcomes for children. Multiple changes further aggregate the negative outcomes, suggesting that instability in and of itself could be detrimental to children. (see Sandstrom & Huerta, 2013, for review)

The above examples indicate that cumulative dis/advantage operate via two distinct pathways. First, through what we call here the 'intra'-level processes, which involve inequalities

within a single dimension increasing as individuals age. For example, individuals with fragmented family origins tend to have complexity in their relationship trajectories, just as differences in childhood health predict increased health inequalities in adulthood. Second, cumulative dis/advantages operate through 'inter'-level processes, where inequalities in one dimension accumulate across other life domains. For instance, childhood and adult health are associated with the propensity to marry (Sylvest et al., 2021), just as poor family functioning and exposure to negative life events during childhood are both associated with worse health outcomes in adulthood (Kravdal & Wörn, 2023; Winding & Andersen, 2019).

We refer to stable marital biographies as advantageous, while trajectories characterized by complexity or singlehood are considered disadvantagous, because the trajectories are associated with different well-being outcomes across life course as demonstrated by the literature review above, particularly in studies by Mäki et al. (2022), O'flaherty et al. (2016), and Zimmermann and Hameister (2019).

We hypothesize accordingly that positive childhood experiences predict stable romantic relationship biographies (1a), and that childhood SES confounds the association (1b). Favorable childhood experiences provide individuals with greater resources to initiate and maintain romantic relationships, whereas those who have undergone adverse childhood experiences are likely to encounter greater challenges with both. We expect similar outcomes for men and women as they react similarly to many childhood stimuli (1c). Considering that men tend to respond to adversity with behavioral problems and women with psychological issues, it is possible that these differences could be reflected in their partnership trajectories to some extent. For example, a higher prevalence of externalizing behavior among men who have faced adversity could be particularly related to difficulties in finding a partner, while the tendency for internalizing problems among women could be linked to challenges in maintaining well-functioning long-term relationships.

Socio-Cognitive Capabilities

Personal characteristics could further pronounce the cumulative dis/advantages of childhood experiences. Those with better socio-emotional capabilities and cognitive faculties could have

even larger benefits from favorable childhood conditions, and those with disadvantaged backgrounds could fare even worse if they had less human capital. Formally, this mechanism is called resource multiplication (Bauldry, 2014). In this article, we refer to the accumulation of main effects with cumulative dis/advantage and to the interaction effects with resource multiplication—or resource substitution, if the moderating factors would reduce rather than amplify the differences (Mirowsky & Ross, 2005).

Similar to our discussion on childhood experiences, we start with the assumption that romantic relationship trajectories result from the interplay of multiple life events and domains. In this case, high socio-emotional and cognitive capabilities could give direct benefits in the marriage market, but also indirect ones. For example, larger social networks introduce individuals to more potential mates and provide social support in times of crisis; People with psychosocial capabilities may have means by which they can navigate through different life circumstances, including love life. Therefore, if the hypothesis of resource multiplication would hold, capable individuals would appear to have increased benefits from favorable childhood conditions.

Cognitive faculties.

Research on intelligence and marital outcomes is scarce and contains small samples or old cohorts, as demonstrated by the meta-analysis of Roberts et al. (2007). Taylor et al. (2005) found that high IQ predicted the likelihood of ever marrying for men, but the association was reversed for women. As their study population was born in 1921, the results may not be generalizable for younger cohorts. At least in egalitarian societies, high education already predicts higher rates of getting married and nativity (Jalovaara & Fasang, 2015). We should expect similar trends for IQ. Regarding divorce, high IQ seems to be protective, but again study designs or, more specifically, small sample sizes leave room for replication studies (Holley et al., 2006; Helson, R.,2006, as cited in Roberts et al., 2007)

IQ scores consistently predict lower mortality (Čukić et al., 2017; Roberts et al., 2007). Those with higher intelligence, the reasoning goes, tend to make more beneficial behavioral choices and come up with means to overcome difficult situations (Čukić et al., 2017). Similar mechanisms could predict the choice of partners and relationship patterns that foster well-being as

well as the ability to utilize psychological resources in order to deal with challenging family life situations.

There is an overlap between social and cogntive skills. For example school performance does not solely reflect an individual's fluid intelligence. To illustrate, the ECLS-K Social Rating Scale (Rock & Pollack, 2002) assesses approaches to learning, self-control, interpersonal skills, external behavior, and internal behavior. These socio-emotional traits are shown to be consistently associated with academic success (Liu, 2019; Rock & Pollack, 2002). By the same token, Schoon et al. (2021) discovered that both cognitive skills and socio-emotional competences predicted adult socioeconomic position, independent of family background.

We will next zoom in on social capabilities and capital and argue that individuals that possess both cognitive and noncognitive capabilities will have an advantage in many life domains, including the marriage market.

Social capabilities and capital.

An ability to form and maintain social relationships will help in finding partners directly (Collins & van Dulmen, 2006), but also indirectly as they have wider social circles from which to find a partner (Degenne & Forsé, 1999).

The presence or absence of social circles also have repercussions on other areas of life that could indirectly influence the formation of romantic biographies. Social competence and peer relationships in childhood predict work competence (Collins & van Dulmen, 2006), health (Landstedt et al., 2015), life satisfaction (Marion et al., 2013) and even the likelihood of starting a business, as well as entrepreneurial success (Obschonka et al., 2012).

A word of caution should be added: antisocial peers could be a hardship in and of itself (Sameroff & Rosenblum, 2006, cf.), so childhood peer attachment might not always necessarily measure social competence.

Peer relationships in adolescence could predict adult outcomes in a different manner for men and women, but we are unsure how gender differences might manifest themselves in the formation of romantic biographies. Girls are more attached to their peers than boys (Gorrese & Ruggieri, 2012), whereas social status plays a greater role for men, especially in the marriage

market (Ha et al., 2010; Jalovaara, 2001).

Synthesis of Resource Substitution and Multiplication

As we hinted at earlier, rather than increasing initial differences, personal characteristics could in fact reduce inequalities. This might seem counterintuitive at first, as psychosocial abilities predict a number of wellbeing measures. Mirowsky and Ross (2005) argue that individuals with more resources become less reliant on any single resource. Individuals with ample socio-cognitive capital might be less affected by the absence of other resources, such as favorable childhood experiences. They would also gain less additional benefit from favorable childhood experiences because the added value of extra resources would be smaller. In the same way, adverse or favorable childhood experiences would be more influential for those with less socio-cognitive capital.

Empirical evidence in favor of either the resource substitution or multiplication theories is inconclusive. The fact that different studies support these opposing theories indicates that the driving mechanism is likely subject to specifications. The existing literature focuses mainly on health. Studies that focus on subjective health tend to support the theory of resource multiplication (Andersson, 2016; Settels, 2022; Veenstra & Vanzella-Yang, 2022), whereas those that focus on objective health tend to find support for resource substitution (Bauldry, 2014; Ross & Mirowsky, 2006, 2010). Yet, not all studies agree (Andersson & Vaughan, 2017).

Since there are no prior studies examining resource substitution and multiplication with the same or even similar specifications as ours, hypothesizing how resource substitution or multiplication would play out in our study setting is difficult, especially due to the fact that even the existing literature on health has produced somewhat conflicting findings. The above literature review could nevertheless indicate, as some suggest (cf. Settels, 2022), that outcomes that are holistic and incorporate several life domains could be a result of multiplicative processes. Romantic biographies are indeed woven into multiple life domains.

With these considerations in mind, we make a cautious hypothesis that we will see signs of resource multiplication in our results. More specifically, we hypothesize that good socio-cognitive capabilities will appear amplify the assumed impact of good childhood experiences

on romantic biographies, independent of childhood SES (2a). Both theories imply that people with few personal resources are more vulnerable to outside influence (2b). Therefore, negative childhood experiences are more likely to predict fragmented romantic biographies for people with less socio-cognitive resources. If there were any gender differences, men would be more prone to resource multiplication and women to resource substitution, because men tend to possess a wider variety of resources, as demonstrated by Andersson and Vaughan (2017) and Ross and Mirowsky (2006) (2c). Figure 2 displays a simplification of how the interaction effects might look like for a given trajectory, should we find any interaction effects.

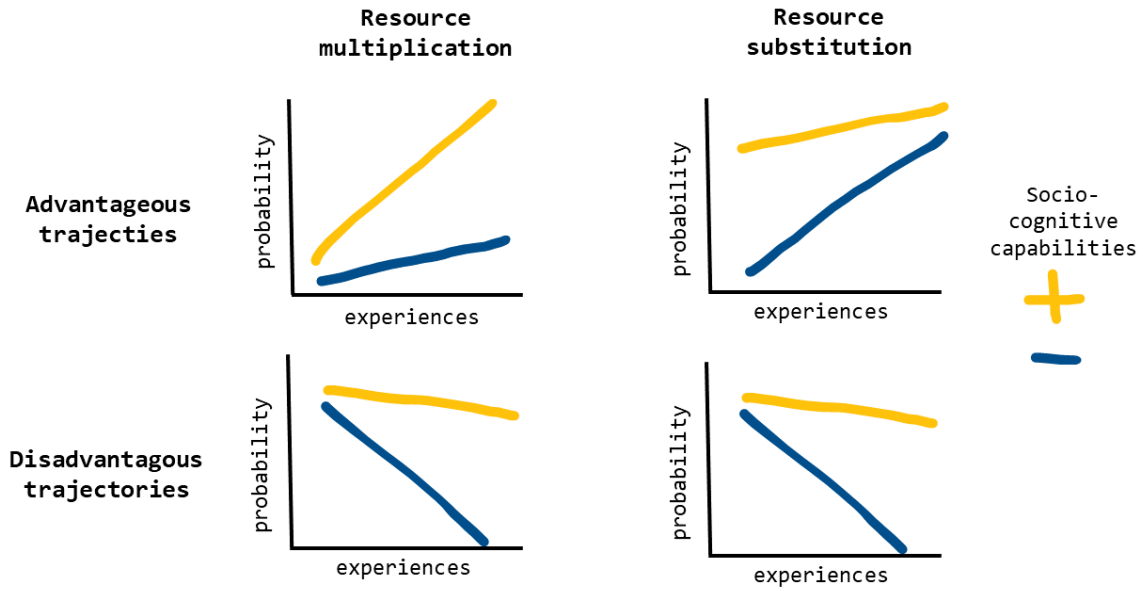


FIGURE 2. POSSIBLE INTERACTION EFFECTS IF THEORIES OF RESOURCE MULTIPLICATION OR SUBSITUTION WOULD HOLD

DATA AND METHODS

We drew upon the Survey of Health, Ageing and Retirement in Europe, Waves 1, 2, 3, 4, 5, 6, and 7. See Börsch-Supan et al. (2013) for methodological details. SHARE is the largest study of aging in the world. Here, we utilize the SHARELIFE interviews from wave 7 which focus on life course events, including comprehensive childhood information. We included all SHARE countries in the analysis, that is, all EU countries, Switzerland and Israel.

Relationship trajectory typologies were created with Latent Class Growth Modeling (LCGM),

which combines Latent Class Analysis (LCA) and Latent Growth Modelling (LGM): in addition to creating a latent probability curve for each relationship status, the sample was classified into latent classes that shared similar growth patterns. Readers interested in the mathematical details can refer to Muthen and Asparouhov (2008) and Vermunt (2007).

In LCGM, categorical co-variates may change the shape of growth curves. This allowed us to model the trajectories jointly for men and women, yet left room for sex-specific patterns.

The logit of the growth curves is a linear function:

$$ln\left(\frac{(\Pr^{s}_{i,age} \mid C_j = j)}{(\Pr^{s=1^{st}marriage}_{i,age} \mid C_j = j)}\right) = \alpha^{s}_{1,j} + \alpha^{s}_{2,j} sex_i + \beta^{s}_{1,j} age_i + \beta^{s}_{2,j} age_i \cdot sex_i \quad (1)$$

where s is relationship status, j is a given latent class C, i is individual, $\alpha_{1,2}$ intercept and $\beta_{1,2}$ slope estimates.

We experimented with adding quadratic terms, but the patterns were not as easily identifiable. The computational time also quadrupled.

The predicted probabilities were further derived from Equation 1 in the standard way:

$$\Pr(s, age, i \mid C_j = j) = \frac{\exp(logit_{s,age,i} \mid C_j = j)}{\sum_{s=1}^{7} \exp(logit_{s,age,i} \mid C_j = j)} \quad (2)$$

Computing LCGM requires generous resources. We ran 50 iterations for each potential 1 to 12 class solution to avoid local maxima in line with Wardenaar (2020). We parallelized the 600 subtasks in the CSC high performance environment Puhti (CSC, 2021) using R singularity environment container (R Core Team, 2021; RStudio Team, 2022) and R packages flexmix (Leisch, 2004), foreach (Microsoft & Weston, 2022), future (Bengtsson, 2021) snow (Tierney et al., 2021). Still, the LCGM part of the analysis took over one and a half days.

Out of the 50 iterations for each class solution, we selected the one with the highest log likelihood. To determine how many classes to choose, we compared different class solutions visually against log likelihood, Lo-Mendell-Rubin likelihood ratio test (LMR_LRT) (Lo et al., 2001), and Integrated Completed Likelihood criterion (ICL) (Baudry et al., 2010). LMR_LRT and ICL correspond to the more familiar Likelihood Ratio Test (LRT) and Bayesian Information Criteria (BIC), respectively, but penalize for the number of classes.

In this analysis, we considered childhood SES to be a confounder. This is because we were

trying to capture both experiences and personal qualities that would not be mere artefacts of socioeconomic background.

We divided childhood information into three sets of variables that were fed into Confirmatory Factor Analysis (CFA). (All variables are listed in Table S3.) Firstly, we measured childhood experiences with a broad range of variables from number of residences, childhood health, family composition and whether parents were alive at the time when the respondent came of age to relationship with parents and whether they experienced physical harm by father, mother, or anyone else.

Second, feelings of loneliness and sufficiency of friends served as measurements of social capability served as measurements and reading, writing, and math skills as those of cognitive capability. Reading, writing and math skills both predict fluid intelligence, the capability to solve novel reasoning problems. Evidence from a synthesis of longitudinal studies concludes that reading and mathematics skills also correlate with one another. (Peng et al., 2019)

Finally, how well off the family was financially and the number of books, features, rooms in childhood home and International Socio-Economic Index of occupational status (ISEI) functioned as measurements for childhood socioeconomic status (SES).

Although parental and peer attachment are generally moderately correlated (see Gorrese & Ruggieri, 2012, for a review), in our sample, the correlation between variables that measure relationships with parents and peers was below .10 in all cases. Having them in different factors was therefore warranted. In the results section we will also explore the correlations between the different factors.

We also acknowledge that family socioeconomic background is generally a predictor of school performance (Berkowitz et al., 2017) and to some extent of social networks (Goldman, 2022). Therefore, we controlled our results for childhood SES. In addition, we also controlled for the country of origin.

