Gender-Roles Attitudes and Hypogamous Unions' Formation

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Short abstract

Individuals typically form unions where the man is older than the woman, and where the man is at least as educated as the woman. These unions' patterns are conventionally considered more stable and more fertile. Recently, gender-egalitarian attitudes have been found to positively affect unions' stability and couples' fertility. Such attitudes may already play a role at the time of mate selection, but there is hardly research about this so far. By means of Generations and Gender Surveys for six countries and multinomial logistic regressions, I investigate the association between single men and women's gender-roles attitudes (measured in wave 1) and union formation patterns (measured in wave 2). Results suggest that egalitarian men are more likely to form hypogamous unions, i.e. the woman more educated than the man, rather than remaining single. Egalitarian women, instead, are less likely than other women to be in hypogamous unions rather than remaining single.

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1. Introduction

In theories of mating behavior, the concept of marriage market synthesizes two aspects of the mating process. First, individuals look for mates with specific attributes and preferred qualities. Second, individuals face constraints when choosing from the pool of ideal partners (Oppenheimer 1988; Grow and Van Bavel 2015). Given the constraints, men and women prefer mates whose attributes they believe will facilitate their well-being in their life outcomes (Zentner and Eagly 329:2015).

Preferences and beliefs about partners have been shaped by people's expectations for men and women in society, i.e. societal gender-roles. Over time, personal choice has become an important determinant in partners' selection: unions are increasingly viewed in terms of individual qualities rather than social roles (Goldscheider et al. 2009).

Family scholars are interested in individuals' mate-selection processes because of the links with family outcomes, such as couples' fertility. To this aim, scholars have referred to different dimensions of mating markets, in particular age and education, to infer about partners' similarity or dissimilarity in family goals (Voas 2003; Testa et al. 2014; Thomson 1986). The most conventional mating pattern with regard to the age difference between partners consists in couples where the man is older than the woman. With regard to education, typically the man is at least as educated as the woman. These prevailing patterns have been often considered the outcome of a strong traditional gender division of labor: the male-breadwinner and female homemaker model (Becker 1991).

Since the reversal in the gender-gap in education, there is a higher proportion of highly educated women than highly educated men on the mating market. As previous studies showed, while homogamy remains steady, hypergamy has decreased (Esteve et al. 2012; Grow and Van Bavel 2015; De Hauw et al. 2017). These patterns tend to be not compatible with people's preferences for unions formed by men that are at least as educated as women.

The fact that women in their reproductive ages acquire higher education than men is regarded as a process enhancing equality also in other aspects of society, for instance income potential and labor market participation. In the last decades, theories on family behavior emphasize the fact that societies are going through a Gender Revolution (McDonald 2000; Esping-Andersen and Billari 2015; Goldscheider et al. 2015). According to these theoretical approaches, the diffusion of gender-egalitarian attitudes will lead the Gender Revolution towards its final stages, strengthening the family, i.e. societies will experience lower dissolution rates and fertility to – at least – replacement levels.

All these changes affect the composition of mating markets in structural terms, but also in qualitative terms. Over time, mating markets are increasingly filled with men and women who tend to show more egalitarian attitudes. These attitudes may be manifested on at least two levels. First, in the private sphere, concerning the relationship between the man and the woman within the couple. Second, in the public sphere, gender equality at the societal level. Existing studies show that, at the individual level, gender-egalitarian attitudes have been negatively associated with dissolution rates and positively associated with fertility (Goldscheider et al. 2015).

Overall, mate-selection processes are affected in a way that individuals' do not necessarily need to follow a traditional role specialization. As previous studies showed, gender-roles attitudes affect family outcomes, such as unions' stability and fertility. However, the selection processes may occur before unions are formed but there is hardly research on this topic. This paper fills this gap, and it focuses on the link between gender-egalitarian attitudes and partner-selection processes.

I examine the effect of personal attitudes about gender-egalitarianism on entrance into a union with a partner having *uncommon* features, relative to those expected from a society where a traditional gender role division holds. To this end, I use two waves of the Generations and Gender Surveys (GGS) data for six European countries. I select single men and women in the first wave, and I examine how their unions' patterns (observed in the second wave) are associated with their gender egalitarian attitudes. Results show that men who hold egalitarian attitudes are more likely to form hypogamous unions, i.e. where the man is younger or less educated than the woman, relatively to their less egalitarian peers. This finding does not hold for women, instead.

