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# Do Female Colleagues and Supervisors Influence Family Role Attitudes? A Three-Level Test of Exposure Explanations Among Employed Men and Women in 27 European Countries

*This study examines the relationship between various aspects of female labor participation and people's family role attitudes. Following exposure theory, we expect that individuals may adopt more egalitarian family roles as they are more often exposed to employed women because it dispels negative ideas about women's capabilities and brings them into contact with non-traditional networks. This study provides an elaborate test by examining the role of exposure to female colleagues and supervisors in three contexts: workplaces, occupational sectors, and countries. We found that the number of female colleagues at work and in occupational sectors was positively related to egalitarian family roles of employed men. Our study further showed that this positive relationship between exposure to female colleagues at work and men's egalitarian family roles was weaker in female-dominated sectors. Remarkably, exposure to national female labor participation was not significantly related to the family roles of employed women.*

During the past decades, the composition of the labor market has changed dramatically, foremost as a result of an increase in female labor force participation. Not only do women currently hold more than 40% of jobs worldwide but they also run a third of all businesses (International Labour Office, 2015). Moreover, although women are still underrepresented in top positions, the proportion of female managers increased during the past 20 years in a majority of countries (International Labour Office, 2015). The question central to this study is to what extent exposure to today's female labor force participation is related to people's support for egalitarian family roles, which has been rising as well (e.g., Brooks & Bolzendahl, 2004; Thornton & Young-DeMarco, 2001). Attitudes on the division of work and care between men and women are not only relevant as an indicator of inequality between men and women but may also affect long-term concrete behaviors (Ajzen, 1991), especially with respect to the division of work and to a lesser extent to family obligations (e.g., Hochschild, 1989).

Previous studies have argued that contact and interaction with employed women at the workplace are positively related to egalitarian family role attitudes, mainly through people's exposure to women's capabilities to perform in the labor market (next to managing a family) and their capability to be self-reliant (Banaszak & Plutzer, 1993; Bolzendahl & Myers, 2004;

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Davis & Robinson, 1991; Gerson, 1987; Klein, 1984; Kroska & Elman, 2009). In addition, it is argued that employed women themselves hold on average more egalitarian views than nonemployed women and hence that exposure to females at the workplace implies that employees come into contact with relatively nontraditional women at work (e.g., Cassidy & Warren, 1996; Kraaykamp, 2012; Rhodebeck, 1996). Yet, the relation between family role attitudes and exposure to various forms of female labor participation, especially at the individual level (i.e., the workplace), has been understudied in empirical studies. This study advances on previous work with three main contributions.

First, this research is of one the first empirical studies to directly test exposure mechanisms underlying the relation between female colleagues at work and egalitarian family role attitudes and will do so among both men and women. Next to exposure to relatively successful women (female supervisors), we examine whether the mere amount of exposure to female colleagues at the workplace (regardless of their status) is related to egalitarian family roles. In doing so, we contribute to the development of exposure theory and provide a more elaborate test.

Second, exposure to female colleagues and supervisors may differ according to work sector. For instance, in education and health sectors, female employees are found most often (Charles & Bradley, 2009; Eurostat, 2014), and an overrepresentation of women in a sector may imply that people will be exposed to women's abilities and egalitarian attitudes regarding the division of work and care tasks more than in male-dominated sectors. We here build on previous research not only by testing the idea of exposure at occupational sector level next to the workplace level but also by theorizing to what extent more contact with women at one's workplace might mean something different than in one's sector, for instance, because contact with women in the workplace might be more frequent, more personal, and more visible than in one's occupational sector. In addition, we examine the exposure mechanism even further by studying whether the relation between exposure to female colleagues and supervisors at the workplace and egalitarian family roles is weaker or stronger in sectors with a higher percentage of female colleagues (cross-level interaction).

Third, people's norms and values are also influenced by societal norms and structures (e.g., André, Gesthuizen, & Scheepers, 2013; Banaszak & Plutzer, 1993; Geist, 2005; Glass, Bengston, & Dunham, 1986; Sjöberg, 2004; Voicu, Voicu, & Strapcova, 2009). According to Banaszak and Plutzer (1993), previous literature suggests that "in nations where women's participation in the economy is high, support for feminist goals is also high" (p. 147). Yet, empirical studies that investigate the effects of national female labor force participation on people's family role attitudes are scarce. Moreover, studies that do (e.g., Banaszak & Plutzer, 1993; Sjöberg, 2004) examine only a small number of countries, and the results are contradictory (e.g., André et al., 2013; Banaszak & Plutzer, 1993; Sjöberg, 2004). We contribute to this stream of literature by examining to what extent egalitarian family role attitudes are influenced by the number of women in the labor force and the number of women in supervising or managerial positions in 27 countries. Until now, it was unclear whether national labor market characteristics indeed are related to egalitarian family role attitudes or whether previously found country associations in fact represent composition effects or influences of exposure on lower levels. We add to this gap in literature by examining the national context next to the individual workplace and occupational sector. In addition, more frequent and personal contact, such as at the workplace or in sectors, might be differently related to egalitarian family roles than exposure to national norms regarding working women. So, in this contribution we also gain more insight into the relative importance of different types of exposure by focusing on working women in various contexts.

