

The End of Hypergamy: Global Trends and Implications

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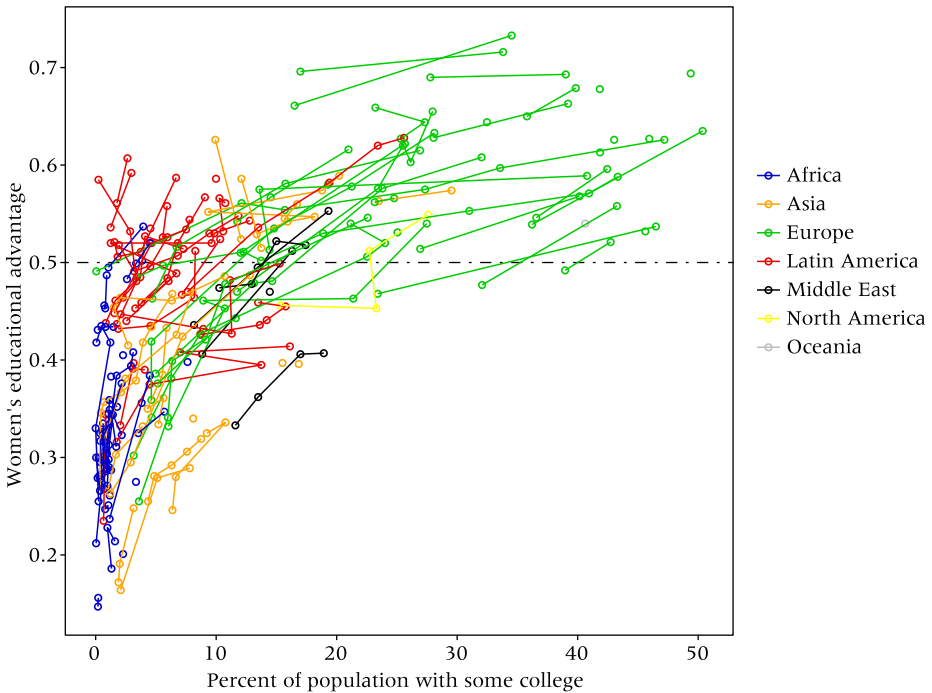
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THE GENDER GAP in education that has long favored men has reversed for young adults in almost all high- and middle-income countries. In 2010, the proportion of women aged 25–29 with a college education was higher than that of men in more than 139 countries that altogether represent 86 percent of the world's population. According to recent population forecasts, women will have more education than men in nearly every country in the world by 2050, with the exception of a few African and West Asian countries (KC et al. 2010). The reversal of the gender gap in education has major implications for the composition of marriage markets, assortative mating, gender equality, and marital outcomes such as divorce and childbearing (Van Bavel 2012).

In this work, we focus on the implications of the reversal for trends in assortative mating and, in particular, for educational hypergamy: the pattern in which husbands have more education than their wives. This represents a substantial update to previous studies (Esteve, García-Román, and Permanyer 2012) in the number of countries and years included in the analysis. We present findings from an almost comprehensive world-level analysis using census and survey microdata from 420 samples and 120 countries for the period 1960–2011, which allow us to assert that the reversal of the gender gap in education is strongly associated with the end of hypergamy and increases in hypogamy (wives having more education than their husbands). We provide near universal evidence of this trend and extend our analysis to consider the implications of the end of hypergamy for family dynamics, outcomes, and gender equality. We draw on European microdata to examine whether women are more likely to be the primary breadwinners in the household when they marry men with lower education than

FIGURE 1 Within-country changes from 1960 to 2011 in the relationship between the proportion of the population with some college and women's educational advantage, by region



NOTE: Women's educational advantage is measured as the probability that a randomly selected woman's education exceeds a randomly selected man's, given that their educational attainments differ. Probabilities above 0.5 indicate that women have higher attainment than men.

SOURCES: Authors' calculations based on the most recent harmonized census and survey microdata samples. See text for details.

themselves and discuss recent research regarding divorce risks among hypergamous couples. We close with an examination of attitudes about women earning more money than their husbands and about the implications for children when a woman works for pay.