To assess how well the factors fitted, we checked standardized factor loadings of the variables, covariances between the factors, and the customary fit indices to access the the overall fit for different factor solutions, namely Chi-squared, RMSEA, Comparative Fit Index (CFI) and Tucker-Lewis Index (TLI). We standardized the factor scores and used them as dependent

variables in multinomial logistic regressions.

In order to deal with missing childhood data (Table S3), we performed multiple imputation with six imputed datasets. All variables in the factor analysis that were correlated by at least .10 were used for multiple imputation, as well as some additional variables not used for inference elsewhere: whether financial difficulties caused family to move to a different place; if family received help from relatives because of financial difficulties; whether father of respondent did not have a job for several months, and parental education that was only available for under half of the respondents due to the panel survey design. Due to this, we also used own educational level as a proxy for parental imputation in multiple imputations (cf. Black et al., 2005; Martin, 2012).

Results

Romantic biographies

We identified seven romantic biography classes. The fit statistics (Supplement Table S1) improved as more classes were introduced. However, solutions with more than seven classes did not yield any new, meaningful life course patterns; instead, they offered finer-grained timings of first marriages or typologies that did not make conceptual sense.

With this many classes and relation statuses, it seems that the fit indices have difficulty identifying parsimonious models, although they would make most sense heuristically. Furthermore, since fit indices should not be used to justify poorly fit models (Stone, 2021), it implies that theoretical and mathematical fit do not always coincide. Furthermore, the typologies found here with LCGM were similar to the clusters revealed by sequence analysis in Mäki et al. (2022) that used the same dataset. This would also seem to lend support for the heuristic approach.

Figure 3 pictures the romantic biography typologies that the Latent Class Growth Modeling revealed. The growth curves represent the probability of belonging to a given relationship status in a given age and class. Thus, it does not present individual trajectories but rather broad patterns or probability curves by which individuals have been divided into different classes.

The *Early direct marriage* (1) class trajectories began either in singlehood or a dating relationship at the age of 15 and quickly transitioned into a stable first marriage. If the marriage was

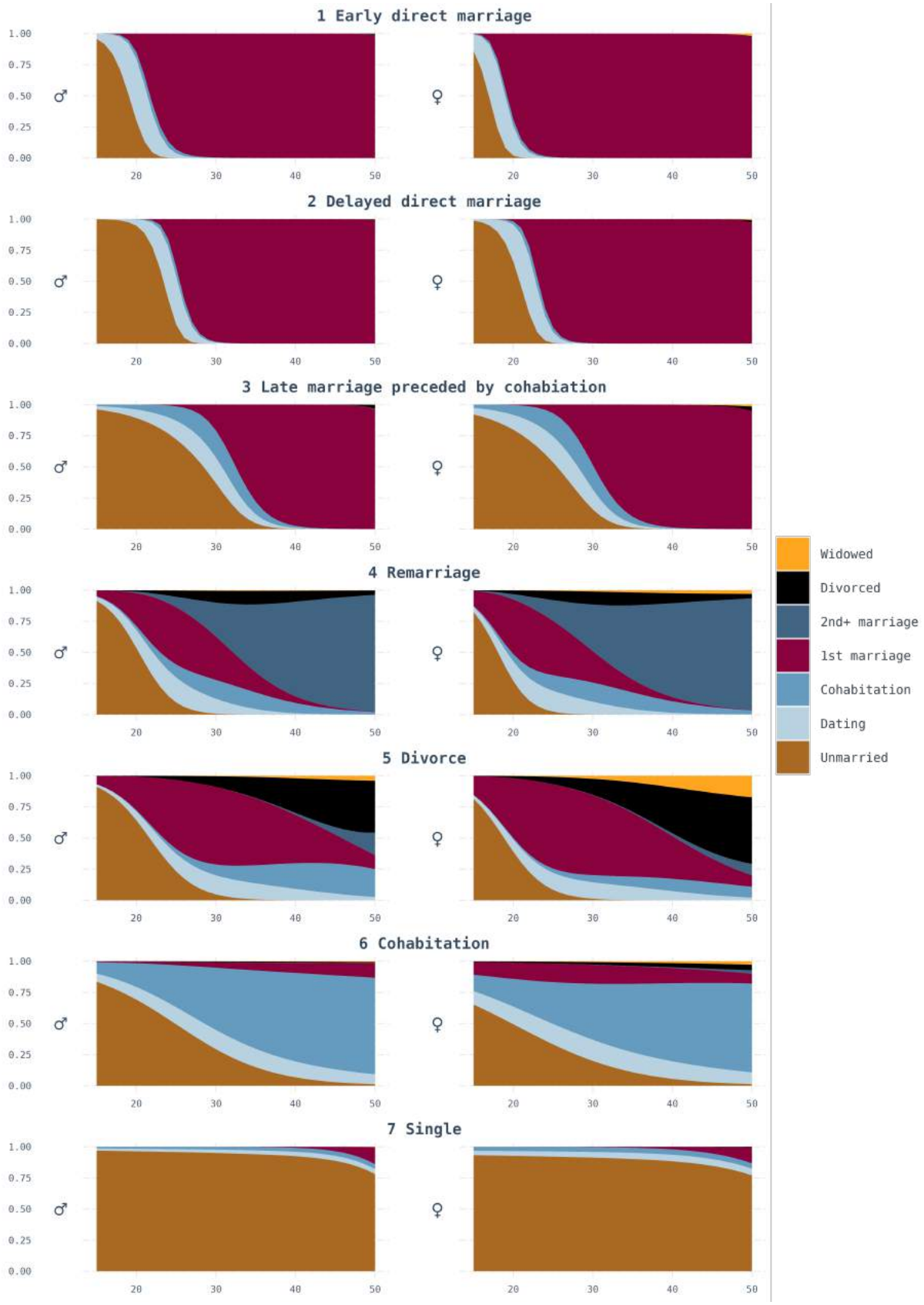


FIGURE 3. ROMANTIC BIOGRAPHIES FOR WESTERN AND NORTHERN EUROPEANS BORN IN 1945 - 1957 AT THE AGE OF 15 - 60

preceded by cohabitation, the period was very brief. The *delayed direct marriage* (2) is identical to the first class in other prospects, but the transition into a dating relationship and marriage occured around five years later on average. The third class comprised of *Late marriages preceded by cohabitation* (3). Unlike in the first three classes, here the cohabitation period was not purely transitory, although people ultimately ended up in stable first marriages. The marriages started on average around the age of thirty.

The remainder of the classes introduced quite different patterns from the previous. The *Remarriage* (4) trajectories ultimately ended up in relatively stable higher-order marriages. People did not stay divorced in this class but tended to re-partner rather quickly. The *divorce* (5) class was the least well defined. Although most first marriages ended by the age of 50, some—especially men—transitioned to cohabiting or dating relationships. The mixture modeling also assigned the majority of widows in our sample to this class, especially among women. Some late remarriages were also assigned to this group, evidently due to a longer period as a divorcee before repartnering.

Respondents in the *Cohabitation* (6) class had a high probability of being single at the beginning of the trajectory, while the probability of cohabitation increased as a function of time. Some individuals did get married, but the unions tended not to be long-lasting.

Finally, the *single* (7) class consisted of trajectories that were vastly characterized by permanent singlehood, with some occasional dating and cohabitation spells. The few very late first marriages were also assigned to this class—seemingly due to the long period of singlehood it was preceded by.

Male and female trajectories were similar, but we can notice the trend that men tend to be older in relationships and die younger: female trajectories were a few years ahead, and widowhood was more common among them.

Table 1. *Descriptive Statistics by Class*

	1	2	3	4	5	6	7	Overall
	(N=8731)	(N=6805)	(N=3244)	(N=1452)	(N=2473)	(N=1711)	(N=2053)	(N=26469)
Year of Birth								
Mean (SD)	1957.31 (3.52)	1957.33 (3.52)	1957.82 (3.55)	1957.21 (3.56)	1957.64 (3.54)	1958.01 (3.48)	1957.91 (3.49)	1957.49 (3.53)
Sex								
Male	3613 (41.4 %)	3046 (44.8 %)	1502 (46.3 %)	540 (37.2 %)	1001 (40.5 %)	709 (41.4 %)	1106 (53.9 %)	11517 (43.5 %)
Female	5118 (58.6 %)	3759 (55.2 %)	1742 (53.7 %)	912 (62.8 %)	1472 (59.5 %)	1002 (58.6 %)	947 (46.1 %)	14952 (56.5 %)
Education								
Basic	2794 (32.0 %)	1511 (22.2 %)	613 (18.9 %)	322 (22.2 %)	545 (22.0 %)	369 (21.6 %)	639 (31.1 %)	6793 (25.7 %)
Secondary	4040 (46.3 %)	3023 (44.4 %)	1224 (37.7 %)	666 (45.9 %)	1065 (43.1 %)	673 (39.3 %)	803 (39.1 %)	11494 (43.4 %)
Higher	1875 (21.5 %)	2248 (33.0 %)	1393 (42.9 %)	461 (31.7 %)	853 (34.5 %)	659 (38.5 %)	584 (28.4 %)	8073 (30.5 %)
Missing	22 (0.3%)	23 (0.3%)	14 (0.4%)	3 (0.2%)	10 (0.4%)	10 (0.6%)	27 (1.3%)	109 (0.4%)
Childhood experiences								
Mean (SD)	0.06 (0.97)	0.12 (0.95)	0.02 (0.98)	-0.25 (1.07)	-0.18 (1.08)	-0.22 (1.05)	-0.11 (1.05)	0.00 (1.00)
Socio-cognitive capabilities								
Mean (SD)	-0.02 (0.97)	0.08 (0.98)	0.06 (0.99)	-0.01 (1.04)	-0.02 (1.03)	-0.01 (1.05)	-0.24 (1.08)	0.00 (1.00)
Childhood SES								
Mean (SD)	-0.19 (0.94)	-0.02 (0.97)	0.25 (1.03)	0.16 (1.01)	0.14 (1.01)	0.28 (1.05)	-0.04 (1.05)	0.00 (1.00)

The classes resembled each other in their demographic makeup (Table 1). There were no notable differences in the distributions of the year of birth or sex, although perhaps surprisingly the remarriage class was more common among women. Less surprisingly, the single class was more prevalent among men. Both classes that were marked by cohabitation spells were more frequently observed among the higher educated; single and early direct marriage classes among the basic educated.

Due to the high number of childhood variables, we display only the pooled factor scores of childhood circumstances by class. Interestingly, childhood experiences and socio-cognitive capabilities had chiefly similar values by class, whereas childhood SES behaved differently within each. More on the factors and differences by class further below.

The supplementary Table S3 outlines the distributions of childhood information by gender for every childhood variable included in the analysis. In general, positive childhood experiences were much more common than negative ones. More respondents also reported values above perceived average than below perceived average, something that is typical in surveys (Williams & Gilovich, 2008). Women had more extreme values in their assessment of their parental relationships. Men were more content with their social life. Otherwise, men and women reported similar answers to the childhood questions.

Although the sample size was not large enough for a thorough analysis of class distributions among countries, some patterns did still emerge (supplementary Figure S1). The direct marriage classes (1,2) were prevalent in all other countries except Denmark, Sweden, and Switzerland, where the most common trajectories were marriages preceded by cohabitation (3). The singlehood class occurred relatively constantly across Europe and constituted generally five to ten percent of all respondents. Life courses characterized by remarriage, divorce, cohabitation, and marriage after cohabiting were less common in Southeastern Europe compared with Northwestern Europe.

Factor Analysis of Childhood Variables

All goodness of fit indicators supported a three-factor solution over single- and two-factor solutions (details in the supplementary Table S2). Covariances between the three factors are doc-

Table 2. *Covariances Between Factors in Three-Factor Confirmatory Model of Childhood Information*

Factors		Covariance (se)
Childhood experiences	Socio-cognitive capabilities	.38 (.01)
Childhood experiences	Childhood SES	.10 (.01)
Socio-cognitive capabilities	Childhood SES	.28 (.01)

Table 3. *Standardized Factor Loadings for Three-Factor Confirmatory Model of Childhood Information*

Variables by factors	Factor loading (se)
Childhood experiences	
No. of residences - inversed	.13 (.01)
Childhood health	.21 (.01)
Living with both biological parents when ten	.30 (.01)
No parental death	.17 (.01)
No parental death	.17 (.02)
Relationship with mum	.77 (.00)
Relationship with dad	.83 (.00)
Mum understood worries	.78 (.00)
Dad understood worries	.83 (.00)
Physical violence by mum - inversed	.45 (.01)
Physical violence by dad - inversed	.47 (.01)
Physical violence by anyone else - inversed	.39 (.01)
Socio-cognitive capabilities	
Math performance	.61 (.01)
Reading and writing performance	.60 (.01)
Loneliness - inversed	.57 (.01)
How often had friends	.63 (.01)
Childhood SES	
Rooms at childhood home	.38 (.01)
Features at childhood home	.56 (.01)
Financial situation	.61 (.01)
Books at childhood home	.74 (.01)
ISEI	.50 (.01)

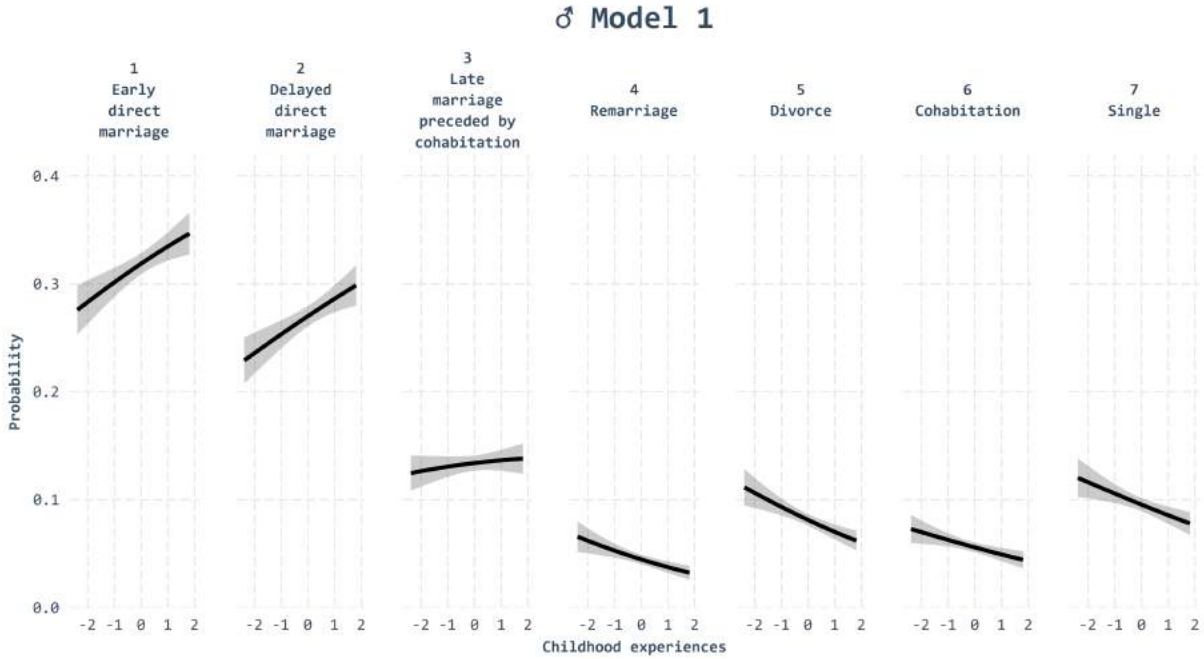
umented in Table 2. The covariance between childhood experiences and childhood socioeconomic status was only .10, which could indicate that our childhood experience variables were not mere artifacts of socioeconomic position. Socio-cognitive capabilities and chilhood SES correlated by .28, which is not totally optimal for studying interaction effects, but still modest considering that individual characteristics are by definition dependent on family background.