This study answers the following research questions: To what extent are (a) the percentage of female colleagues and having a female supervisor at the workplace, (b) the percentage of female employees and supervisors in an occupational sector, and (c) the percentage of female employees and supervisors in a country related to family role attitudes of employed men and women? Also, to what extent is the relation between the percentage of female colleagues at the workplace and men's and women's family role attitudes conditional on the percentage of female employees in an occupational sector? To test our expectations we use information from the European Social Survey (ESS, <http://www.europeansocialsurvey.org>), Round 5 (2010) on

27 European countries. We examine employed men and women belonging to the working-age population and analyze men and women separately. Exposure explanations are criticized because of selectivity and causality issues. We discuss these issues at the end of the theory section.

### THEORY

Previous research has put forward exposure theory as one of the main theoretical explanations for developing egalitarian family roles (Bolzendahl & Myers, 2004; Davis & Greenstein, 2009; Sjöberg, 2004). According to this perspective, people adopt and internalize social standards on the proper roles of men and women through prevailing social norms in their environment through socialization or through personal experiences (Banaszak & Plutzer, 1993; Bolzendahl & Myers, 2004; Davis & Greenstein, 2009; Davis & Robinson, 1991; Glass, Bengston, & Dunham, 1986; Klein, 1984; Kroska & Elman, 2009; Rhodebeck, 1996). The general exposure hypothesis tested in our study therefore states that individuals who are frequently exposed to employed women are more likely to express egalitarian family role attitudes (e.g., Kroska & Elman, 2009). Next to working females among family (e.g., wife) and friends, female contacts in the labor force are of importance, especially because these latter contacts are omnipresent (e.g., national labor force) and are more difficult to avoid (e.g., colleagues at work or in sector). We address exposure to female employees and supervisors at the workplace in occupational sectors and in the national labor force.

#### *Exposure at the Workplace*

According to Bolzendahl and Myers (2004), an individual's labor force participation is related to support for more egalitarian family roles. The first explanation for why people's employment is associated with egalitarian family role attitudes is that observing and interacting with employed women at work contradicts the idea that women are not capable to perform in the workplace and also supports the idea that working women are able to manage a family and be financially independent (e.g., Banaszak & Plutzer, 1993; Bolzendahl & Myers, 2004; Davis & Robinson, 1991; Gerson, 1987; Klein, 1984;

Kroska & Elman, 2009). Second, an individual's contact with female employees introduces the individual to networks of relatively progressive women, inducing egalitarian family role attitudes (Banaszak & Plutzer, 1993; Cassidy & Warren, 1996; Rhodebeck, 1996). Finally, labor force participation might make a person more aware of (structural) inequalities between men and women by exposure to discriminatory situations at work (e.g., Klein, 1984). Although this latter explanation is perhaps most likely to be related to women's family role attitudes, observing female colleagues being discriminated against also makes men more aware of possible inequalities. In this respect, Davis and Robinson (1991) have shown that as people experience more gender inequalities, they are more supportive of combating them. Particularly from the first two theoretical ideas, exposure to female colleagues at the workplace is expected to be related to more support for egalitarian family roles. Our first hypothesis reads as follows: H1a: The higher the percentage of female colleagues at one's workplace, the more egalitarian one's family role attitudes. By examining the sheer amount of exposure to female colleagues (regardless of their status), we provide a more elaborate test of exposure theory.

As a contrast, we examine exposure to successful women as well. It may be expected that especially women in high-status positions demonstrate women's capabilities (and convey progressive family roles; Kroska & Elman, 2009; Parboteeah, Hoegl, & Cullen, 2008). Because supervisors have a higher job status, they are likely to be good examples of women who are successfully performing on the labor market. Furthermore, supervisors have a prominent position in the workplace, and because subordinates have to relate to their supervisor, there will be frequent contact and interaction. We therefore expect the following: H1b: Individuals with a female supervisor have more egalitarian family role attitudes than individuals with a male supervisor. On the basis of their occupational success and visibility at the workplace, it might be expected that having a female supervisor has more impact on people's family roles than having female colleagues in general. We explore to what extent this is supported by our results.