The reversal of the gender gap in education

The expansion of education has not been gender neutral. Historically, men have accumulated more education than women and received the vast majority of college degrees. But all over the world, women's education has increased, and in many countries the gender gap in education has reversed. The universality of this pattern is shown in Figure 1, which plots the proportion of a country's population aged 25–34 with some college education against an indicator of women's educational advantage (WEA). WEA measures the probability that a randomly selected 25–34-year-old woman's

education exceeds a randomly selected man's of the same age given that they do not have the same education (Esteve, Garcia-Román, and Permanyer 2012). Probabilities above 0.5 indicate that women have higher attainment than men on average and, thus, that the gender gap in education favors women. Figure 1 includes data on 120 countries from different points in time from 1960 to 2011 combining various rounds of census and survey microdata samples. Of the total of 417 samples, 189 are census samples from the Integrated Public Use Microdata Series (IPUMS) International database of census microdata (Minnesota Population Center 2015), the world's largest collection of population microdata, with supplementary use of Demographic and Health Surveys (133 samples), European Labor Force Surveys (45), EU-Statistics on Income and Living Conditions (27), Generations and Gender Surveys (18), and South Korean census microdata samples (5). Our final dataset amounts to over one-half billion person records representing 89 percent of the world's population. The solid lines in Figure 1 show country trends over time.

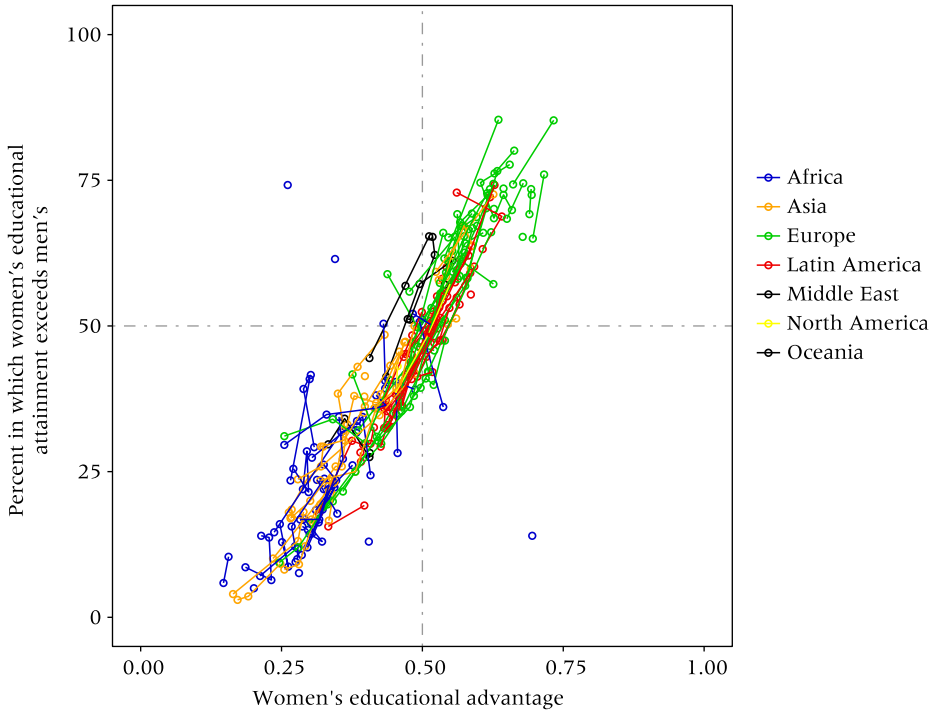
Figure 1 shows the pronounced and consistent changes in women's educational advantage as populations across the world have become more educated. Despite variability across countries, the positive relationship between the two dimensions is undeniable. As populations become more educated, the likelihood that women acquire more education than men tends to increase. Countries in which less than 10 percent of the population has at least some college are rarely those in which women's educational attainment exceeds men's. At the other extreme, very few countries with more than 20 percent of the population with some college education show women in educational disadvantage compared to men. By continent, African countries have the lowest proportions of the population with college education and the lowest levels of women's education compared to men's. Time trends indicate little progress in expanding college education in Africa but substantial progress in women's education that has successfully contributed to closing the gender gap, which still favors men. Latin American countries have undergone an important expansion of education in parallel with significant advances in women's education that have contributed to closing and reversing the gender gap in education. Despite Latin America's low proportions with college education in comparison to Europe, North America, or some Asian countries, women's educational attainment exceeds men's in the majority of countries. Middle Eastern countries show the same positive association between proportions with college education and women's educational advantage. Asian countries vary with regard to the proportion of the population with college education, but all countries show a tight correlation between this variable and women's educational advantage. Europe and North America have by far the largest proportions of college-educated populations and, in most cases, the highest values of WEA, typically above 0.5.