Table 3 portrays the standardized factor loadings. Factors measuring sociocognitive capacity and childhood socioeconomic status had fair loadings, mainly around .60. Parental relational variables in the childhood experience factor have scores as high as .80. By contrast, childhood health, family composition, whether parents were alive in the childhood of the respondent, and number of residences before the age of 16 all fell below .30. The three factors dealing with physical harm fall in between.

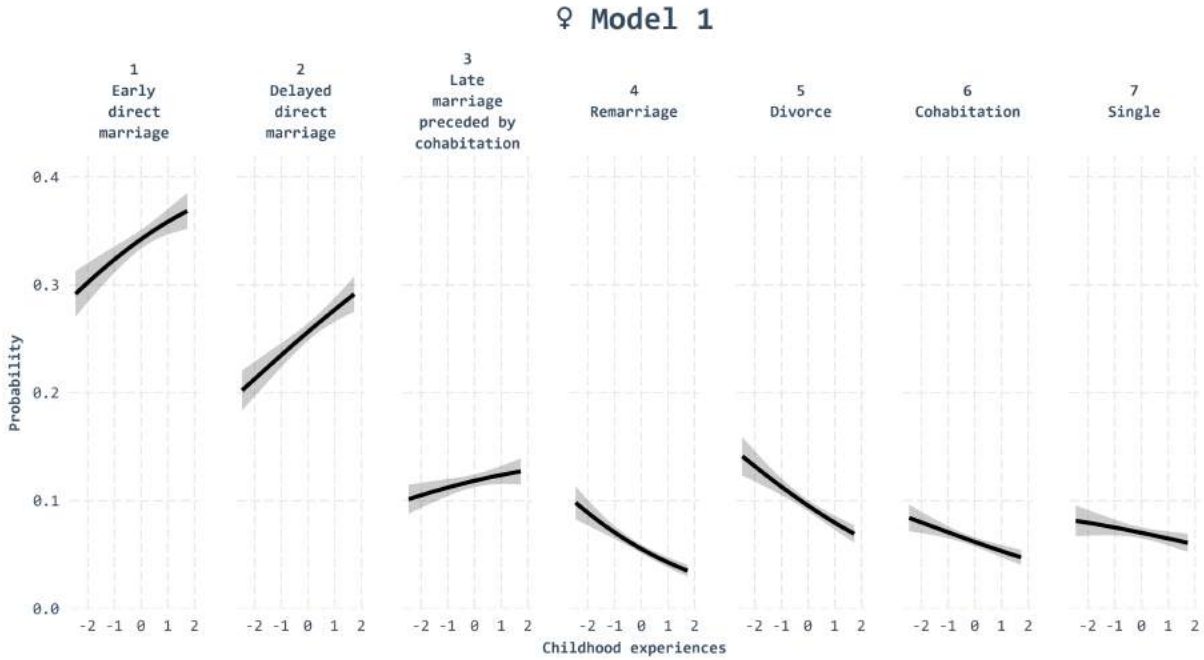
In a factor with multiple questions dealing with to parental interactions, it is natural for these variables to score high. Interactions with parents are arguably one of the most defining aspects of childhood (Gutman et al., 2010). It is logical that they carry substantial weight in any composite score that attempts to capture childhood experiences. Still, parental interactions are not the only ones that matter for child development. Family composition, childhood health, number of residences and physical harm from a non-parent all have an impact on a child's life, as demonstrated by our literature review. Yet, they all measure a slightly different dimension of childhood experiences. It then makes sense that they do not explain the common variability of the factor equally well as do the parental interaction variables that are more similar to each other. As a result, we chose to keep even variables with low factor loadings in the analysis because they made sense conceptually for our analysis.

Links Between Childhood and Romantic Biographies

Figure 4 displays the predicted probabilities from Multinomial Logistic Regressions on how childhood experiences predicted, after controlling for childhood SES and country of residence, the probability of belonging to a given romantic biography typology. We let the childhood experience factor score vary from the 1 % quintile to the 99% quintile to capture nearly the full spectrum of how childhood adversity and advantage predicted the formation of relationship

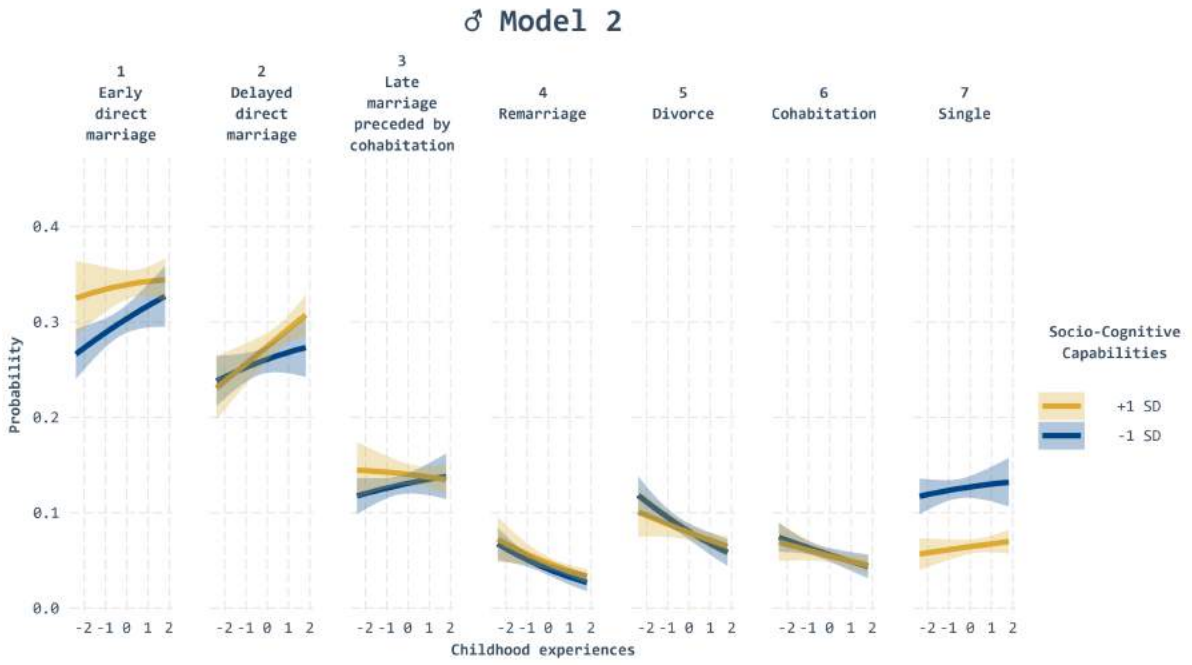


(A) Men

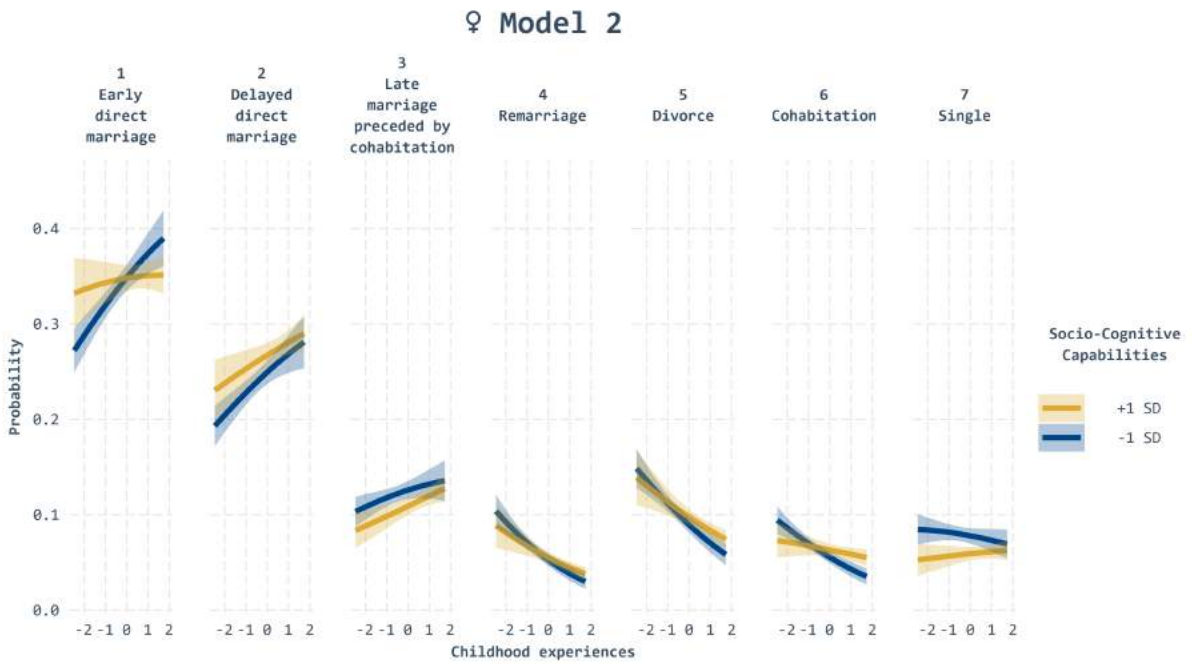


(B) Women

Figure 4. Predicted probabilities of class membership by childhood experiences and sex. Controls for childhood socioeconomic status and country (Model 1)



(A) MEN



(B) WOMEN

FIGURE 5. SOCIO-COGNITIVE CAPABILITY MODERATED CLASS MEMBERSHIP PROBABILITIES BY CHILDHOOD EXPERIENCES AND SEX. CONTROLS FOR CHILDHOOD SOCIOECONOMIC STATUS AND COUNTRY (MODEL 2)

trajectories. We opted for the quintile as opposed to minimum and maximum because of a few outliers in the data that made the predictions unreliable, especially at the lower values. We display here standardized factor scores, which means 0 is the mean value, and one unit change on the x-axis implies a change of one standard deviation.

Figure 4 reveals an intriguingly clear pattern: favorable childhood experiences predicted trajectories that eventually arrived at stable first marriages, adverse childhood experiences predict all other trajectories. Very favorable childhood experiences increased the probability of belonging to the direct marriage classes by just under ten percent, compared with very adverse childhood experiences. The associations were somewhat stronger for women and delayed marriages, and slightly weaker for early direct marriages. Likewise, very adverse childhood experiences increased the probability of belonging to the classes that did not end up in a stable first marriage by around three percent for men and five percent for women. The only exception to these gendered patterns was the singlehood class (7) wherein childhood experiences had a better predictive power for men and barely any predictive power for women. Good childhood experiences also predicted the late marriage preceded by cohabitation by a few percent, but the main effects fell within the confidence bounds.

Figure 5 depicts the moderating effects of socio-cognitive capabilities. These are fixed at plus and minus one standard deviation from the standardized sample mean. One standard deviation away from the mean pictures fair differences in personal characteristics while not understating or exaggerating the results. It is also a standard practice of presenting continuous by continuous interaction effects (Long, 2019; UCLA, 2023). Here we have chosen to display the absolute differences in the marginal effects in order to maintain comparability with the main effects. If the interaction effects would be displayed on a relative scale, the results would appear stronger for the classes with smaller main effects.

Low capabilities appeared to strengthen, and high capabilities reduce the predictive power of childhood experiences on the formation of relationship trajectories for women. There, the interaction effect was observed in almost all of the classes, albeit not very distinctly in all cases. Either the curves were flatter for the low-capable individuals, or there were no clear patterns. This suggests that the theory of resource substitution would hold: childhood experiences could

matter more for those with less socio-cognitive resources.

A similar pattern is distinguishable for the *early direct marriage* (1) for men. Otherwise, there were no notable interaction effects, although the curves tended to be somewhat steeper for the individuals with low capabilities, which would also point towards resource substitution. The only instance that appears to align with the resource multiplication theory are men in the *delayed direct marriage* (2): favorable childhood conditions predicted arriving at such trajectory at an increasing rate for those with high socio-cognitive faculties.

Robustness Checks

Experimenting the models with and without childhood SES revealed some intriguing patterns. If controls for country and childhood SES were left out of the model, the relationship was stronger, but the general trends were the same (online supplements Figure S2 and Figure S3). Using childhood SES as a dependent variable instead, usually reversed the direction of the main effect (supplementary Figure S4). When, in addition, we consider that childhood SES and childhood experiences factors barely correlated (Table 2), it is reasonable to conclude that childhood SES and childhood experiences were linked to romantic biographies through vastly a different pathway.

We tried several different variable combinations with the factor analysis and obtained very similar results: seperating social and cognitive capabilities, keeping all childhood experiences, keeping or dropping some with low factor loadings. We also constructed composite scores so that variables dealing with residential stability, childhood health, relationship with parents, parental presence and physical harm all had equal weight. The results were near identical with our other analyses, but the main effects were somewhat stronger. (Results available upon request)

Even if class distributions were partially uneven between countries, we are inherently interested in how childhood experiences predict family formation and not in the prevalence of relationship patterns. Therefore, we reran the multinomial logistic regressions by four regions: Northern, Southern, Eastern, and Western Europe as defined by the United Nations (UNSD, 1999) to find out any region-specific patterns. The stratified analysis vastly corroborated the

aggregated results (See supplements Figure S5 through Figure S12). Southern European men displayed some signs of resource multiplication: those with high socio-cognitive faculties had stronger marginal effects. Our sample size was unfortunately not large enough for country-level robustness checks (see also supplementary Figure S1 for country distributions).

Discussion and Conclusion

The aim of this study was to understand how childhood experiences, other than socioeconomic background, resonate through the formation of romantic relationship trajectories. We found that favorable childhood experiences predicted stable first marriages, childhood adversities predicted all other romantic biography typologies. Among women, romantic biographies reflected both adverse and favorable childhood experiences more for individuals with lower socio-cognitive capabilities. For men, we did not find constistently interpretable patterns.

Our study confirms previous findings that marital patterns reflect childhood health (Sylvest et al., 2021), the relationship stability of parents (Hiekel & Vidal, 2020), and childhood relationship with parents (Parade et al., 2012). We found that the totality of childhood experiences were associated with romantic biographies (1a). Childhood SES partly confounded the relationship, but for the most part socioeconomic background and childhood experiences predicted romantic biographies differently (1b).