2. The Gender Revolution and partners' selection processes

According to Goldscheider and colleagues (2015), the first half of the gender revolution consists in an increasing participation of women the public sphere. In particular, this regards women's reaching higher educational levels and ensuing rise in women's labour force participation. These processes have been associated with a weakening of family life, i.e. higher divorce rates, diffusion of cohabitation and non-marital childbearing, postponement of motherhood and higher childlessness (Lesthaeghe and Van de Kaa; Esping-Andersen 2009).

A second half of the gender revolution is, however, envisioned. The second half of the gender revolution refers to the increased involvement of men in the private sphere of home and family. Although the gender revolution did not reach its final stages, there are signs that the second half is underway in several countries, for instance in the Northern European countries (Goldscheider et al. 2015). The general sequence of the two halves of the gender evolution lead to an alteration of the public and private sphere, where a new balance towards more equal relationships between men and women is expected.

In this framework, attitudes and their changes over time play an important role in the ways individuals adapt to structural changes, developing new behaviors on the basis of their opportunities and constraints to maximize their well-being (Golscheider et al. 2015; Thornton and Young-DeMarco 2001; Zentner and Eagly 2015). Gender-role attitudes refer to views held by individuals regarding the roles men and women should play in society, and its use is mostly addressing the distinction between paid and unpaid work. The attitudes formed in the older structure may still hold, especially for those strata of the population more reluctant to the new gender structure (Rindfuss et al. 1996; Goldscheider et al. 2015). The processes underlying the movement of women into the labour force appear to be reinforcing egalitarian gender-roles in both the public sphere and the domestic sphere. As people adapt to the new structure, new patterns take place and this may also effect demographic outcomes, namely union formation, dissolution and fertility.

2.1 On mating markets and partners' mating preferences

Changes in gender-role attitudes may also affect partner's search and preferences, the latter will in turn affect union and fertility behaviors. In light of fulfilling their own family goals, people may be more inclined to choose a partner with certain characteristics, who supposedly share similar family goals (Corijn et al. 1996; Voas 2003).

Typically, individuals are not aware about the composition of mating markets with all potential mates, thus the mating market concept for partners' selection processes require some assumptions on men and women's mating preferences. Research on mating preferences has shown that age and education are among the main attributes that can make people more or less desirable (Buss et al. 1990; Grow and Van Bavel 2015).

According to the socio-cultural framework to understand men's and women's mate-preferences, the latter are shaped by individuals' gender-role attitudes and the level of gender equality where individuals socialize (Eagly and Wood 1999; Zentner and Eagly 2015). In male-breadwinner societies, men are mostly working in paid jobs and they are the main responsible of the household income, whereas women take care of household work, individuals' prioritize attributes that maximize the traditional division of labour between partners (Becker 1991).

In general, if the male-breadwinner model holds, men tend to prefer younger and less educated women, with lower labour market orientation, whereas women tend to prefer older men than themselves with high level of education and high income potential. Thus, in a traditional gender-role mating market, a high level of education is particularly important attribute for men on the mating market because the income of the male partner determines the socio-economic status of the household. On the other hand, a high level of education may not be necessarily a relevant attribute women for non-egalitarian men (Becker 1991). Male partners have the greatest advantage from a homogamous match, where the traits of both partners are as similar as possible. However, non-egalitarian men seek partners who will mostly devote their time to the care of the household. This is typically of the lower educated women, given that the highly educated women may be more inclined to invest in their careers.

In non-egalitarian societies, preferences regarding the age difference between partners stems from similar arguments regarding educational matching. Non-egalitarian women would be more inclined to prefer older men, because with increasing age also earning potential increases. Non-egalitarian men, instead, tend to prefer younger women than themselves. Age differences have also been argued to affect power dynamics between the genders both within couples and in society, thus a high gender equality is expected to be associated with lower age-differences (Bozon 1991). Age hypergamy (i.e. man older than the woman) has been linked to limited opportunities for women, inequality and patriarchy. In general, the younger partner is considered the weaker within the relationship in terms of bargaining power due to fewer socio-economic resources and less life experience (Kolk 2015).