Global trends in hypergamy

Education is one of the main structural dimensions of contemporary marriage markets. Men and women tend to marry within the same broad education groups. But among unions in which couples have different levels of education, educational hypergamy has been one of the most enduring forms of gender inequality in heterosexual relationships. The origins of hypergamy have been tied to patriarchal norms that characterize marriage practices around the world (Therborn 2004). High educational attainment for men pays off in both the labor market (giving access to higher salaries) and the marriage market (making them more attractive marriage partners). In addition, a common theory is that the rise of women's education increases their economic independence, thereby reducing the need for marriage (Becker 1973), and it also raises the standards for minimally acceptable matches with some accompanying risk of non-marriage (Oppenheimer 1988; Van Bavel 2012). However, the steady growth of women's education has the potential to alter the tendency for men to marry women with less education than themselves.

Our analysis suggests that traditional marriage practices in which men marry down in education are unlikely to persist for long once women gain the educational advantage. Figure 2 demonstrates this, showing the relationship between women's educational advantage and the proportion of couples in which women's education exceeds men's among couples who have different levels of education. These data include heterosexual married and cohabiting couples. Country points are connected by a line showing trends over time. The strength of the relationship is striking. Wives have more education than their husbands in countries where women in general have more education than men. This finding suggests that historical marriage practices may persist while women have only a slight educational advantage, but as increasing proportions of women achieve more education than men, it is unlikely that husbands will retain their educational dominance in marriage. Trends over time within countries follow a similar pattern: increases in women's education are closely followed by increasing numbers of couples in which women's education exceeds men's. This occurs in countries as diverse as Argentina, France, Indonesia, Kenya, South Korea, and the United States. Agent-based models show that the shift from men marrying down in education to women marrying down could occur without any change in mating preferences. The shift could be explained simply by the reversal of the gender gap in education in combination with a preference for high-income partners among women and men alike (Grow and Van Bavel 2015). In short, the reversal of the gender gap in education in the population appears to move in near lock step with the reversal of the gender gap in education in marriage.

FIGURE 2 Within-country changes from 1960 to 2011 in the relationship between the proportion of married or cohabiting couples in which women's educational attainment exceeds men's and women's educational advantage, by region



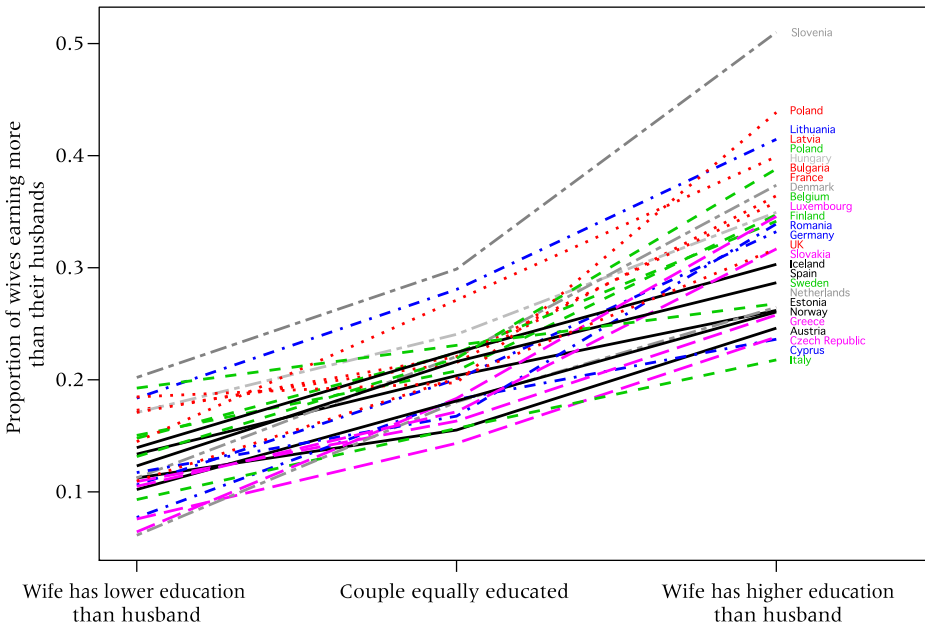
NOTE: As in Figure 1.
SOURCES: As in Figure 1.