#### *Exposure in Occupational Sectors*

Next to people's exposure to female capacities and family role norms at the workplace,

we similarly expect that people adopt and internalize opinions on family roles they are exposed to in their occupational sector. Following the logic of exposure theory, we presume that men and women working in sectors with high proportions of females are more likely to support egalitarian family role attitudes because in their larger work context they are more exposed to women's abilities and progressive attitudes regarding the division of labor and care (Banaszak & Plutzer, 1993; Bolzendahl & Myers, 2004; Davis & Greenstein, 2009; Kroska & Elman, 2009). Indeed, Coverdill, Kraft, and Manley (1996) demonstrated that women in female-dominated and mixed-gender occupations become slightly more gender egalitarian over time than women in male-dominated occupations. There are several arguments why a person's occupational sector may affect a person's egalitarian family roles independently of experiences at their own workplace. First, people might come into contact with females in their sector when collaborating with people from other companies. Second, as people switch jobs in their career (but stay in the same sector, which is likely), they become exposed to general perceptions of the qualities of female colleagues in their sector and moreover observe sector-specific norms and values regarding family roles. We therefore hypothesize the following: H2a: The higher the percentage of female colleagues in one's sector, the more egalitarian one's family role attitudes. H2b: The higher the percentage of female supervisors in one's sector, the more egalitarian one's family role attitudes.

It is likely that contact with women in the own workplace is more frequent, more personal, and more visible than contact with working women in one's occupational sector. Building on exposure theory, we therefore assume that people get a better impression of women's capabilities to perform on the job market (besides managing a family) and are more easily affected by their network's family roles when contact is closer and more frequent. On the basis of these ideas, we explore to what extent exposure to women at the workplace is more strongly related to egalitarian family roles than exposure in the sector.

#### *Exposure at the Country Level*

People's family role attitudes are believed to be associated with female labor force participation

on a national level as well (e.g., André et al., 2013; Banaszak & Plutzer, 1993). First, we expect that as a nation's female labor force participation is higher, people are more likely to interact with working female friends, family, neighbors, and working women they meet outside their own workplace and sector. As a result, they are more exposed to (national) norms on working women. Second, people living in countries with higher female labor force participation are more likely to be exposed to prevailing egalitarian family role norms via the media or through governmental policies. Again, building on the idea that exposure to female employment facilitates people to observe women's possibilities, self-reliability, and nontraditional family roles, it is expected that a higher percentage of women in the labor force and in supervising or managerial functions in a country positively affects egalitarian family role attitudes. We hypothesize the following: H3a: The higher the percentage of female labor force participation in one's country, the more egalitarian one's family role attitudes. H3b: The higher the percentage of females in managerial positions in one's country, the more egalitarian one's family role attitudes. According to exposure theory, people's family roles are developed through prevailing socialization, social norms, and personal experiences (e.g., Bolzendahl & Myers, 2004). By examining exposure to working women on the national level next to exposure at the workplace or in sectors, we study the relative importance of societal norms (i.e., national norms and culture about men and women dividing work and care tasks) and personal experiences in relation to egalitarian family roles in our analyses.

#### *Interaction of Exposure at the Workplace and Occupational Sector*

Last, the relation between exposure to female colleagues at the own workplace and family role attitudes might differ across occupational sectors, conditional on the number of women working in those sectors. We assume that people's family role attitudes are least affected by female colleagues at work when egalitarian family role attitudes and female labor force participation are already the norm. Specifically, contact with a female colleague in a male-dominated sector might raise more additional awareness than contact with a female colleague in a female-dominated sector. In



a similar vein, Banaszak and Plutzer (1993) argue that exposure to nontraditional experiences increases feminist attitudes more in traditional settings, whereas it may be less effective in a context where women's gains are already substantial and egalitarian attitudes are already prevalent. The latter, they argue, could possibly be explained by complacency or even economic competition. Following the literature on occupational segregation, relating occupational feminization to disadvantaged outcomes in terms of wages, prestige, and power (e.g., Cohen & Huffman, 2007; Elliot & Smith, 2004; Reskin and Ross, 1992; Yaish & Stier, ??), exposure to women in highly feminized occupational sectors might not necessarily be demonstrating women's capacities and thus might not be positively related to egalitarian family roles. We formulate the following interaction hypothesis: H4: The positive association between the percentage of female colleagues at the workplace and egalitarian family roles will be weaker as the percentage of female colleagues in sectors is higher.

#### *Differences Between Men and Women*

Various scholars suggest that the strength of exposure effects differs between men and women. Previous research has mainly argued that (discriminatory) personal experiences at work will foremost affect family roles among women as they belong to the group that is (previously) discriminated (e.g., Klein, 1984). In addition, Hackett, Esposito, and O'Halloran (1989) argued that female role models are more important for women than for men because of perceived similarities. Lockwood (2006, p. 36) added to this the following: "Because women face negative stereotypes regarding their competence in the workplace, they may derive particular benefit from the example of an outstanding woman who illustrates the possibility of overcoming gender barriers to achieve success." In contrast, it might also be expected that women's family role attitudes are less affected by exposure to other working women because most working women are well aware of women's capabilities and (mostly) already support egalitarian family role attitudes (e.g., Kraaykamp, 2012). In that case, exposure to female colleagues and supervisors will affect men's family role attitudes the most. Keeping this in mind, we do not formulate explicit

expectations about female–male differences, but study the effects of female supervisors and colleagues in workplaces, sectors, and countries separately for men and women.