These partners' preferences may explain to some extent why in more gender-traditional societies, educational hypogamy (i.e. couples where the woman is more educated than the man) and age hypogamy (i.e. unions where the woman is older than the man) are considered exceptional matches. Individuals forming these kind of couples may be socially sanctioned for violating gender-roles norms and being a threat for their social network and their own gender identities (Blossfeld and Timm 2003; Brines 1994). Given the shift toward a more gender-equal society, attitudes may also have changed in relation to ideal characteristics of potential partners (Goldscheider et al. 2009). Since the 1990s, men increasingly posed more importance to women's earnings power and, to some extent, women give less importance to men as good providers (Buss et al. 2000, 2001; Press 2004; Zentner and Eagly 2015). A process which has been also fuelled by structural changes in the composition of mating markets (Van Bavel 2012; Grow and Van Bavel 2015; De Hauw et al. 2017).

At the individual level, however, it is not yet clear whether individuals who emphasize more gendered-roles act differently from their gender-egalitarian counterpart at the moment of partners' selection. To understand these mechanisms it is important to disentangle the effect of attitudes on behaviors, given that behavior may also influence attitudes. Possibly, more egalitarian views of the relationships between partners may derive by the fact that previous – gender-stereotypical – partnerships were not successful. Alternatively, attitudes may have become more traditional after a less common union type was experienced.

2.2 Research hypothesis

In this study, I ask whether gender-roles attitudes are linked to patterns' of union formation. In light of the theoretical background and previous research, I formulate the main hypothesis according to which egalitarian men and women are more inclined to form hypogamous unions rather than remaining single relatively to men and women who hold more traditional attitudes. This is because individuals who hold gender-egalitarian attitudes are less attached to a traditional division of labor between partners. I will test this hypothesis separately for men and women, focusing on two dimensions of the mating markets, i.e. age and education. Thus, with regard to the age pattern, I expect that men and women who hold egalitarian attitudes will be more likely to form unions where the woman is older than the man relatively to non-egalitarian individuals (*H1a*). With regard to educational assortative mating, I expect that lower educated men and higher educated women who hold egalitarian attitudes will be more likely to form unions where the woman is more educated than the man, relatively to their less egalitarian peers (*H1b*).

3. Data and methods

3.1 Generation and Gender Surveys (GGS) and sample selection

The GGS are part of a wider program whose aim is to improve the knowledge of macro-micro factors that affect the relationships between generations and genders (http://www.ggp-i.org/). The surveys, which include individuals between 18 and 79 years old, deal with different topics, such as: fertility and partnership histories, the transition to adulthood, economic activity, care duties, and attitudes. The GGS are the most recent available large-scale panel and internationally comparable demographic surveys available to date and they are characterized by an independent sample of men and women that were interviewed separately (Vikat et al. 2007). To determine how much attitudes matter for union formation, longitudinal data are necessary. Among all the countries taking part in the Generation and Gender Program, Austria, Bulgaria, France, Georgia, Hungary and Poland, have been chosen for their availability of two survey-waves and for their availability of the variables necessary to the aim of this paper. The first wave took place at different times for these countries (2004-2011) and the second wave has been carried out three (or four) years later. Table 1 synthesizes information of the survey for each country considered.

Table 1 Details of GGS countries, years of survey.

	Austria	Bulgaria	France	Georgia	Hungary	Poland
Wave 1 (years)	2008-2009	2004	2005	2006	2004-2005	2010-2011
Wave 2 (years)	2012-2013	2007	2008	2009	2008-2009	2014-2015
% of wave 1 sample interviewed in wave 2 (Panel Stability)	78%	72.67%	88%	83%	83%	NA

To answer the research question of this study, I selected single respondents (18-45 years old) in the first wave. From a starting sample of 7606 respondents, 292 have been dropped because of inconsistencies between the first and second waves in reporting the sex and year of birth. Overall, the sample consists of 3693 men and 3621 women[2].

3.2 Variables and analytical strategy

The dependent variable is the respondent's union outcome at the second wave. Our outcome of interest is the formation of a union, combining co-residential and non-residential unions, between survey waves. In GGS surveys, co-residential unions are considered as such only if they lasted for at least three months (Vikat et al. 2007)[3].