Contrary to our expectations, the results were more in line with the resource substitution theory (2a). Among women, capable individuals appeared less susceptible to external events, whether good or bad, whereas the life courses of individuals with less cognitive and social capabilities childhood events appeared to be more defining (2b). Although the findings for men were somewhat ambiguous, the results could still indicate that some individuals will 'have their way' irregardless of prevailing conditions, while others could be more influenced by their surroundings.

We considered potential gender-specific variations in our results, but were unsure how that would play out. Specifically, we peculated that resource substitution could better explain partnership formation for women and resource multiplication for men, which, in the light of our findings, seems to hold to some extent (2c). We also contemplated that men with negative childhood

experiences could have challenges entering a relationship and women sustaining them (1c). This was partially supported by our findings: Childhood experiences predicted fragmented romantic biographies more for women and biographies characterized by singlehood for men. Unforeseeably, we did not find that socio-cognitive faculties would consistently moderate the relationship between childhood experiences and romantic biographies for men. This unexpected outcome may stem from the initially weaker main effects, making interactions more difficult to detect. The weaker main effects among men could be explained by lower suspectablity to certain outside influences (Haltigan et al., 2023; Kaltiala, 2023), although it is difficult to disentangle the mechanisms as boys generally react more visibly to enviromental factors (Vrantsidis et al., 2022).

Additionally, it is possible that men are less susceptible to childhood influences in ways that were not adequately addressed in our literature review.

Our findings highlight the added value of using continuous variables for childhood experiences, rather than counting the number of adversities, which appears to be the convention (Brugiavini et al., 2022; Montez & Hayward, 2013). Initially, less information was lost when variables were not grouped before conducting inferential analyses. Additionally, using continuous predictors revealed that those with high socio-cognitive capabilities seemed to be resistant, not only in response to adverse experiences but also to favorable ones. Our approach is in line with an early work of Rutter (1987) who proposed that joint continuous variables serve the purpose better than treating vulnerability and protective factors of the same phenomena separately. Our study supports Rutter's reasoning.

One of the strengths of this study lies in its capacity to distill complex patterns and associations into a relatively coherent and understandable representation. Using Latent Class Growth Modeling revealed more nuanced patterns than the more frequently employed sequence analysis (cf. Mäki et al., 2022) as proposed by (Mikolai & Lyons-Amos, 2017). LCGM with our sample size would not have been possible without the help of a high performance computing environment and parallelization with several hundred nodes, something that is uncommon in social science research. We also had quite a few childhood variables that aided in giving a holistic picture of early life conditions and enabled examining early life settings from multiple angles.

Although this study has its merits, it is not without a few caveats. First, the reasonably high survey sample size was possible only by aggregating the analysis between 28 European countries. Although regional-level robustness checks were mainly in line with the aggregated analysis, it is possible that we missed some interesting country-specific patterns due to aggregation. Second, some of the factor loadings fell below the conventional cut-off points (Stevens, 2012). Splitting the childhood experience factor into multiple dimensions would have bolstered the statistical rigor of our factor analysis. However, adding more factors would have introduced unnecessary additional complexity in our inferences. Keeping all in the same factor made conceptual sense, and in addition, all factor loadings were positively correlated and the magnitude of the factor loadings was roughly the same for conceptually similar variables. Furthermore, robustness checks with composite scores corroborated our findings. Third, we focused here on socio-cognitive capabilities that were measured with academic performance and social connectedness. Measuring personal characteristics with some other variables might have produced different results.

In line with previous research on health and relationship formation (Sylvest et al., 2021; Winding & Andersen, 2019), we found that a web of interrelated factors was associated with romantic biographies. On the one hand, a variety of resources that are linked with love life accumulate to certain individuals. Yet, on the other hand, a lack of one type of resource may be compensated for with another. Future research could look into the interplay of different childhood factors and try to reveal causal links. Understanding why socioeconomic background and other childhood events sometimes predict adult outcomes in opposite direction would be a particularly interesting quest.

Just as the interconnectedness of different childhood factors provides avenues for new studies, so do the macro-level changes and phenomena in love life. Understanding how personal characteristics modify association is interesting and important, but there is a risk of not seeing the forest for the trees. In contemporary Western societies, there is a tendency to treat collectivist and societal issues with individual-level solutions. If some people cannot lead the kind of love and family life they would hope for, there could be societal trends that stood in their way, such as labor market insecurities (Sutela, 2012), lack of commitment (Finkel, 2014), postpone-

ment of childbearing and marriage, and changes in attitudes towards family life (Lesthaeghe & van de Kaa, 1986). Focusing solely on the individual would miss the point. Therefore, recently emerged theories that emphasize collective trends such as system resilience are a welcomed addition to the discussion (Shaw et al., 2016).

Our results demonstrate that socioeconomic background does not fully determine romantic biographies. Other childhood experiences are equally, if not more important. Some people seem to be more susceptible to childhood experiences. Our findings highlight the importance of identifying the needs of families and tailoring support accordingly.

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classes	logLik	ICL	LMR_LRT
1	-1004042.40	2008416.06	
2	-724451.58	1449728.44	541517.81
3	-633483.07	1268194.55	729225.31
4	-577377.12	1157140.21	844152.06
5	-544437.24	1091573.99	911775.00
6	-520332.48	1044124.28	961149.47
7	-497395.11	998774.64	1007815.57
8	-481670.57	967811.13	1039897.86
9	-472313.99	949501.80	1059138.30
10	-457424.40	920454.61	1089288.04
11	-451052.28	908347.82	1102384.36
12	-440761.00	888241.11	1123231.99

Table S1. *Fit Statistics for Models with Different Number of Classes*

Table S2. *Goodness-of-Fit Indicators of Confirmatory Factor Analysis Models for Childhood Information*

Statistic	Single factor	Two factor	Three factor
χ^2	66477.35	50079.18	34098.95
P-value	0	0	0
Degrees of freedom	189	188	186
RMSEA	0.12	0.10	0.08
Comparative Fit Index (CFI)	0.67	0.75	0.83
Tucker-Lewis Index (TLI)	0.63	0.72	0.81

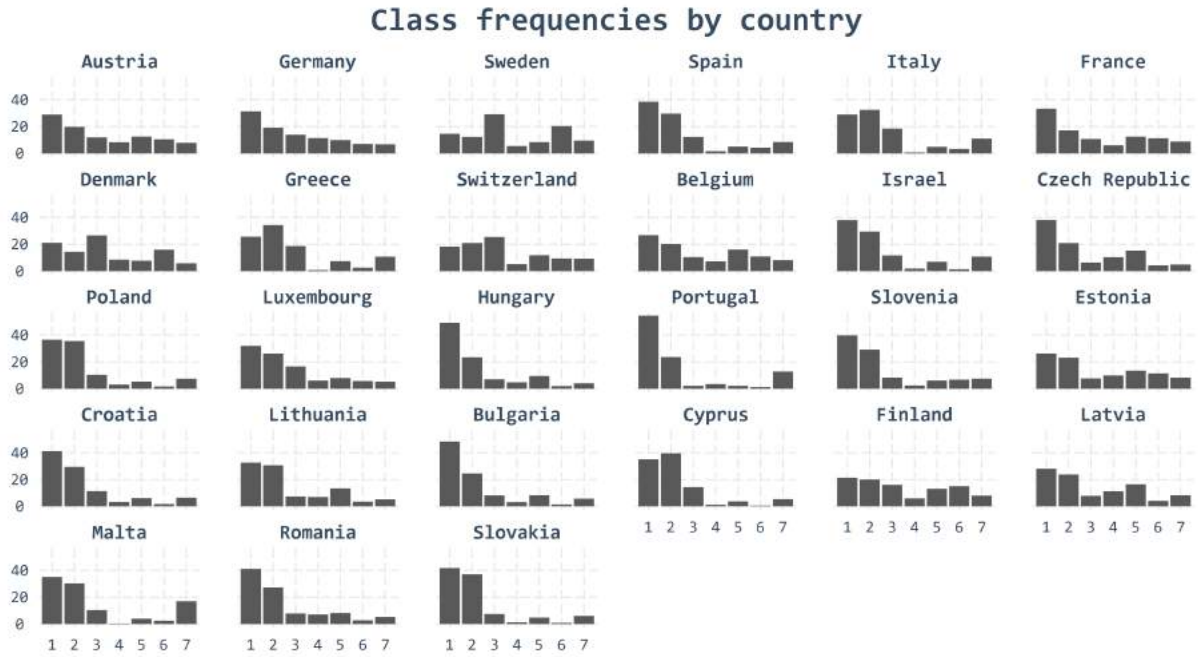


FIGURE S1. CLASS MEMBERSHIP PERCENTAGES BY COUNTRY

Table S3. *Descriptive Statistics by Gender*

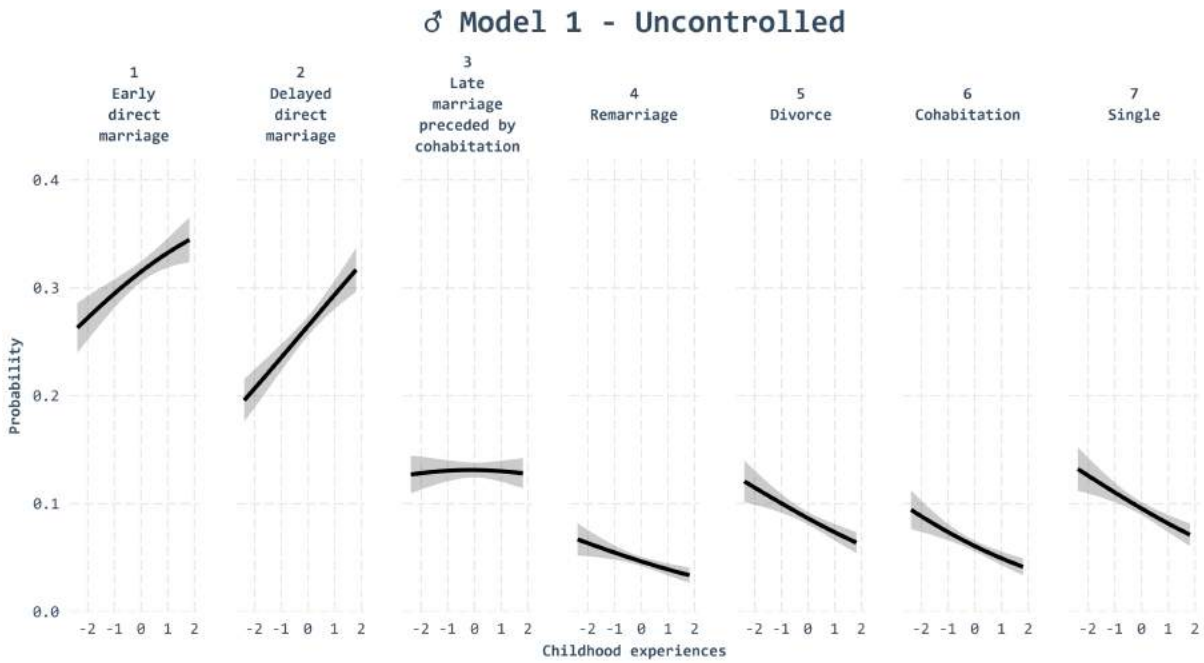
	Male	Female
	(N=11517)	(N=14952)
No. of residences		
Mean (SD)	1.44 (0.85)	1.46 (0.86)
Missing	76 (0.7%)	90 (0.6%)
Childhood health		
Excellent	4054 (35.2 %)	4861 (32.5 %)
Very good	3611 (31.4 %)	4727 (31.6 %)
Good	2858 (24.8 %)	3874 (25.9 %)
Fair	672 (5.8 %)	1074 (7.2 %)
Poor	222 (1.9 %)	350 (2.3 %)
Missing	100 (0.9%)	66 (0.4%)
Living with both biological parents when ten		
Yes	10431 (90.6 %)	13426 (89.8 %)
No	1025 (8.9 %)	1466 (9.8 %)
Missing	61 (0.5%)	60 (0.4%)
Dad alive when 18		
Yes	10525 (91.4 %)	13754 (92.0 %)
No	992 (8.6 %)	1198 (8.0 %)
Mum alive when 18		
Yes	11074 (96.2 %)	14436 (96.5 %)
No	443 (3.8 %)	516 (3.5 %)
Relationship with mum		
Excellent	3415 (29.7 %)	4704 (31.5 %)
Very good	3826 (33.2 %)	4730 (31.6 %)
Good	3117 (27.1 %)	3668 (24.5 %)
Fair	665 (5.8 %)	1212 (8.1 %)
Poor	169 (1.5 %)	400 (2.7 %)
Missing	325 (2.8%)	238 (1.6%)
Relationship with dad		
Excellent	2441 (21.2 %)	3802 (25.4 %)
Very good	3310 (28.7 %)	4319 (28.9 %)
Good	3579 (31.1 %)	4163 (27.8 %)
Fair	1165 (10.1 %)	1399 (9.4 %)
Poor	452 (3.9 %)	670 (4.5 %)
Missing	570 (4.9%)	599 (4.0%)
Mum understood worries		
A lot	5332 (46.3 %)	7165 (47.9 %)
Some	3987 (34.6 %)	4666 (31.2 %)
A little	1326 (11.5 %)	1926 (12.9 %)
Not at all	468 (4.1 %)	898 (6.0 %)
Missing	404 (3.5%)	297 (2.0%)
Dad understood worries		

Table S3. *Descriptive Statistics by Gender (continued)*

	Male	Female
A lot	3634 (31.6 %)	5125 (34.3 %)
Some	4278 (37.1 %)	5119 (34.2 %)
A little	2098 (18.2 %)	2594 (17.3 %)
Not at all	871 (7.6 %)	1475 (9.9 %)
Missing	636 (5.5%)	639 (4.3%)
Mum physical harm		
Often	359 (3.1 %)	561 (3.8 %)
Sometimes	1579 (13.7 %)	1730 (11.6 %)
Rarely	2716 (23.6 %)	3052 (20.4 %)
Never	6519 (56.6 %)	9356 (62.6 %)
Missing	344 (3.0%)	253 (1.7%)
Dad physical harm		
Often	410 (3.6 %)	389 (2.6 %)
Sometimes	1670 (14.5 %)	1187 (7.9 %)
Rarely	3144 (27.3 %)	2838 (19.0 %)
Never	5737 (49.8 %)	9987 (66.8 %)
Missing	556 (4.8%)	551 (3.7%)
Other physical harm		
Often	182 (1.6 %)	240 (1.6 %)
Sometimes	684 (5.9 %)	714 (4.8 %)
Rarely	1885 (16.4 %)	1558 (10.4 %)
Never	8487 (73.7 %)	12287 (82.2 %)
Missing	279 (2.4%)	153 (1.0%)
Math performance		
Much better	1153 (10.0 %)	1616 (10.8 %)
Better	2731 (23.7 %)	3390 (22.7 %)
About the same	5895 (51.2 %)	7782 (52.0 %)
Worse	1347 (11.7 %)	1695 (11.3 %)
Much worse	242 (2.1 %)	309 (2.1 %)
Not applicable: did not go to school	0 (0.0 %)	0 (0.0 %)
Missing	149 (1.3%)	160 (1.1%)
Reading and writing performance		
Much better	925 (8.0 %)	2089 (14.0 %)
Better	2420 (21.0 %)	4480 (30.0 %)
About the same	6485 (56.3 %)	7243 (48.4 %)
Worse	1397 (12.1 %)	892 (6.0 %)
Much worse	150 (1.3 %)	99 (0.7 %)
Not applicable: did not go to school	0 (0.0 %)	0 (0.0 %)
Missing	140 (1.2%)	149 (1.0%)
How often felt lonely		
Often	553 (4.8 %)	1026 (6.9 %)
Sometimes	1469 (12.8 %)	2326 (15.6 %)
Rarely	2370 (20.6 %)	3036 (20.3 %)