#### *Selectivity Versus Causality*

Similar to our assumptions, numerous longitudinal and panel studies have pointed out that previous work experiences affect gender role attitudes later in time (e.g., Coverdill et al., 1996; Cunningham, 2008; Cunningham, Beutel, Barber, & Thornton, 2005; Fan & Marini, 2000; Thornton, Alwin, & Camburn, 1983). Nevertheless, we have to acknowledge that—similar to many other cross-sectional studies in this field—selectivity might be at play. That is, previously held family role attitudes could be a determinant of employment patterns and job choices later in life (e.g., Cunningham, 2008; Hakim, 2002). Next we discuss to what extent selectivity might be relevant in our study and how we responded to this.

To begin, on the sector level, family role attitudes might affect the choice for a specific occupational sector (Dodson & Borders, 2006; Eccles, 1994; J. Jacobs, 1989; S. C. Jacobs, 1995; Rudman & Phelan, 2010); people with more traditional family roles may prefer to work in more traditional work environments. In addition, people with traditional family roles probably also will prefer an occupation that fits their gender according to traditional family roles. As a result, women with traditional family role attitudes may be more likely to choose female-dominated professions (e.g., in the education and health sectors), whereas men with traditional family role attitudes likely decide on male-dominated professions (e.g., agriculture or construction), affecting the relation between people's family roles attitudes and the exposure to female colleagues at the workplace and sector.

Next, on the individual level, it seems unlikely that—apart from being related to choices for more or less feminized occupational sectors—people would select workplaces with more or less female colleagues on the basis of their attitudes about male breadwinner and female caregiver roles. It also is questionable to what extent people even are informed about the exact number of female colleagues when applying for a job.

Furthermore, we assume it is not very likely that selectivity occurs of people with egalitarian

family roles into countries where female labor participation is high. Hence, theoretically, selection seems to be mostly at play at the individual and sector levels.

Yet, previous empirical research that has explicitly studied the reciprocal relationship between women's gender role attitudes and labor force participation found "only weak evidence of any selection into ... labour force status on the basis of prior gender role attitudes" (Berrington, Hu, Smith, & Sturgis, 2008, p. 18). "Selection and adaptation effects are both present, but ... adaptation effects are more consistent and larger" (p. 24). Hence, this gives us more confidence in assuming an influence of labor force participation on family roles rather than the other way around. Nonetheless, we are aware that causality might still be relevant in our study, and we try to deal with this in several ways.

First of all, this study includes the occupational-sector level and the exposure to female colleagues in these sectors, which allows us to partly control for the employment choices for certain (more or less feminized) occupational sectors and workplaces (as the latter are partly defined by the sector they are in). Second, we control for several indicators of previously held family role attitudes such as people's educational level, social class, religious attendance, ethnic minority status, urbanization, mother's educational level, and mother's employment during one's youth (e.g., André et al., 2013; Bolzendahl & Myers, 2004; Kraaykamp, 2012; Kroska & Elman, 2009). Most important, we control for various socialization influences (e.g., mother's educational level, working mother during one's youth, ethnicity, social class). These socialization influences, in particular the presence of a working mother during one's youth, not only affect family role attitudes later in life but also predict employment choices. Third, we control for indicators of prevailing norms in the environment other than the workplace or sector by which family roles might be influenced (e.g., religious attendance, urbanization, social class). Fourth, it has been argued that "adults do not change their attitudes simply because their age makes them susceptible to change, but rather because they are likely to be exposed to certain kinds of 'change-inducing' events" (Cunningham et al., 2005, p. 886). For instance, men's and women's gender roles become more traditional after the birth of their first child (Baxter,

Buchler, Perales, & Western, 2015). Therefore, we control for the influence of such major life events (i.e., marriage and having children) next to employment characteristics. Although we control in several ways for possible selection as far as possible with our data, we still have to be careful in our interpretations and talk about associations rather than about effects.

## METHOD

### *Data and Measurements*

To test our hypotheses we employed data from the ESS. This cross-national survey is conducted every 2 years and focuses on attitudes, beliefs, and behavior patterns regarding various social issues. We used the questionnaire on family, work, and well-being, which was conducted in Round 5 (2010) in 27 countries ( $N = 52,458$ ). Because we were interested in exposure at the workplace, and only employees (excluding self-employed people) were asked about their female colleagues and supervisors, we analyzed employed respondents only (i.e., aged 15–65 years;  $N = 20,098$ ). As respondents younger than 25 years whose main activity is paid labor might differ in various aspects from the general working population, we performed sensitivity analyses excluding the youngest age group. This did not change our results substantially.

*Dependent variable: Egalitarian family role attitudes.* Egalitarian family role attitudes were measured by two items: "A woman should be prepared to cut down on her paid work for the sake of her family" and "When jobs are scarce, men should have more right to a job than women" ( $r = .48$ ). Response categories for both items ranged from 1 (*agree strongly*) to 5 (*disagree strongly*). We computed a mean score on both items ( $\alpha = .65$ ). People who had a missing score on both items were excluded (71 respondents, 0.4%;  $n = 20,027$ ). As a sensitivity analysis, we also analyzed the items separately. This led to largely similar conclusions with regard to our hypotheses. Two exceptions are discussed in the Results section.