The type of unions formed have been disaggregated by taking into account the age and educational level of the respondent's partner as separate outcomes. The information on the partner's characteristics is available from the respondent's questionnaire at the second wave. Unfortunately, due to lack of information, it is not possible to account for unions that have been formed between waves and that did not survive till the second wave. For the majority of countries considered, partner's age and education are available only if the respondent is currently, i.e. at the time of interview, living in a union.

With regard to the age difference between partners the categories of the outcome variable are: 1) homogamy (defined as an age difference lower than two years; 2) hypergamy (i.e. male older two years or more); 3) hypogamy (i.e. female older two years or more); 4) not partnered in wave 2, this last category indicate individuals who remained single. Robustness checks have been carried out considering homogamous unions those characterized by an age difference of one year or three years; results remained substantially in line with what we present here.

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[2] In models analyzing the age difference between partners we had to drop 301 individuals because of missing information about partners' age, whereas in models analyzing educational assortative mating, 169 individuals have been dropped because of missing educational level of the partner.

[3] Robustness checks have been run in order to consider only co-residential union as outcome variable, results remain substantially the same.

The second outcome variable is educational assortative mating, grouping respondents and their future partners into three levels of education (low, medium, high), collapsing categories from the International Standard Classification of Education (ISCED 1997). The first group includes those who completed primary plus lower secondary school (at least 8 years of schooling, ISCED 0, 1, and 2). The medium category consists of respondents who completed the upper-secondary and a post-secondary level (ISCED 3 and 4). Finally, highly educated respondents got a bachelor/master/PhD degree (ISCED 5 and 6).

The variable of educational assortative mating has four categories: homogamous union, where both partners have the same level of education (1); male hypergamy, where the man is more educated that the woman (2), female hypogamy, where the woman is more educated than the man (3), remaining single (4). To check whether the results are sensitive to the definition of the outcome variable, we have also constructed a dependent variable which indicates whether the respondent in the second wave is partnered with a low educated individual (0); with a medium educated (1); with a highly educated (2) or if he/she remained single (3).

The main independent variables are measured at wave 1 and concern gender-egalitarian attitudes. We have considered three statements for which the respondent expressed his or her agreement, answering on a 5-point scale ranging from strongly agree to strongly disagree. The statements are the following: "If the woman earns more than the partner, it is not good for the relationship" (1); "In a couple it is better for the man to be older than the woman"(2); "When jobs are scarce men have more right to the job than women" (3). The first two statements indicate gender-egalitarian attitudes within the couple, whereas the third one within society.

A score of 1 or 2 has been coded as "Non-egalitarian", 3 "Neutral", 4 or 5 "Egalitarian". Each statement relates to different aspects of being gender-egalitarian and this is the reason to keep them separately. As previous scholars noted, attitudes regarding egalitarianism in the private sphere may lead to different demographic outcomes than attitudes regarding the societal sphere (Goldscheider et al. 2010). Additionally, it is relevant to distinguish between couple-level gender-roles attitudes and society-level because of the two stage of the Gender Revolution. Gender-egalitarian attitudes related to women's role in the public sphere are more diffused than differences in the relationships between men and women in the private sphere (Goldscheider et al. 2015). Unfortunately, we do not have a direct measure or statement that could indicate the participation of the men in household chores, or that refers to the equal share of household work.

In addition to our attitudes measures, as in Sassler et al. (2010), I include a series of control variables that may affect respondents' union formation; they include: marital history, parental status, age and educational attainment. Table 2 shows the independent variables for both the male and female samples, whereas Table 3 shows the distribution of the outcome variables.

To estimate the effect of gender-roles attitudes measured at time t_1 (wave 1 of GGS) on the likelihood that a single man or woman enters into a specific type of union at time t_2 (wave 2 of GGS), we apply a multinomial logit model (Agresti 2007). Logit models for nominal response variables pair each type of union with a baseline category, which in this case is the single-status. Formally, we could write:

$$log \frac{\pi_j(x)}{\pi_{J=single}(x)} = \alpha_j + \beta_j' x$$

Table 2 Sample description, independent variables

	Men	Women
Educational level	%	%
Low	14.11	10.05
Medium	61.22	50.15
High	24.67	39.80
Cohort		
1957-1966	10.78	17.51
1967-1976	26.16	27.59
1977-1986	49.50	42.25
1987-1993	13.57	12.65
Union history		
Never in union	67.94	54.21
First union	23.29	31.98
Higher order union	6.88	10.96
Unknown	1.90	2.84
Gender attitudes-couple level: Age partners		
Non-egalitarian	40.45	41.26
Neutral	35.58	33.11
Egalitarian	23.26	24.97
Unknown	0.70	0.66
Gender attitudes-couple level: Earnings		
Non-egalitarian	22.83	23.67
Neutral	32.63	28.69
Egalitarian	43.33	46.29
Unknown	1.22	1.35
Gender attitudes-society level: Jobs scarce		
Non-egalitarian	38.29	18.12
Neutral	25.05	14.50
Egalitarian	36.01	66.69
Unknown	0.65	0.69
Age (Median)	26	28
Number kids (Mean)	0.2	0.6
Country		
Austria	10.29	11.74
Bulgaria	23.12	19.52
France	9.10	12.62
Georgia	18.82	18.39
Hungary	20.66	18.06
Poland	18.01	19.66
N total	3.693	3.621

Source: Own calculations on GGS data.

Table 3 Distribution of the outcome variables

Outcome variables	Men	Women
Age difference	%	%
Homogamy	7.28	7.68
Hypergamy: male older	16.08	18.75
Hypogamy: female older	3.44	4.11
Not partnered	68.24	66.20
Not Available	4.96	3.26
Educational assortative mating		
Homogamy	17.30	17.56
Hypergamy	7.85	4.81
Hypogamy	4.71	8.70
Not partnered	68.24	66.20
Not Available	1.90	2.73
Partner's education		
Low	7.28	5.36
Medium	13.65	14.77
High	8.94	10.94
Not partnered	68.24	66.20
Not Available	1.90	2.73

Source: Own calculations on GGS data

4. Results

In this section, we discuss the results obtained from the multinomial regression models, especially focusing on the effects of the gender egalitarian attitudes for each outcome considered. We have specified three models: in M1 we account for the statement about the age difference between partners; in M2 we control for the opinion regarding the earning power of partners; and in M3 we account for gender-egalitarian attitudes at the society-level. Overall, we found similar results for men and women with regard to the association between gender-egalitarian attitudes and less common union types in terms of age difference between partners. The findings differ between men and women with regard to the educational pairing outcome.

4.1 Age difference between partners

According to *H1a*, single egalitarian men would have higher likelihood than non-egalitarian (single) men to form hypogamous unions. In line with this hypothesis, men who disagree with the statement that it is better for the couple if the man is older are almost twice more likely than men who agree with this statement to form unions where the women is older rather than remaining single (see Table 4). Additionally, results show that egalitarian men have a 40% lower risk of mating with women younger than themselves relatively to non-egalitarian men. Next, we do not find any statistically significant association between the other two statements about gender-role attitudes and the likelihood to form a homogamous, hypergamous or hypogamous union rather than remaining single.

Table 4 Multinomial logistic regression, male sample, relative risks.

Age Homogamy (Ref. Single)	*M1*	*M2*	*M3*
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	1.204	1.246	1.232
Egalitarian	1.168	1.073	1.029
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		0.851	0.858
Egalitarian		1.189	1.172
Gender attitudes society (Ref. Non-egalitarian)			
Neutral			0.977
Egalitarian			1.207
Age Hypergamy (Ref. Single)			
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	0.804	0.798	0.779
Egalitarian	0.717*	0.649**	0.632**
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		1.049	1.031
Egalitarian		1.322	1.315
Gender attitudes society (Ref. Non-egalitarian)			
Neutral			1.214
Egalitarian			1.157
Age Hypogamy (Ref. Single)			
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	1.31	1.318	1.342
Egalitarian	1.988**	1.955*	1.918*
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		0.997	1.033
Egalitarian		1.056	1.046
Gender attitudes society (Ref. Non-egalitarian)			
Neutral			0.772
Egalitarian			1.063

* p<0.05, ** p<0.01, *** p<0.001

Table 5 shows the results for the female sample. Also in this case, in line with hypothesis *H1a*, women who hold egalitarian attitudes regarding the statement on the age difference between partners tend to be almost 70% more likely to form a hypogamous union than non-egalitarian women, rather than remaining single. The difference between egalitarian and non-egalitarian women does not show up in any other case.