Table S3. *Descriptive Statistics by Gender (continued)*

	Male	Female
Never	6878 (59.7 %)	8408 (56.2 %)
Missing	247 (2.1%)	156 (1.0%)
How often had friends		
Often	8417 (73.1 %)	10170 (68.0 %)
Sometimes	1873 (16.3 %)	2935 (19.6 %)
Rarely	641 (5.6 %)	1105 (7.4 %)
Never	345 (3.0 %)	593 (4.0 %)
Missing	241 (2.1%)	149 (1.0%)
Rooms at childhood home		
Mean (SD)	3.47 (1.65)	3.41 (1.63)
Missing	543 (4.7%)	647 (4.3%)
Features at childhood home		
Mean (SD)	2.62 (1.94)	2.64 (1.93)
Missing	75 (0.7%)	76 (0.5%)
Financial situation		
Poor	1500 (13.0 %)	2024 (13.5 %)
About average	7467 (64.8 %)	9754 (65.2 %)
Pretty well off financially	2055 (17.8 %)	2552 (17.1 %)
Missing	495 (4.3%)	622 (4.2%)
Books at childhood home		
None or very few (0-10 books)	3598 (31.2 %)	4384 (29.3 %)
Enough to fill one shelf (11-25 books)	2903 (25.2 %)	3691 (24.7 %)
Enough to fill one bookcase (26-100 books)	3055 (26.5 %)	4104 (27.4 %)
Enough to fill two bookcases (101-200 books)	930 (8.1 %)	1362 (9.1 %)
Enough to fill two or more bookcases (more than 200 books)	844 (7.3 %)	1241 (8.3 %)
Missing	187 (1.6%)	170 (1.1%)
ISEI		
Mean (SD)	36.83 (16.58)	37.02 (16.63)
Missing	2736 (23.8%)	3483 (23.3%)



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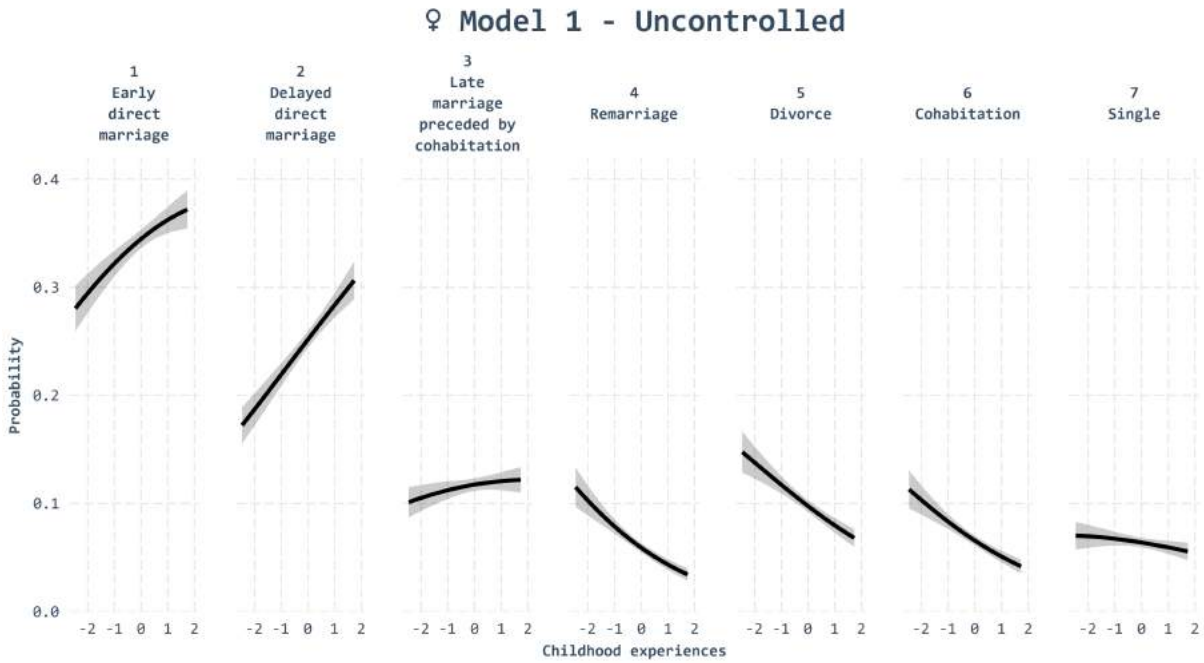
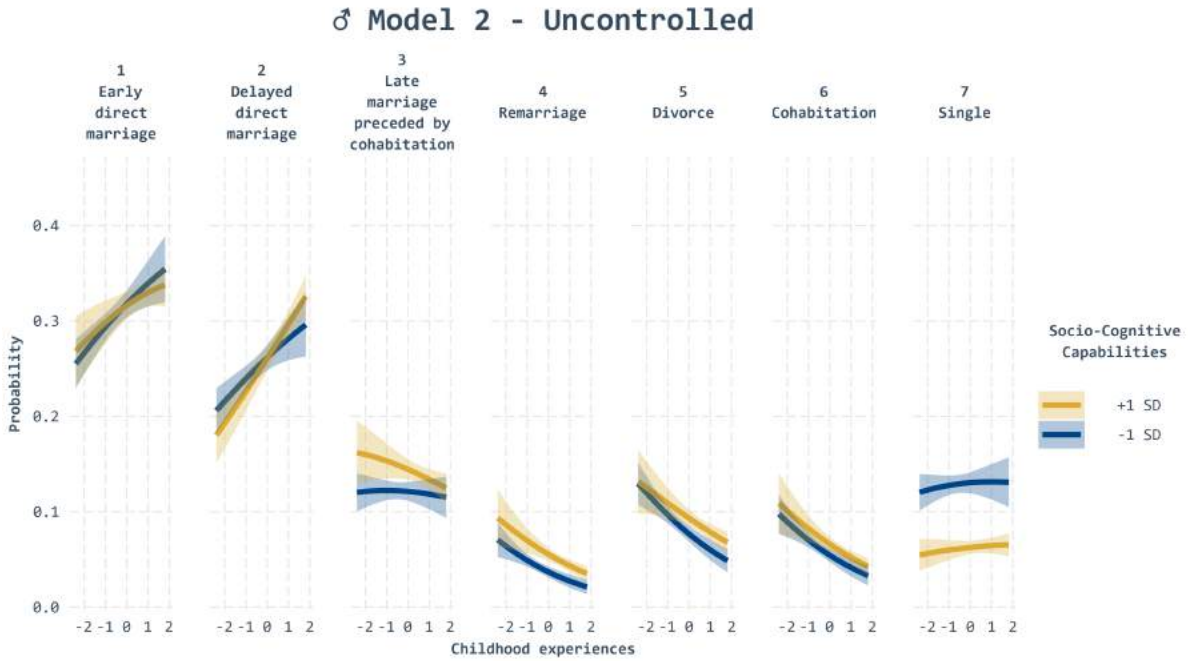
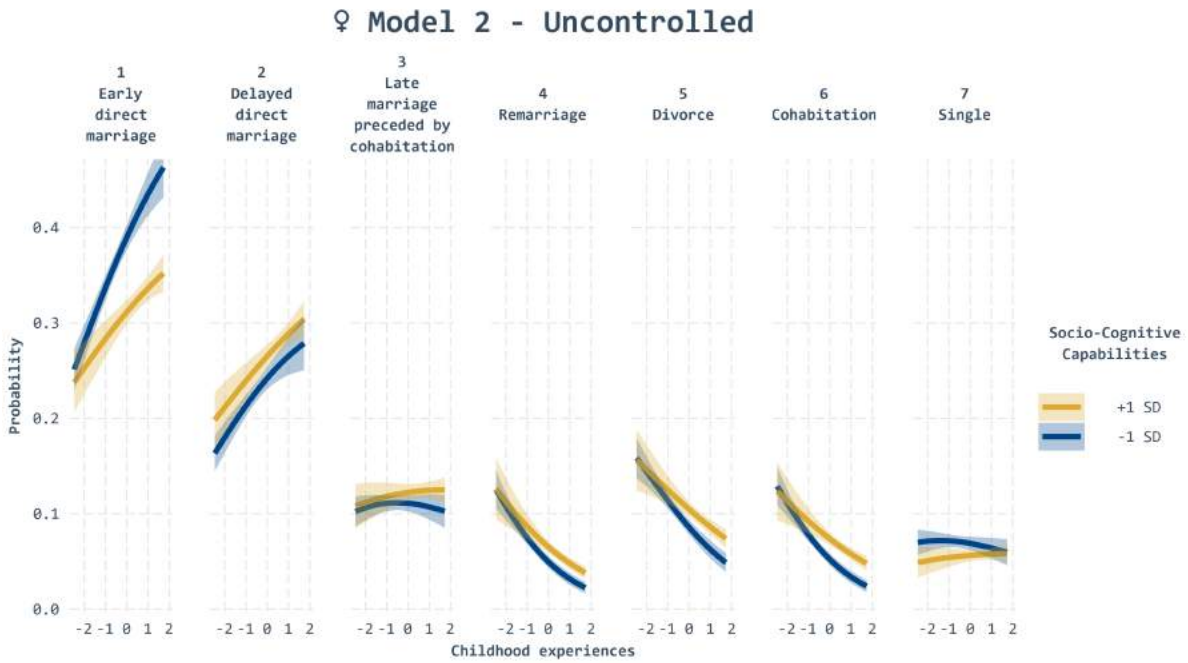


(B) WOMEN

FIGURE S2. PREDICTED PROBABILITIES OF CLASS MEMBERSHIP BY CHILDHOOD EXPERIENCES AND SEX. UNCONTROLLED VERSION OF MODEL 1

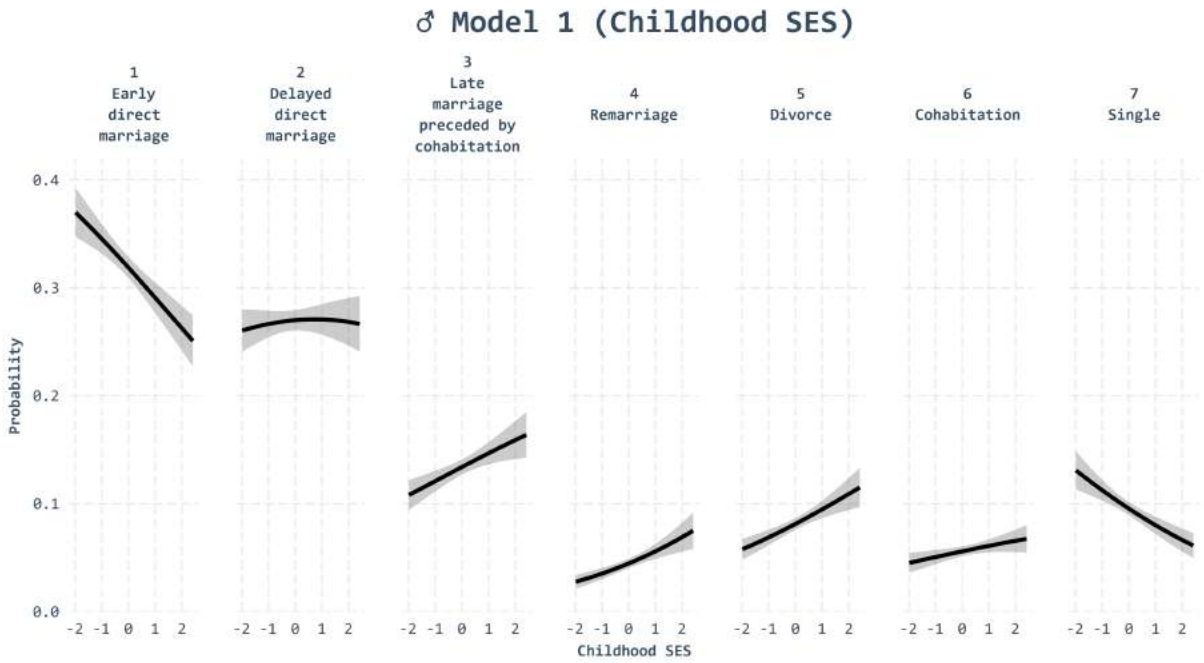


(A) MEN



(B) WOMEN

FIGURE S3. SOCIO-COGNITIVE CAPABILITY MODERATED CLASS MEMBERSHIP PROBABILITIES BY CHILDHOOD EXPERIENCES AND SEX. UNCONTROLLED VERSION OF MODEL 2