Although our findings do not address the perceived difficulty of women's search for mates, they strongly suggest that marriage patterns adapt to changing demographic realities and that men and women form partnerships in which wives have the educational advantage rather than cling to norms in which husbands have more education than wives. Rather than widespread non-marriage among highly educated women, the dominant pattern is that the rise of women's education has led rather quickly to changes in marriage patterns and an increasing likelihood that women marry down.

Implications for family dynamics and outcomes

Will the trend toward the end of hypergamy ultimately result in an overall increase in gender equality? The concepts of gender equality and gender equity are at the heart of recent and influential debates about the future of

FIGURE 3 Relationship between the proportion of wives earning more than half of total household income and the relative education of husbands and wives, 27 European countries



SOURCE: Authors' calculations based on EU-SILC 2007 and 2011, reflecting 2006 and 2010 incomes. Observations include married couples and unmarried cohabiting couples where one or both partners earn income and the woman is aged 25–45; see Klesment and Van Bavel (2015) for details.

the family and fertility, which hypothesize that gender egalitarianism will increase fertility and decrease divorce in countries with the lowest fertility (McDonald 2000; Esping-Andersen and Billari 2015; Myrskylä, Kohler, and Billari 2009; Goldscheider, Bernhardt, and Lappegård 2015).

One important indication of progress toward gender equality is whether couples in which women have the educational advantage are also those in which women earn more than men. Women's higher education and income have been linked to greater bargaining power in the home, children's health and well-being, longer life expectancy, lower fertility, marital stability, and other advantageous outcomes (Duflo 2012). We find that wives who have more education than their husbands are indeed more likely to be the main breadwinners—at least in Europe, where the reversal of the gender gap in education is well established. Figure 3 plots the proportion of couples where the wife earns more than half of the household income for 27 European countries using 2007 and 2011 data from the Statistics on Income and Living Conditions (EU-SILC, $N = 95,498$). (Although the EU-SILC data include unmarried cohabiting couples, we refer for simplicity to husbands and wives.) Lines show country trends according to wife's growing educational advantage. While there are considerable country differences