*Workplace: Female colleagues and supervisors.* Respondents were asked about the proportion of female colleagues at their workplace. Response categories ranged from 1 (*none*) to 7 (*all*). For reasons of interpretation, we recoded the categories to percentages (interval scale), where 0% referred to none, 15% to very small, 35% less than half, 50% to about

half, 65% to more than half, 85% to very large, and 100% referred to all. We used various alternative constructions of this variable to check for robustness. They all showed similar results when compared with the original scale (1–7) and did not affect the main conclusions regarding our hypotheses (additional analyses available on request). About 28% of the workplaces were dominated by males (<15% females), compared to 26% female-dominated workplaces (>85% females). We measured whether respondents' immediate supervisor (direct line manager or the person to whom the respondent reports day to day) was a man (reference category, 68%) or a woman (32%) with a dummy variable. Respondents with a missing value on either of these variables were excluded from our analyses (2%).

*Individual-level controls.* We controlled for respondents' educational level, social class, hours worked per week, marital status, having children, age, religious attendance, ethnic minority status, urbanization, and mothers' educational level and employment because these aspects have proven to be related to family role attitudes in previous research (e.g., André et al., 2013; Bolzendahl & Myers, 2004; Kraaykamp, 2012; Kroska & Elman, 2009). Moreover, we expect these features to be related to the percentage of female supervisors and colleagues at work as well. Educational level was measured by the cross-nationally comparable International Standard Classification of Education (ISCED; UNESCO, 1997), ranging from 1 (*less than lower secondary education, ISCED 0–1*) to 7 (*tertiary education completed, ISCED 5–6*). Additional analyses with dummy variables indicated a linear relationship. Therefore, educational level was treated as an interval variable in our final analyses. To measure social class, we coded the International Standard Classification of Occupations scores into the Erikson, Goldthorpe, and Portocarero (1979) class scheme. We distinguished the following classes: high-grade professionals, low-grade professionals, routine nonmanuals, workers (consisting of manual supervisors, unskilled, and farmers), and other/unclassifiable social classes (recall that self-employed people were not part of our sample). To measure respondents' total contracted hours per week in their main job, we constructed the following three dummy variables: marginal, less than 15 hours; part-time, 15 to 29 hours; 30 hours and more. This coding is in

line with the Organization for Economic Cooperation and Development (2013) definition of full-time work (30 hours and more) and Hakim's (1993, 1997) distinction between half-time jobs (15–29 hours a week), and marginal jobs (only a few hours a week). Respondents' marital status was measured by the following five dummy variables: distinguishing between people who were married/registered civil union, divorced/separated, widowed, cohabiting, and people who were never married or in a registered civil union or who were not cohabiting. In addition, we included a dummy variable for Finnish respondents because their marital status was not correctly measured in ESS Round 5 because of a routing error. We measured whether people had children living in their household at the time of the interview, in the past, or whether they never had children living in their household. Urbanization was measured by the respondents' indication of their living area, which we recoded to range from 1 (*a farm or home in the countryside*) to 5 (*a big city*). To measure religious attendance, we constructed a measure ranging from 1 (*never*) to 7 (*every day/more than once a week*). We controlled for belonging to an ethnic minority group (i.e., one or both parents were born abroad) and respondents' age. Finally, we included mother's educational level (measured in the same way as respondent's educational level) and added a dummy variable measuring whether respondents' mothers worked when the respondent was aged 14 to control for strong socializing effects of female labor force participation outside the current work environment.

Missing observations on a respondent's educational level, working hours, urbanization, religious attendance, age, or mother's educational level—which were all below 4.5%—were replaced using the expectation-maximization algorithm in SPSS (Version 21.0., IBM SPSS Statistics for Windows, IBM Corp., Armonk, NY) in which plausible values were imputed ( $N = 19,068$ ). Table 1 shows the descriptive statistics of the variables on the individual level for men and women separately. We observe that, although women's family role attitudes were somewhat more egalitarian than men's, family role attitudes did not differ strongly by gender.