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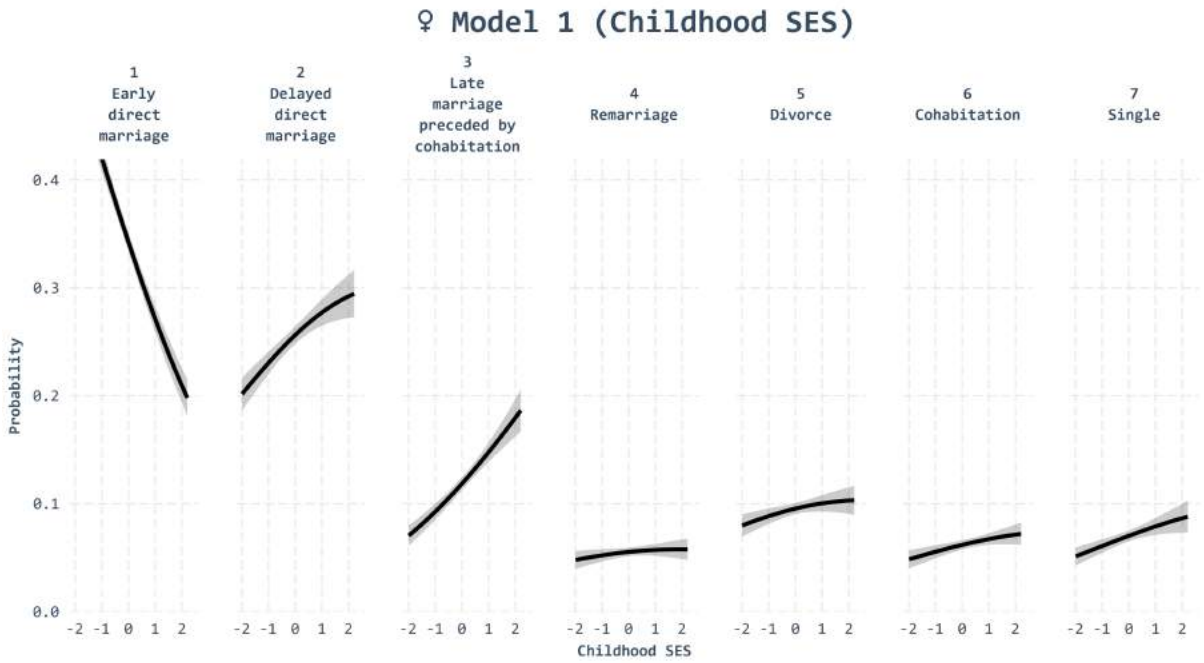
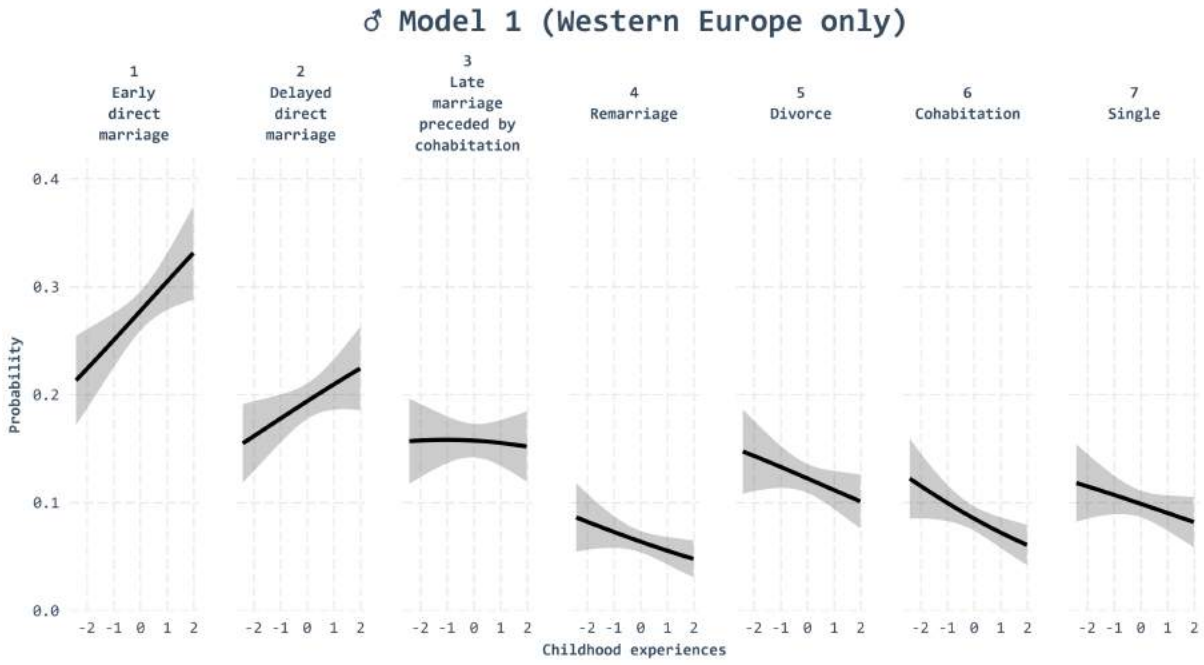
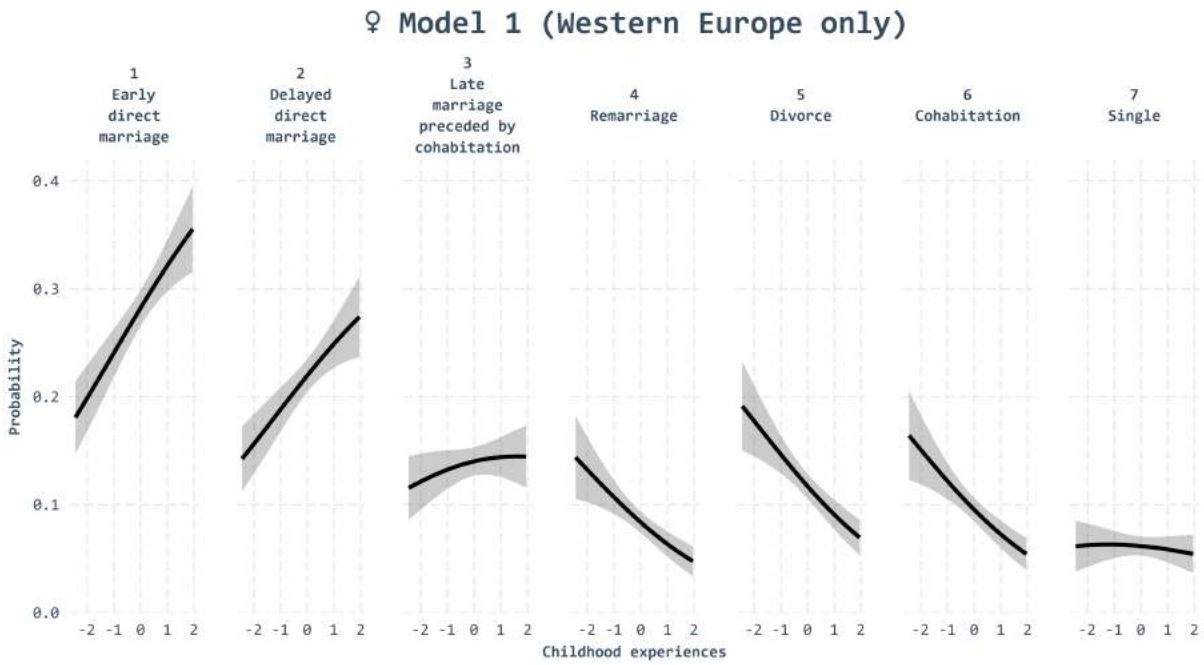


(B) WOMEN

FIGURE S4. PREDICTED PROBABILITIES OF CLASS MEMBERSHIP BY CHILDHOOD SOCIOECONOMIC STATUS AND SEX.

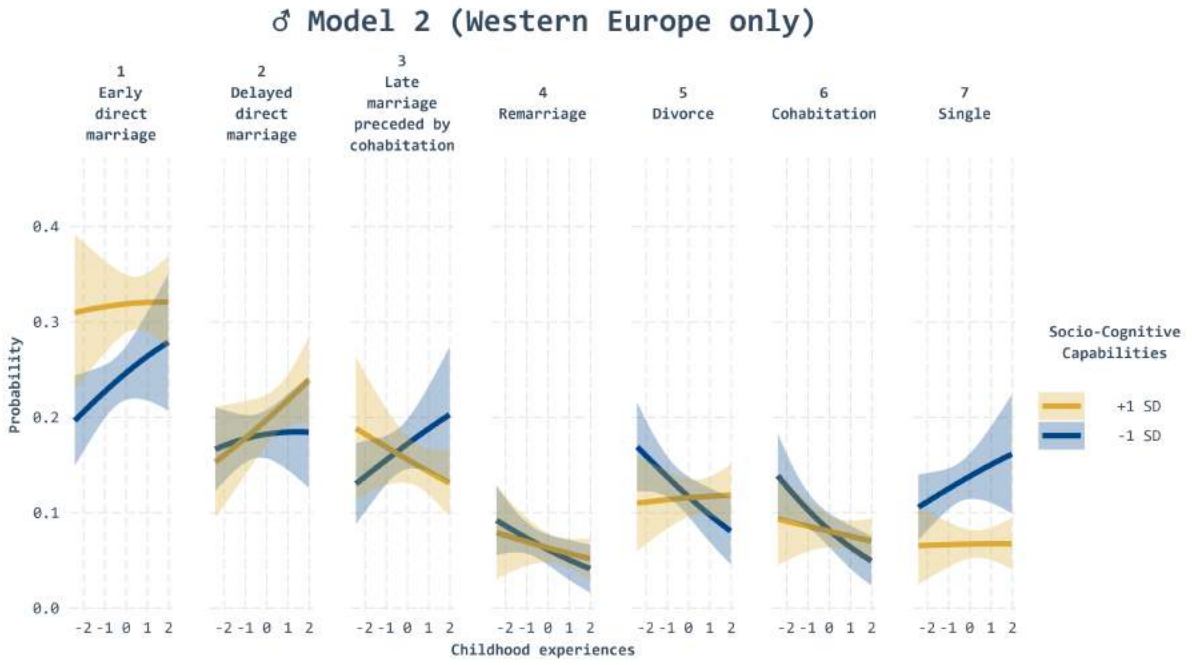


(A) MEN

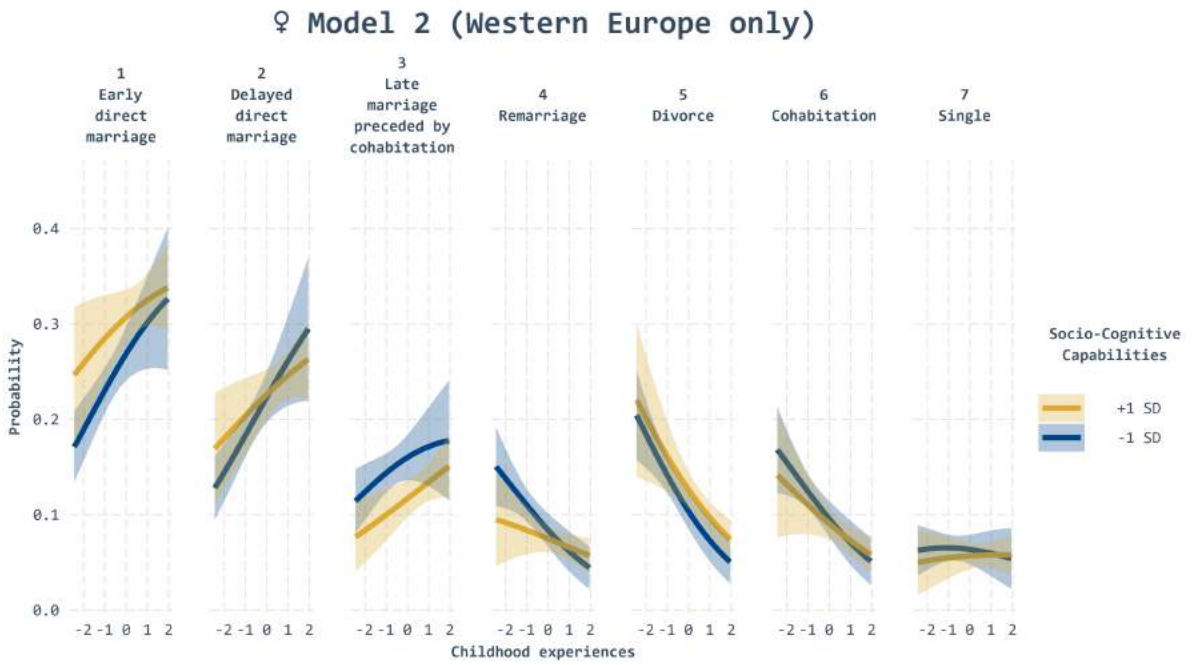


(B) WOMEN

FIGURE S5. PREDICTED PROBABILITIES OF CLASS MEMBERSHIP BY CHILDHOOD EXPERIENCES AND SEX. CONTROLS FOR CHILDHOOD SOCIOECONOMIC STATUS AND COUNTRY (MODEL 1 - WESTERN EUROPE ONLY)

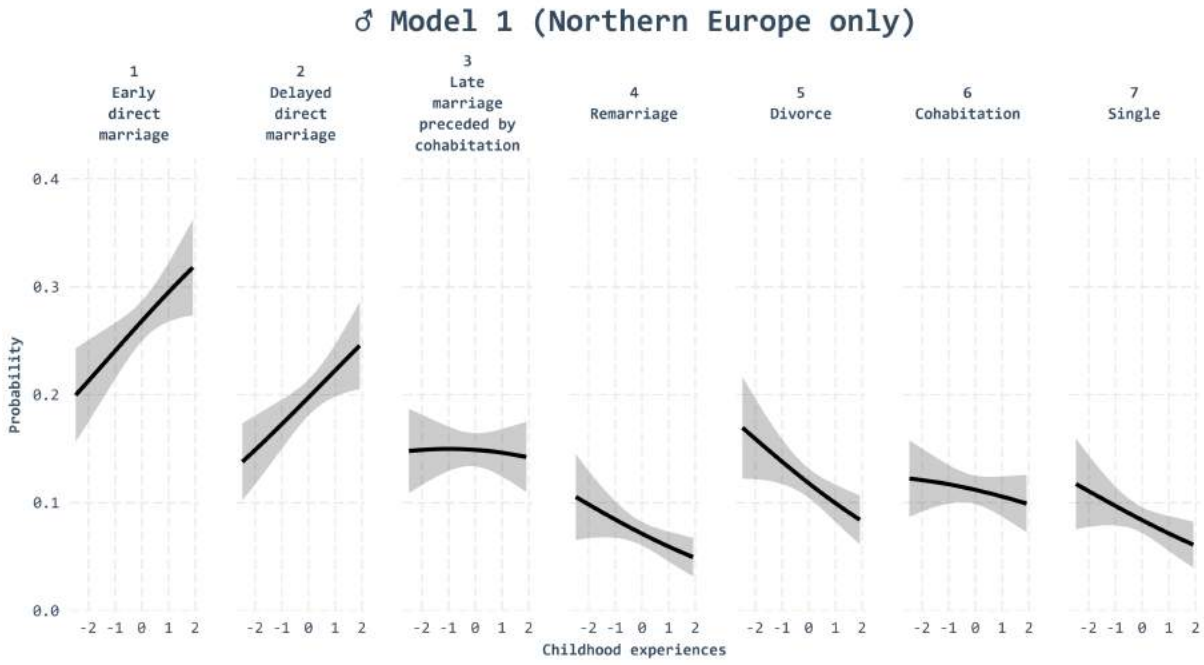


(A) MEN

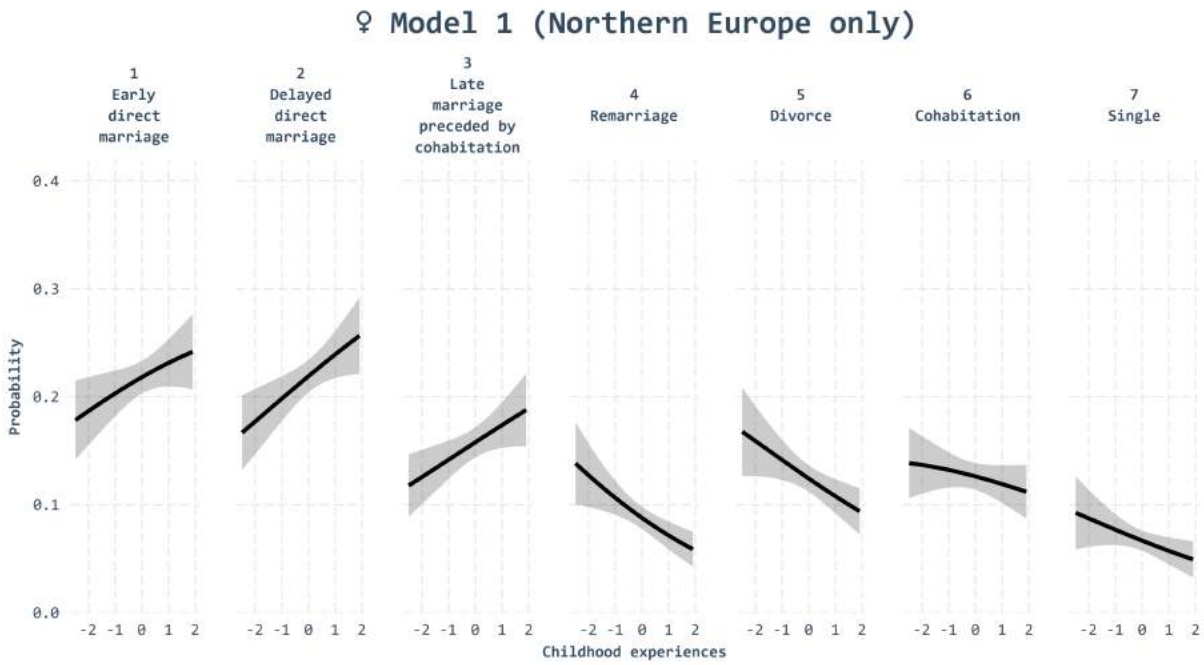


(B) WOMEN

FIGURE S6. SOCIO-COGNITIVE CAPABILITY MODERATED CLASS MEMBERSHIP PROBABILITIES BY CHILDHOOD EXPERIENCES AND SEX. CONTROLS FOR CHILDHOOD SOCIOECONOMIC STATUS AND COUNTRY (MODEL 2 - WESTERN EUROPE ONLY)