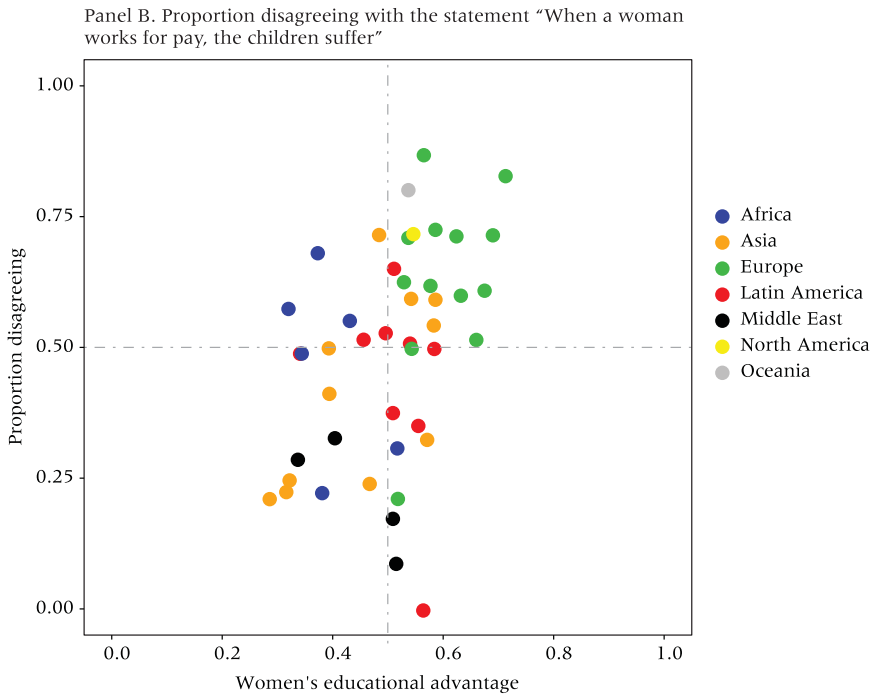
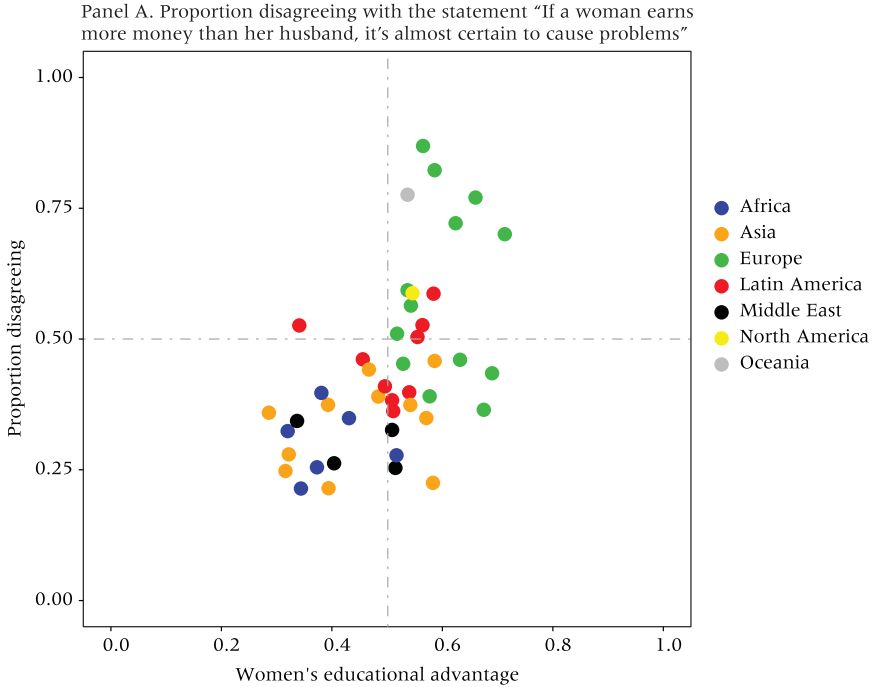
in how common female breadwinners are, the pattern is consistent: wives with more education than their husbands are more likely to be the main breadwinner of the family. In addition, while mothers are much less likely to outearn their husbands than non-mothers, this tendency may be overruled if she has more education than he does (Klesment and Van Bavel 2015).

Do relationships suffer in societies in which wives have more education or earn more than their husbands? Evidence from the United States suggests they do not. Prior to the 1980s when men clearly had more education than women and hypergamy was the norm, men who married women with more education were more likely to divorce. However, as the situation reversed and wives now have more education than their husbands, the association between wives' educational advantage and divorce has disappeared. Among marriages formed since the 1990s, wives with more education than their husbands are no more likely than other couples to divorce (Schwartz and Han 2014). A similar trend is observed for couples in which women earn more than their husbands (Schwartz and Gonalons-Pons 2016). This suggests that, at least in the United States, couples have adapted to the changing realities of the marriage market. A recent study of marriages in Belgium in the 1990s found that those where the husband has more education than the wife are more likely to dissolve than marriages in which the wife has the educational advantage. In line with the American findings, the same study also found that the latter type of marriage is more stable in regions and municipalities where they are more common (Theunis et al. 2015).