*Sectors: Proportion of women and female supervisors.* In the ESS, occupational sectors of respondents were classified according to the statistical classification of economic activities

Table 1. Descriptive Statistics of the Variables on the Individual Level

	Men				Women			
	Min	Max	Mean	SD	Min	Max	Mean	SD
Egalitarian family role attitudes	1	5	3.24	1.02	1	5	3.49	1.00
Women at work, %	0	100	31.09	24.79	0	100	66.58	24.83
Female supervisor (male = ref.)	0	1	0.12		0	1	0.51	
Educational level	1	7	4.28	1.72	1	7	4.58	1.72
Social class								
High-grade professionals (= ref.)	0	1	0.20		0	1	0.15	
Low-grade professionals	0	1	0.21		0	1	0.30	
Routine nonmanual employees	0	1	0.09		0	1	0.34	
Workers	0	1	0.48		0	1	0.20	
Other	0	1	0.02		0	1	0.01	
Working hours								
< 15 (= ref.)	0	1	0.01		0	1	0.03	
15–29	0	1	0.04		0	1	0.15	
30+	0	1	0.95		0	1	0.81	
Marital status								
Married/civil partnership (= ref.)	0	1	0.56		0	1	0.52	
Divorced/separated	0	1	0.08		0	1	0.15	
Widowed	0	1	0.01		0	1	0.04	
Cohabiting	0	1	0.09		0	1	0.08	
Never married/not cohabiting	0	1	0.22		0	1	0.18	
Children in household								
No (= ref.)	0	1	0.33		0	1	0.27	
Yes, currently	0	1	0.49		0	1	0.55	
Yes, in past	0	1	0.18		0	1	0.18	
Age	16	65	41.39	11.56	15	65	41.99	11.21
Religious attendance	1	7	2.28	1.38	1	7	2.55	1.39
Ethnic minority (no = ref.)	0	1	0.17		0	1	0.17	
Urbanization	1	5	3.20	1.23	1	5	3.26	1.24
Educational level mother	1	7	2.85	1.71	1	7	2.88	1.77
Working mother (no = ref.)	0	1	0.63		0	1	0.67	

Source. European Social Survey Round 5 (2010), *N* respondents = 19,068; *n* men = 9,222; *n* women = 9,846.

Note. We included a dummy variable for Finland (not shown) to control for the missing values on marital status. All interval variables were mean centered in the analyses. Ref. = reference category.

in the European community, abbreviated as NACE. We used the classification that existed of 21 categories (one-letter level; NACE Revision 2). To avoid small frequencies, we parsimoniously combined occupational sectors on the basis of the standard high-level aggregation (Eurostat, 2008). In total, we distinguished 12 occupational sectors (see Table 2). Because the male and female composition in a sector in one country may not be necessarily similar to the same sector in all countries, we examined 320 sector–country combinations (four sector–country combinations were not observed in the data: (O) public administration, defense, and compulsory social security in Greece and Slovenia and (Q) human health and social work activities in Greece and Slovenia.

We used official reports on the percentage of women in different sectors in countries on the basis of Eurostat (<http://ec.europa.eu/eurostat>). Data were not available for Israel, Russia, and Ukraine. In those countries, we aggregated the mean percentage of female employees per sector from the ESS data. Official reports on the percentage of female supervisors per sector per country were not available and were aggregated as well.

The mean percentage of female colleagues across all sector–country combinations was 49%, ranging from 15% (agriculture, mining, electricity, water supply, and construction in Ireland) to 88% (human health and social work activities in Finland). The mean aggregated percentage of female supervisors across all



Table 2. Classification of Sectors and Sector Variables

Nace Rev. 2, Section level categorization (one-letter level)	Analyzed categorization			Mean egalitarian family roles attitudes in sector	Females colleagues in sector (Eurostat), %	Female supervisors in sector, %
	12 occupational sectors	Men in sector, %	Women in sector, %			
A Agriculture, forestry, and fishing	A, B, D, E, F	18.0	3.5	3.05	19.9	7.6
B Mining and quarrying						
D Electricity, gas, steam, and air conditioning supply						
E Water supply, sewerage waste management, and remediation activities						
F Construction						
C Manufacturing	C	22.1	11.5	3.21	33.5	17.5
G Wholesale, retail trade, and repair of motor vehicles and motorcycles	G	10.1	12.9	3.32	51.8	30.5
H Transportation and storage	H, I	12.2	8.1	3.24	39.6	23.7
I Accommodation and food service activities						
J Information and communication	J	4.3	1.9	3.65	33.2	22.5
K Financial and insurance activities	K, L	3.8	4.0	3.55	52.8	31.1
L Real estate activities						
M Professional scientific and technical activities	M	4.7	5.3	3.55	48.3	25.7
N Administrative and support service activities	N	4.3	4.4	3.40	46.2	28.1
O Public administration and defense; compulsory social security	O	6.5	6.8	3.53	47.2	32.0
P Education	P	5.0	15.8	3.51	73.1	56.7
Q Human health and social work activities	Q	4.0	18.3	3.63	80.1	67.3
R Arts entertainment and recreation	R, S, T, U	5.0	7.5	3.27	62.4	41.4
S Other service activities						
T Activities of household as employers, undifferentiated goods- and services-producing activities of household for own use						
U Activities of extraterritorial organization and bodies						

Source. European Social Survey Round 5 (2010), *N* respondents = 19,068; *n* men = 9,222; *n* women = 9,846.

sector–country combinations was 32%, ranging from 0% (information and communication in Croatia and transportation and accommodation in Cyprus) to 84% (human health and social work activities in Finland). Overall, the fraction of female colleagues and supervisors was largest in the educational sector and in human health

and social work activities. See Table 2 for the distribution of the variables per sector.