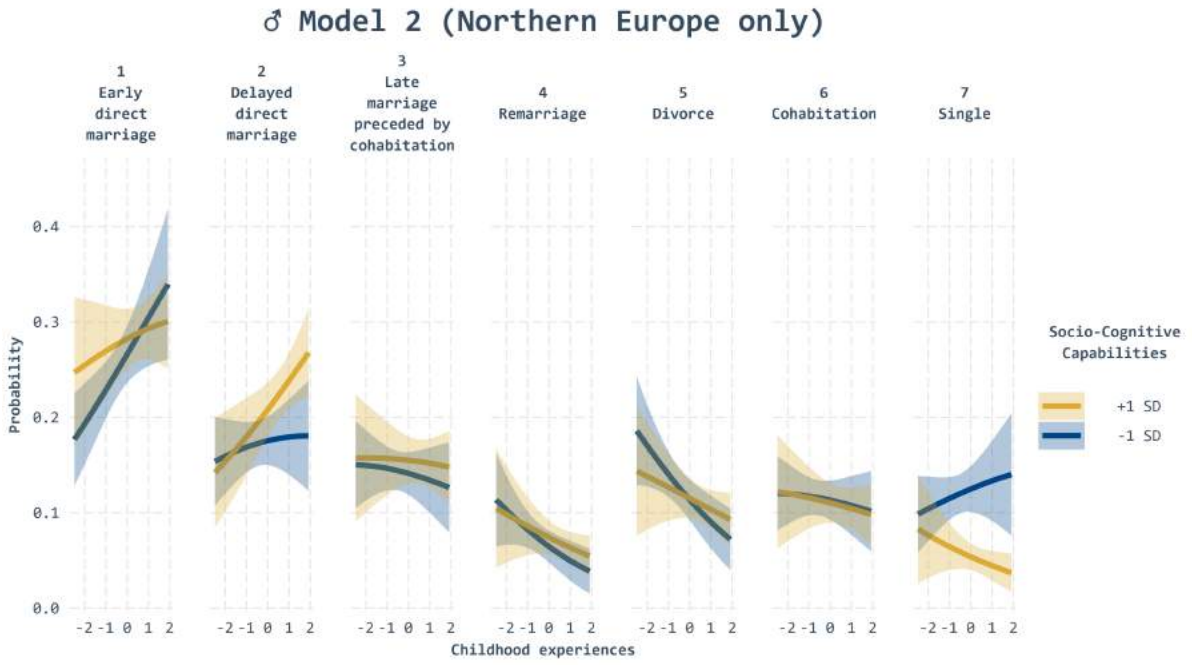


(A) MEN

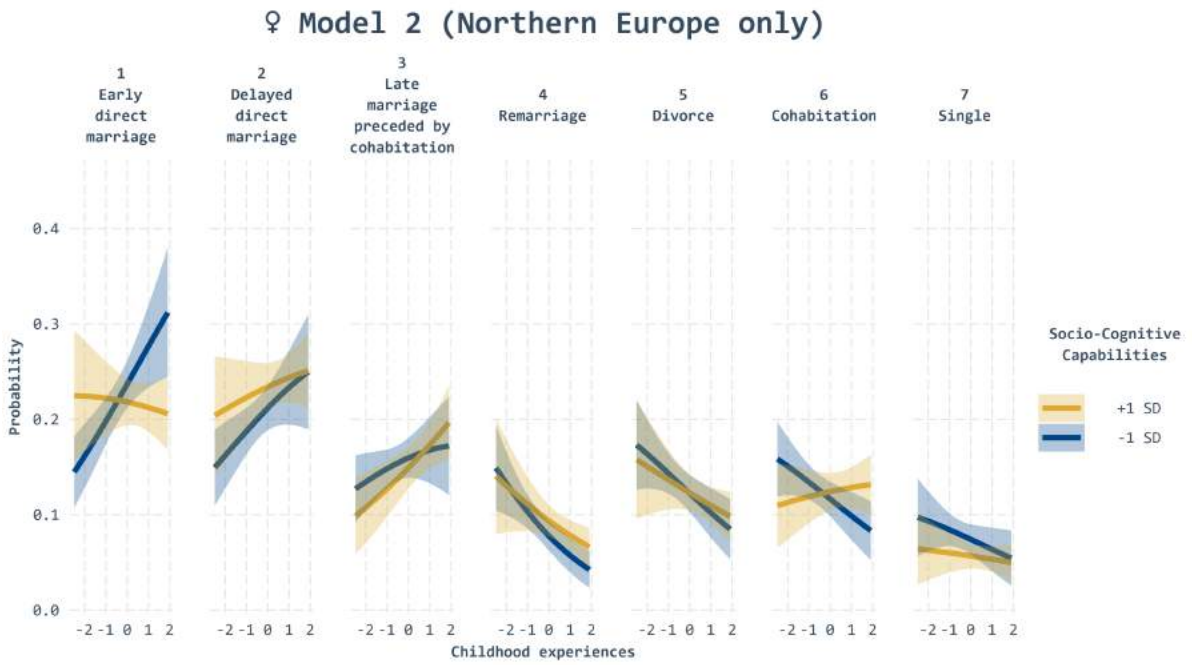


(B) WOMEN

FIGURE S7. PREDICTED PROBABILITIES OF CLASS MEMBERSHIP BY CHILDHOOD EXPERIENCES AND SEX. CONTROLS FOR CHILDHOOD SOCIOECONOMIC STATUS AND COUNTRY (MODEL 1 - NORTHERN EUROPE ONLY)

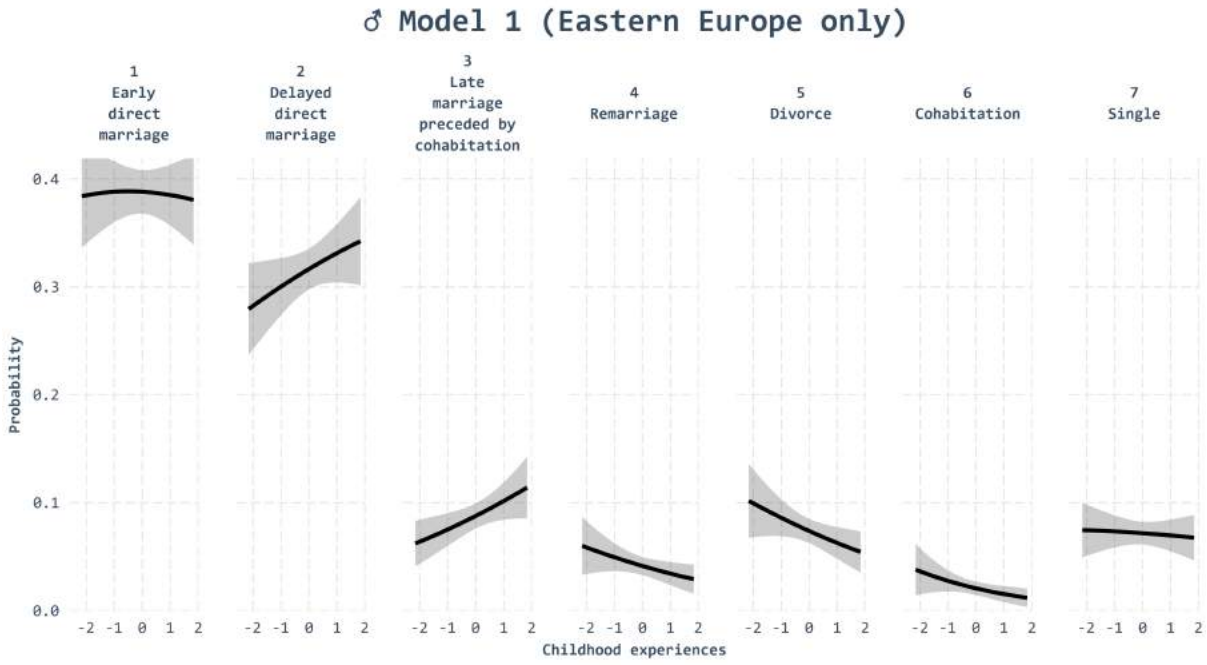


(A) MEN

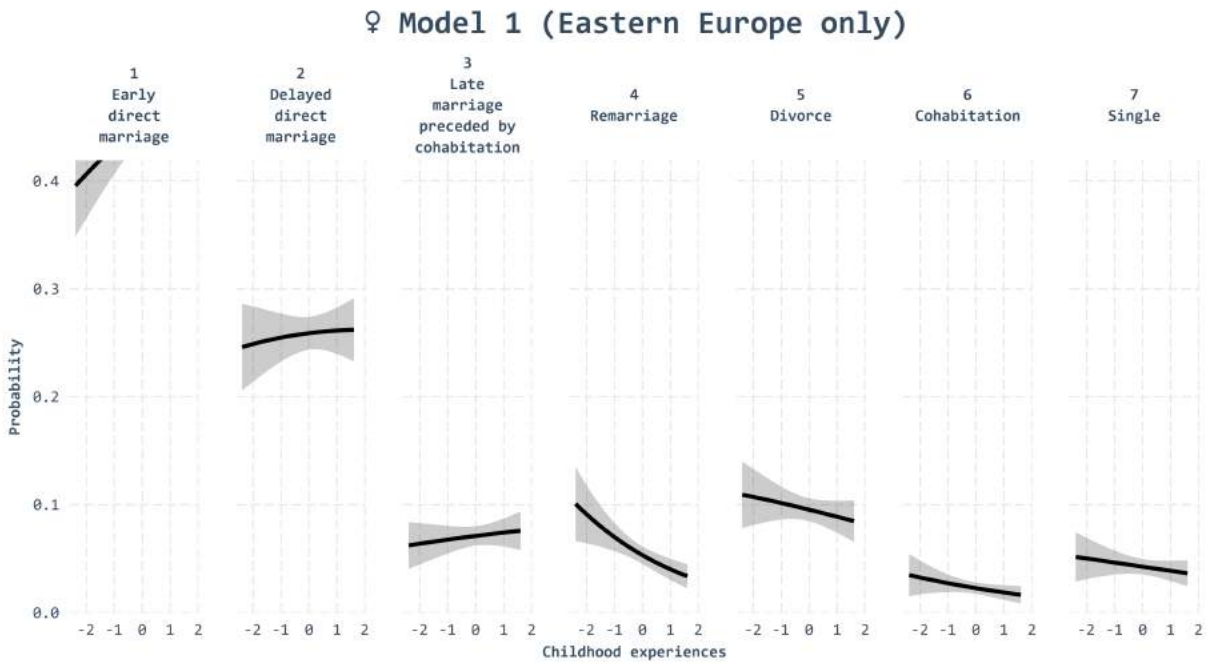


(B) WOMEN

FIGURE S8. SOCIO-COGNITIVE CAPABILITY MODERATED CLASS MEMBERSHIP PROBABILITIES BY CHILDHOOD EXPERIENCES AND SEX. CONTROLS FOR CHILDHOOD SOCIOECONOMIC STATUS AND COUNTRY (MODEL 2 - NORTHERN EUROPE ONLY)