Table 5 Multinomial logistic regression, female sample, relative risks

Age Homogamy (Ref. Single)	M1	M2	M3
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	1.173	1.218	1.231
Egalitarian	1.379	1.337	1.386
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		0.87	0.842
Egalitarian		1.038	1.049
Gender attitudes society (Ref. Non-egalitarian)			
Neutral			1.027
Egalitarian			0.746
Age Hypergamy (Ref. Single)			
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	0.918	0.874	0.877
Egalitarian	0.916	0.968	0.975
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		1.340*	1.344*
Egalitarian		0.978	0.983
Gender attitudes society			
Neutral			0.941
Egalitarian			0.951
Age Hypogamy (Ref. Single)			
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	1.129	1.188	1.204
Egalitarian	1.686*	1.622*	1.679*
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		0.773	0.768
Egalitarian		1.027	1.035
Gender attitudes society			
Neutral			0.888
Egalitarian			0.737

* p<0.05, ** p<0.01, *** p<0.001

With regard to the effect of control variables of interest, we consider the effect of family situation. We found that having kids for men decreases the likelihood of partnering with a younger woman. Whereas having kids for women decreases the likelihood of partnering with an older man or with a man of similar age, rather than remaining single, it does not seem to be associated with the likelihood to enter a hypogamous union.

4.2 Educational assortative mating

Table 6 shows results about the likelihood to enter into a union with a woman equally educated than the male respondent, lower educated (hypergamy) or higher educated (hypogamy). In line with our hypothesis *H1b*, we found that men who hold gender-egalitarian attitudes are more likely to form hypogamous unions, rather than remaining single, relatively to non-egalitarian men. This association especially holds with the two aspects of gender-egalitarian attitudes (couple level and societal level).

Table 7 shows the models for the female sample. Contrary to the expectations, we found that egalitarian women are less likely than non-egalitarian women to form hypogamous unions relatively to remaining single. This is the case especially when we focus on gender-egalitarian attitudes which refer to the society-level. The other dimensions, instead, do not show a statistical significant effect on the likelihood of partnering with a man equally educated, lower educated or higher educated than the woman.

With regard to the effect of other relevant control variables (not shown), we found that for both men and women, all else equal, having an additional kid decreases the likelihood of partnering with a medium or highly educated partner rather than remaining single.

Table 6 Multinomial logistic models of educational pairing, male sample, relative risks

Homogamy (Ref. Single)	M1	M2	M3
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	1.043	1.05	1.061
Egalitarian	0.981	0.93	0.95
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		0.996	0.996
Egalitarian		1.161	1.172
Gender attitudes society (Ref. Non-egalitarian)			
Neutral			0.91
Egalitarian			0.888
Hypergamy (Ref. Single)			
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	0.703*	0.712	0.700*
Egalitarian	0.787	0.777	0.75
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		0.934	0.926
Egalitarian		1.011	0.994
Gender attitudes society (Ref. Non-egalitarian)			
Neutral			1.1
Egalitarian			1.236
Hypogamy (Ref. Single)			
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	1.254	1.296	1.242
Egalitarian	1.312	1.066	0.977
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		0.948	0.926
Egalitarian		1.869*	1.778*
Gender attitudes society (Ref. Non-egalitarian)			
Neutral			1.401
Egalitarian			1.693*

Table 7 Multinomial logistic models of educational pairing, female sample, relative risks

Homogamy (Ref. Single)	M1	M2	M3
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	0.944	0.924	0.928
Egalitarian	1.119	1.106	1.128
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		1.197	1.188
Egalitarian		1.14	1.15
Gender attitudes society (Ref. Non-egalitarian)			
Neutral			0.979
Egalitarian			0.865
Hypergamy (Ref. Single)			
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	0.974	0.988	0.946
Egalitarian	1.395	1.346	1.324
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		0.95	0.903
Egalitarian		1.104	1.076
Gender attitudes society			
Neutral			1.643
Egalitarian			1.4
Hypogamy (Ref. Single)			
Gender attitudes couple: Age (Ref. Non-egalitarian)			
Neutral	1.128	1.086	1.093
Egalitarian	1.059	1.138	1.147
Gender attitudes couple: Earnings (Ref. Non-egalitarian)			
Neutral		1.355	1.412
Egalitarian		0.929	0.946
Gender attitudes society (Ref. Non-egalitarian)			
Neutral			0.496*
Egalitarian			0.567**

4.3 Robustness checks

To check the robustness of our findings, we have specified the outcome variables differently. First, we defined the age homogamy as an age difference bigger than three years old[4]. The results remain substantially the same in terms of sign and statistical significance of the effect.