*Countries: Proportion of women and female supervisors in national labor force.* We used data from the World Bank (2010; <http://data.worldbank.org>) to measure countries' female labor force participation rate as a percentage of

the female population aged 15 and older that was economically active in 2010. The average percentage of females in the labor force was 53% across all countries with a minimum of 44% (Hungary) and a maximum of 61% (Norway). The percentage of females in managerial positions was measured as the percentage of female legislators, senior officials, and managers of all working women. Again, data are from the World Bank and refer to the year 2010. On average, across all countries, the percentage of female managers was 33%, ranging from 13% in Cyprus to 41% in Ukraine. See Table 3 for detailed information on the country variables. In additional analyses, we examined the influence of religious institutions, providing a more traditional cultural context (i.e., promoting traditional views on family roles and female labor force participation). Because this indicator did not prove to be significantly related to family role attitudes, we excluded it from our analyses, only presenting the more parsimonious models.

## RESULTS

To investigate the relationship between exposure measures and family role attitudes, we performed random-intercept multilevel regression analyses. Our data were characterized by a hierarchic three-level structure, with respondents (Level 1,  $N = 19,068$ ), nested within sectors\*country (Level 2,  $N = 320$ ), nested within countries (Level 3,  $N = 27$ ). For men, the random-intercept model without predictors (not presented) showed most variance at the individual level (.751), followed by country variance (.295) and sector\*country variance (.019). For women, this was .789, .199, and .008, respectively. We performed a two-level sensitivity analysis in which the sector\*country level was not specified, but sectors were included as dummy variables. Furthermore, we executed a three-level analysis where the second level was specified as sector rather than sector\*country. Both additional analyses did not lead to a different evaluation of our hypotheses.

Tables 4 and 5 present the multilevel regression analyses on egalitarian family role attitudes for men and women, respectively. For both tables, Model 1a examines to what extent an individual's egalitarian family role attitudes were influenced by the percentage of female colleagues at work, in sectors, and in countries. Model 1b shows the effect of female supervisors

Table 3. *Descriptive Statistics of the Variables on the Country Level*

	Mean egalitarian family role attitudes	Female labor force participation, percentage of female working population	Female legislators, senior officials, and managers, percentage of total
Belgium	3.79	47.6	34.1
Bulgaria	3.21	47.5	34.1
Croatia	3.16	45.7	26.8
Cyprus	2.63	57.1	13.1
Czech Republic	3.14	49.2	27.7
Denmark	4.18	59.8	22.6
Estonia	3.20	56.2	36.9
Finland	3.94	56.2	30.4
France	3.63	50.9	38.7
Germany	3.50	52.7	29.9
Greece	2.97	44.1	29.7
Hungary	2.72	43.7	36.4
Ireland	3.82	53.1	39.0
Israel	3.07	52.6	32.1
Lithuania	2.64	54.3	40.6
The Netherlands	3.89	58.0	28.6
Norway	3.97	61.4	34.4
Poland	3.13	48.3	36.2
Portugal	3.26	56.3	31.8
Russia	2.57	56.4	37.1
Slovakia	3.11	50.8	34.6
Slovenia	3.50	53.1	34.8
Spain	3.66	51.4	34.3
Sweden	4.13	59.0	31.2
Switzerland	3.24	60.8	33.0
Ukraine	2.42	52.4	41.3
United Kingdom	3.62	55.5	35.7

*Source.* The World Bank (<http://data.worldbank.org>) and Euro-pan Social Survey Round 5 (2010).

*Note.* Data on female labor force participation and female managers refer to 2010. For Israel and Russia data on female managers, refer to 2008 and for Ukraine to 2009 as more recent data were not available.

on all three levels. In Model 2, female colleagues and supervisors were examined simultaneously. Because the percentage of females and the percentage of female managers were highly correlated at the sector–country level ( $r = .86$ ), we could only examine the percentage of females colleagues at the sector–country level in Models 2 and 3. Finally, we included an interaction effect in Model 3 to examine to what extent the association between female colleagues at work and egalitarian family role attitudes was conditional on the percentage of female colleagues in sectors.