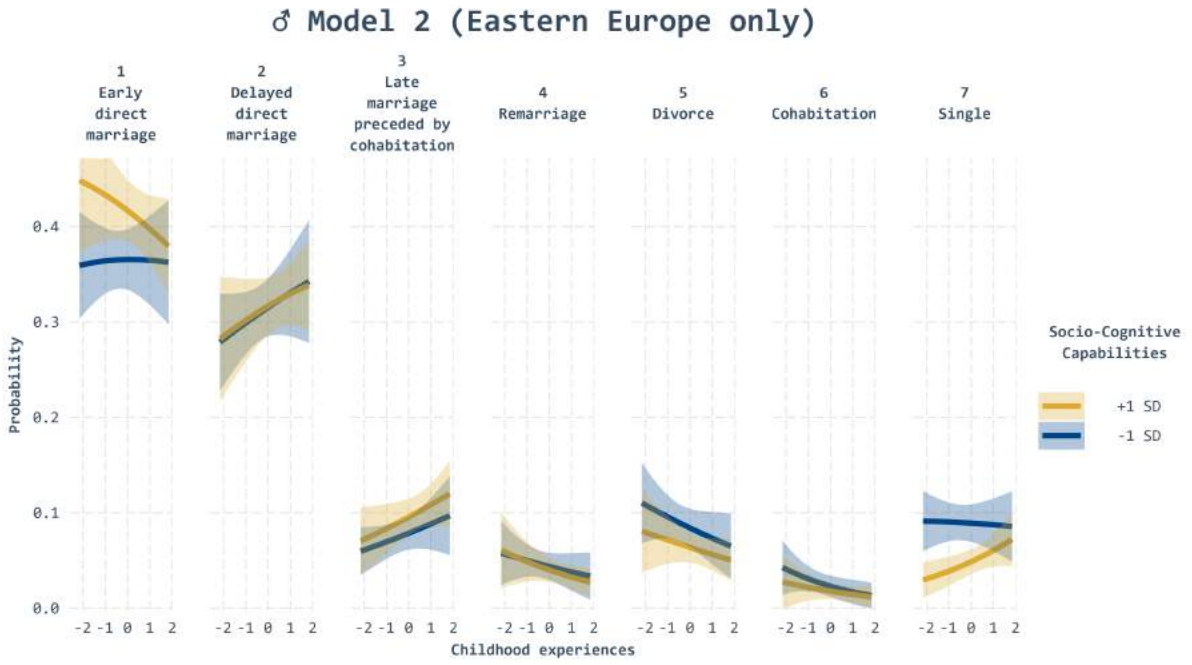


(A) MEN

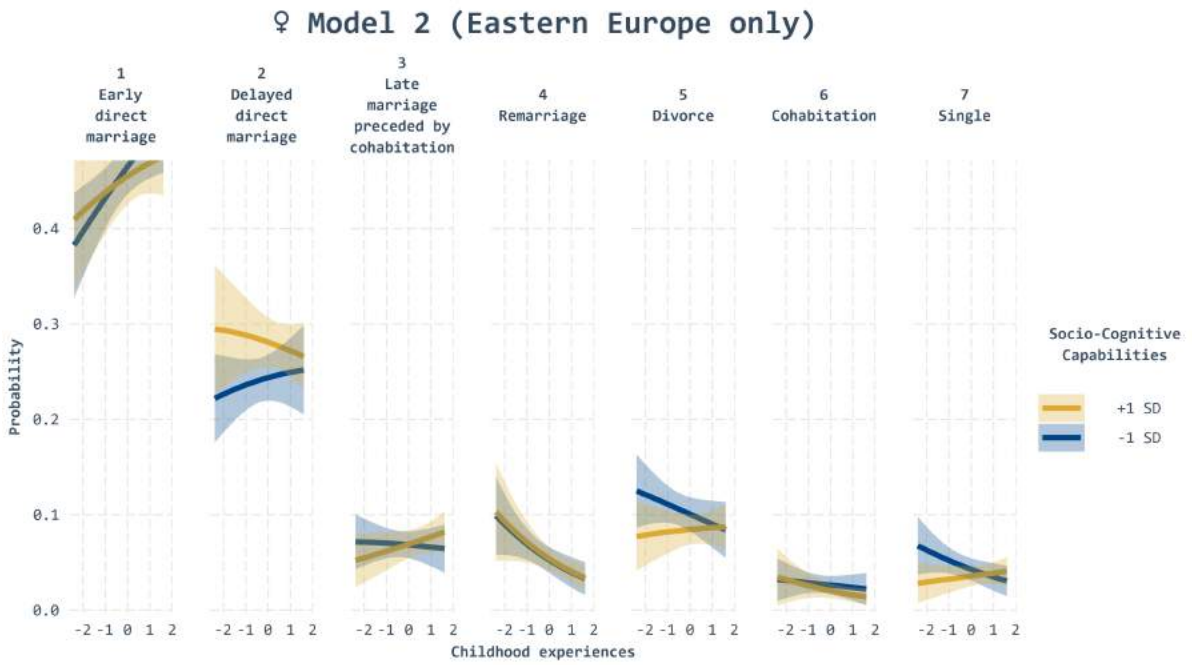


(B) WOMEN

FIGURE S9. PREDICTED PROBABILITIES OF CLASS MEMBERSHIP BY CHILDHOOD EXPERIENCES AND SEX. CONTROLS FOR CHILDHOOD SOCIOECONOMIC STATUS AND COUNTRY (MODEL 1 - EASTERN EUROPE ONLY)

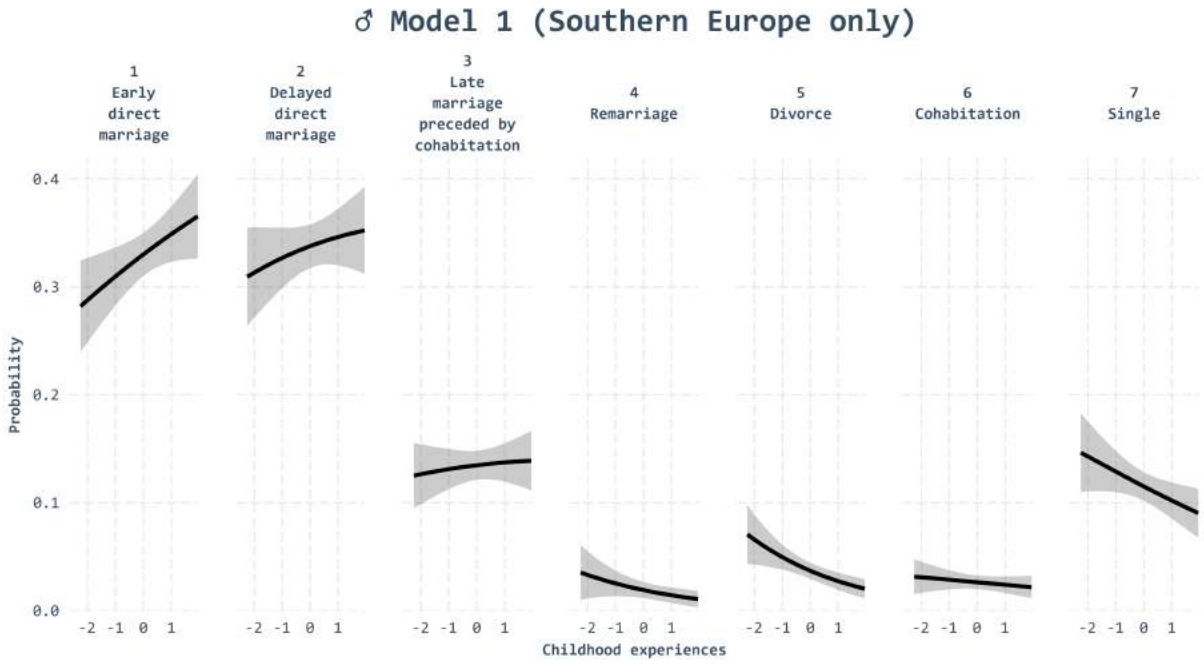


(A) MEN

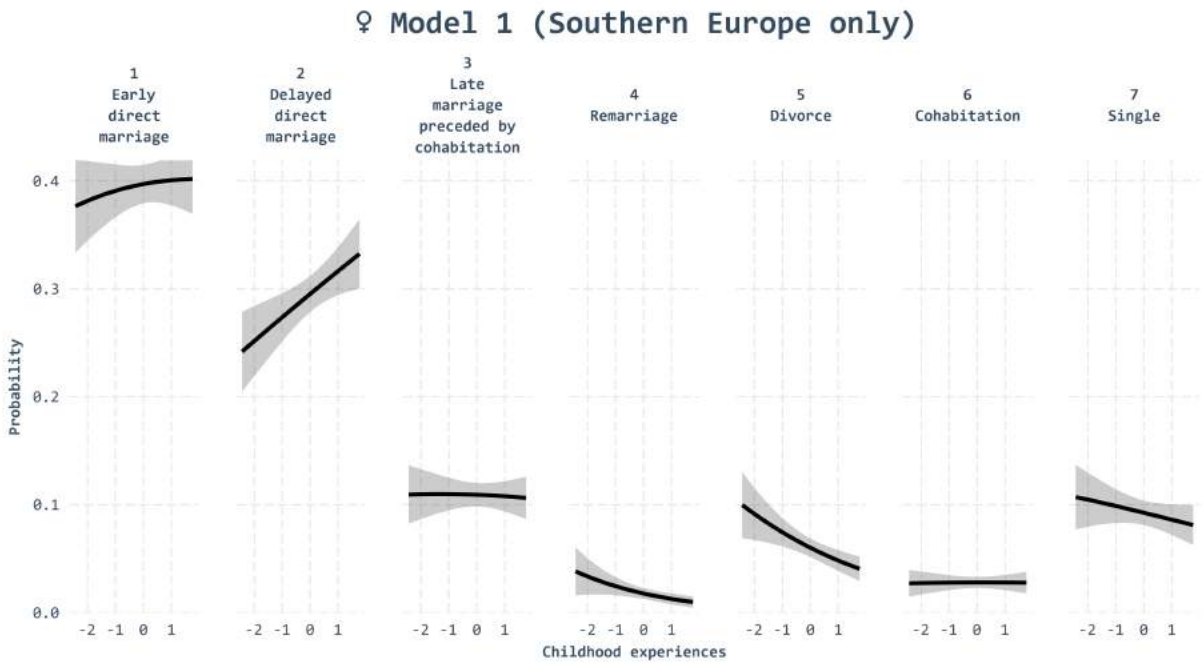


(B) WOMEN

FIGURE S10. SOCIO-COGNITIVE CAPABILITY MODERATED CLASS MEMBERSHIP PROBABILITIES BY CHILDHOOD EXPERIENCES AND SEX. CONTROLS FOR CHILDHOOD SOCIOECONOMIC STATUS AND COUNTRY (MODEL 2 - EASTERN EUROPE ONLY)

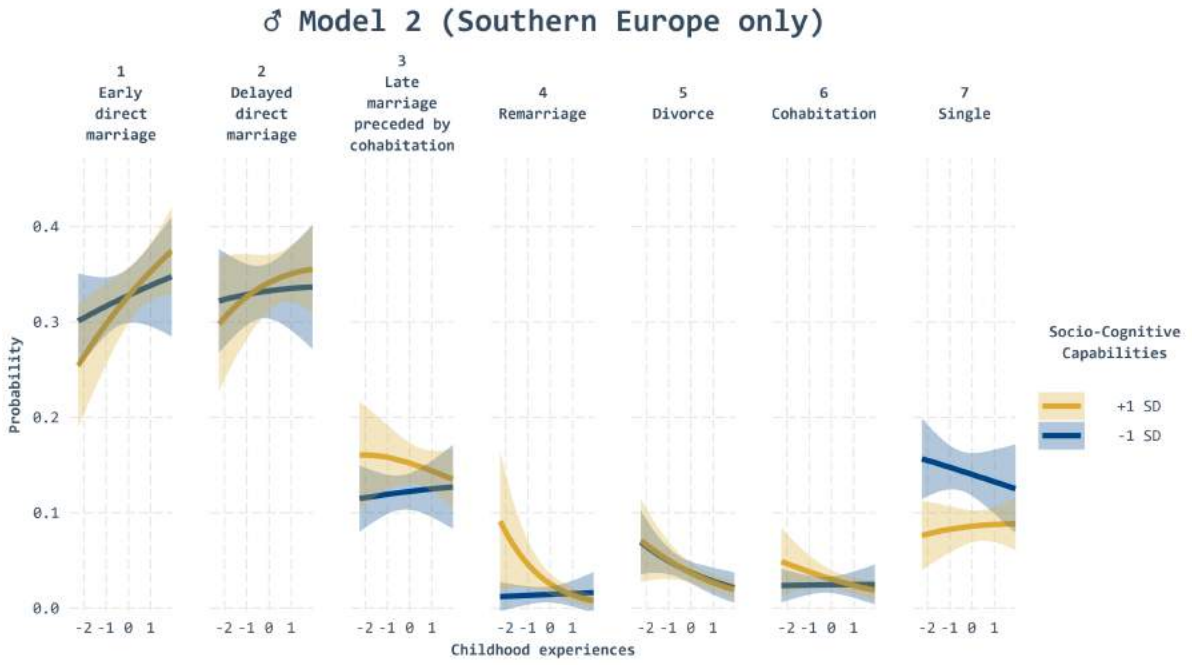


(A) MEN

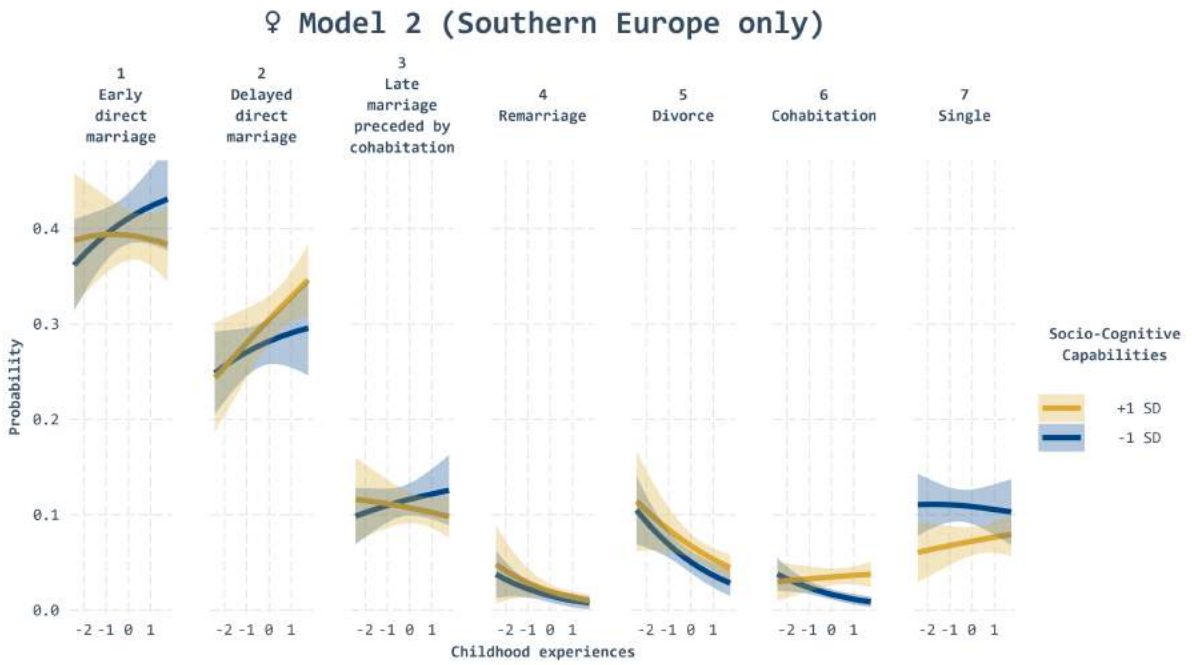


(B) WOMEN

FIGURE S11. PREDICTED PROBABILITIES OF CLASS MEMBERSHIP BY CHILDHOOD EXPERIENCES AND SEX. CONTROLS FOR CHILDHOOD SOCIOECONOMIC STATUS AND COUNTRY (MODEL 1 - SOUTHERN EUROPE ONLY)



(A) MEN



(B) WOMEN

FIGURE S12. SOCIO-COGNITIVE CAPABILITY MODERATED CLASS MEMBERSHIP PROBABILITIES BY CHILDHOOD EXPERIENCES AND SEX. CONTROLS FOR CHILDHOOD SOCIOECONOMIC STATUS AND COUNTRY (MODEL 2 - SOUTHERN EUROPE ONLY)