Next, it should be mentioned that the educational pairing variable has been constructed using the educational level that the respondent declared in the second wave. However, the union may have been formed while the respondent still did not upgrade his/her educational level. In the male sample, less than 5% of men upgraded their education during the panel-period, for women, this percentage reached the 6%. Thus, to check how this could affect the results, we have used the educational level declared in the first wave. Also in this case the results remained substantially unchanged.

Finally, we run a multinomial model with partner's educational level as outcome variable. We found that egalitarian men are more likely to mate with a highly educated woman rather than remaining single. Instead, we do not find that women's gender-egalitarian attitudes are associated with the likelihood of partnering (independently) from the partner's educational level rather than remaining single. The family situation, such as the number of children respondents already have, is a stronger predictor of the future level of education of their partners. Findings that are altogether in line with what has been discussed above.

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[4] It was not possible to test for even bigger age-difference because of the lower number of events.

5. Discussion

Recent studies, based on unions formed in the 1990s, showed that union dissolution's risks are not higher for hypogamous unions, formed by highly educated women and lower educated men, relatively to other pairings (Schwartz and Han 2014; Theunis et al. 2017). Additionally, hypogamous couples have not been found statistically different in their fertility outcomes from hypergamous couples (Trimarchi and Van Bavel 2018; Nitsche et al. 2018). These findings may be explained by the diffusion of gender-egalitarian attitudes, which according to some scholars have a positive effect on family life (Kaufman 2000; Puur et al. 2010; Goldscheider et al. 2015).

It is still unclear, however, to what extent gender-egalitarian attitudes are associated with mating patterns, which in turn affect the stability and fertility of unions. In this paper we aimed to fill this gap, focusing on the association between gender-egalitarian attitudes and less common union types. We pooled GGS data from six European countries and we analyzed the likelihood that single men and women at the first wave formed *hypogamous unions* in the second wave, given their views about the role of men and women within the couple and in society.

With regard to the age difference between partners, we found that both single men and women who hold egalitarian attitudes are more likely to form unions where the woman is older than the man compared to non-egalitarian individuals. With regard to the educational pairing, instead, results differ for men and women. In line with our main hypothesis, we found that single egalitarian men are more likely than single non-egalitarian men to form unions where the woman is more educated than themselves. Single egalitarian women, instead, are less likely than single non-egalitarian women to form hypogamous unions.

While results for men strongly point towards the fact that gender-egalitarian attitudes are associated with forming unions that are considered less common, if we assume a gendered-division of labour, results for women seem to run against this hypothesis. However, this may not be necessarily the case for at least two reasons. First, within *hypogamous* couples, compensating behaviors may take place (Bozon 1991). For instance, it is possible that couples formed by older women are characterized by men with higher earning potential, shifting the power towards the partner with higher income.

Second, men who hold gender-egalitarian attitudes may, to some extent, increase their value on the mating market, independently on their economic prospects, in this way they will be able to find a woman with higher earning power. In line with the hypothesis that the diffusion of gender-equality may lead towards a convergence of men and women's mating preferences; women, independently from their attitudes, may still prefer to mate with someone with an earning power at least as high as theirs (Zentner and Eagly 2015; Eastwick et al. 2006).

Some important limitations of this study should be mentioned. First, due to the lower number of events and small sample size it was not possible to analyze all countries separately. This is unfortunate, given that all the countries considered are at different stages of the Gender Revolution, which implies different levels of gender-equality in the public and private spheres. To check whether results were sensitive to the sample composition, we have run models dropping one country at the time and results remained substantially the same.

Next, one important limitation concerns our independent variables: we missed statements regarding the involvement of the man in the household. While egalitarian men are willing to accept working wives and to share housework, egalitarian women may face resistance from their counterparts (Kaufman 2000). Thus, men forming those kind of unions are selected at the origin (Basu 2002). This is an important issue which has consequences especially for studies focusing on couples' fertility decision making. Couple's disagreement on family goals is one of the main reasons why fertility is below the desired levels. The study of partner's mate selection processes could shed light on the mechanisms behind fertility decision-making processes.

6. References

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