The implications of the growth of hypogamic unions for fertility are more difficult to establish since there is virtually no research that measures whether women who marry men with less education than themselves bear more, the same, or fewer children than women married to men with the same or more education. A recent European study showed that couples in which women have as much or more education compared to men tend to have higher fertility than couples in which men have more education than women (Nitsche et al. 2015). At the population level, the impact of the end of hypergamy on fertility may be determined by the extent to which the rise in the number of female-advantaged couples translates into more gender-egalitarian roles and attitudes, as predicted by McDonald (2000).

Will the reversal of the gender gap in education and reductions in hypergamy contribute to more gender-egalitarian attitudes? Our data suggest that there is an association between the reversal of the gender gap in education and egalitarian attitudes, although it is unclear whether the association is causal. Figure 4 shows the relationship between our measure of women's educational advantage in countries and mean responses to two attitudinal questions from the 2010–2014 World Values Survey: the proportion of respondents disagreeing with the statement "If a woman

FIGURE 4 Relationship between women’s educational advantage and gender egalitarian attitudes by country



NOTE: Weighted estimates calculated for respondents aged 25–34.
SOURCE: World Values Survey 2010–2014.

earns more money than her husband, it's almost certain to cause problems" (Panel A) and "When a woman works for pay, the children suffer" (Panel B). Both panels show that countries in which women have more education than men also have more gender-egalitarian responses to these questions (higher proportions disagreeing). We also know that attitudes about wives outearning their husbands have changed over time and across birth cohorts with the reversal of the gender gap in education. In the United States in 1980, just 41 percent of male college students said that "it wouldn't bother me at all" if their female partners outearned them, and this proportion increased to 60 percent in 1990 (Willinger 1993). Similarly, for most countries in the 2010–2014 World Values Survey, young people have more egalitarian attitudes regarding wives' higher status than do older cohorts. The increase in disagreement with the statement "If a woman earns more money than her husband, it's almost certain to cause problems" is significant ($p < .001$) across WVS countries. Given period trends toward egalitarianism, we would expect age patterns in this measure to underestimate the true extent of social change in egalitarianism on this measure.

Discussion

We highlighted the implications of trends in women's education relative to men's for assortative mating patterns on the basis of an extensive dataset of survey and census microdata that covers 120 countries from 1960 to 2011. Our data provide a rich source for visualizing the universal shift from male to female dominance in educational systems and its concomitant impact on educational assortative mating. The evidence shows that young people adapt to new demographic realities by increasingly forming unions in which wives have the educational advantage, leading to substantial declines in the historical hypergamic pattern. Across a range of different contexts (e.g., France, India, South Korea, Kenya, the United States), the norms governing marriage markets have proven flexible enough to accommodate the increasing numbers of highly educated women, and, as consequence, the number of women marrying down has steadily increased.

We also reviewed evidence on how the new majority of couples in which women have the educational dominance is transforming couples on dimensions like women's contribution to household income and union stability. Data for Europe show that wives with more education than their husbands are more likely to be the household's main breadwinner. With respect to marital outcomes, as wives increasingly have more education or higher income than their husbands, the association between wives' educational or income advantage and divorce has declined and is no longer statistically significant. This finding reinforces the adaptive nature of couples to the changing realities of marriage markets. The reversal of the gender gap in education is also associated with more gender-egalitarian attitudes. Countries in which women have more education than men are also more

tolerant and are less worried about the effects of women's higher earnings on their families' well-being.

In a macro perspective, we have shown that the reversal of the gender gap in education is associated with change in couple relationship patterns and outcomes. These patterns may also be associated with greater gender equality, although whether greater gender equality is a cause or consequence (or both) of the rise of women's education remains to be estimated. If proponents of the gender equity/fertility theories are correct (Esping-Andersen and Billari 2015; Goldscheider, Bernhardt, and Lappegård 2015; McDonald 2000), the rise of gender egalitarianism may lead to higher fertility in low-fertility countries. But the reversal of the gender gap in education is taking place worldwide, and its implications will depend to a large extent on the normative contexts in which these trends take place.

Note

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