Table 4. Multilevel Regression Analysis on Egalitarian Family Role Attitudes—Men

	Model 1a		Model 1b		Model 2		Model 3	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Intercept	3.148	.129***	3.131	0.132***	3.141	0.128***	3.145	0.129***
Workplace								
Percentage of females (/100)	0.212	0.041***			0.192	0.043***	0.212	0.043***
Female supervisor (male = ref)			0.084	0.028**	0.049	0.029†	0.059	0.029*
Sector								
Percentage of females (/100)	0.135	0.064*			0.127	0.064*	0.161	0.064*
Percentage of female supervisors (/100)			0.196	0.065**				
Country								
Percentage of female labor force (/100)	3.680	1.998†			3.531	2.014†	3.544	2.017†
Percentage of female managers (/100)			-1.292	1.763	-0.726	1.695	-0.723	1.697
Interaction								
Percentage of females at work*							-0.636	0.207**
Percentage of females in sector								
Controls								
Educational level	0.044	0.007***	0.047	0.007***	0.044	0.007***	0.044	0.007***
Social class (high-grade prof. = ref)								
Low-grade prof.	-0.074	0.028**	-0.072	0.028*	-0.075	0.028**	-0.075	0.028**
Routine nonmanual	-0.082	0.038*	-0.077	0.038*	-0.085	0.038*	-0.086	0.038*
Workers	-0.163	0.030***	-0.178	0.029***	-0.164	0.030***	-0.160	0.030***
Other	0.009	0.063	-0.004	0.063	0.007	0.063	0.002	0.063
Working hours (<15 = ref)								
15–29	0.117	0.089	0.117	0.089	0.116	0.089	0.125	0.089
30 +	0.140	0.076†	0.138	0.077 ~	0.141	0.076†	0.144	0.076†
Marital status (married = ref)								
Divorced/separated	-0.053	0.035	-0.055	0.035	-0.053	0.035	-0.051	0.035
Widowed	0.026	0.091	0.035	0.091	0.028	0.091	0.031	0.091
Cohabiting	0.040	0.035	0.040	0.035	0.040	0.035	0.040	0.035
Never married/not cohabiting	-0.070	0.032*	-0.067	0.033*	-0.071	0.032*	-0.071	0.032*
Children in household (no = ref)								
Yes, currently	-0.038	0.028	-0.036	0.028	-0.038	0.028	-0.036	0.028
Yes, in past	-0.031	0.034	-0.029	0.034	-0.030	0.034	-0.030	0.034
Age	0.000	0.001	0.000	.001	0.000	0.001	0.000	0.001
Religious attendance	-0.072	0.007***	-0.073	0.007***	-0.072	0.007***	-0.071	0.007***
Ethnic minority (no = ref)	-0.137	0.025***	-0.138	0.025***	-0.138	0.025***	-0.137	0.025***
Urbanization	0.020	0.008*	0.020	0.008**	0.020	0.008*	0.019	0.008*
Educational level mother	0.032	0.007***	0.032	0.007***	0.032	0.007***	0.032	0.007***
Working mother (no = ref)	0.118	0.021***	0.119	0.021***	0.118	0.021***	0.117	0.021***
Variance								
Country	0.246	0.068***	0.271	0.075***	0.244	0.067***	0.245	0.067***
Sector*country	0.002	0.002	0.002	0.002	0.002	0.002	0.001	0.002
Individual	0.713	0.011***	0.714	0.011***	0.712	0.011***	0.712	0.011***
-2 log likelihood	23,192.1		23,213.8		23,189.2		23,179.8	

Source. European Social Survey Round 5 (2010), *N* countries = 27; *N* sector\*country = 320; *N* respondents = 9,222 (two-tailed).

Note. A dummy variable for Finland (not shown) is included to control for the missing values on marital status. All interval variables are mean centered.

†*p* < 0.1. \**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

Model 1a in Table 4 shows that, for working men, the percentage of female colleagues at the workplace was significantly positively related to their egalitarian family role attitudes (*b* = 0.212). Hence, the higher the percentage of female colleagues at work the more egalitarian men’s family role attitudes (H1a is partially

supported). Moreover, the results indicated that the influence of exposure to female colleagues reached beyond the own workplace. The percentage of females working in their occupational sector was also positively related to men’s egalitarian family role attitudes (*b* = 0.135; H2a is partially supported). The effect of the

Table 5. Multilevel Regression Analysis on Egalitarian Family Role Attitudes—Women

	Model 1a		Model 1b		Model 2		Model 3	
	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>	<i>b</i>	<i>SE</i>
Intercept	3.365	0.101***	3.362	0.103***	3.367	0.101***	3.366	0.101***
Workplace								
Percentage of females (/100)	-0.030	0.038			-0.020	0.040	-0.019	0.041
Female supervisor (male = ref)			-0.018	0.019	-0.013	0.020	-0.014	0.020
Sector								
Percentage of females (/100)	0.017	0.055			0.023	0.056	0.024	0.056
Percentage of female supervisors (/100)			0.020	0.050				
Country								
Percentage of female labor force (/100)	2.715	1.670			2.500	1.671	2.498	1.671
Percentage of female managers (/100)			-1.498	1.443	-1.152	1.406	-1.153	1.405
Interaction								
Percentage of females at work*							0.037	0.203
Percentage of females in sector								
Controls								
Educational level	0.048	0.007***	0.047	0.007***	0.047	0.007***	0.047	0.007***
Social class (high-grade prof. = ref)								
Low-grade prof.	-0.036	0.028	-0.036	0.028	-0.035	0.028	-0.036	0.028
Routine nonmanual	-0.130	0.030***	-0.130	0.030***	-0.129	0.030***	-0.130	0.030***
Workers	-0.216	0.035***	-0.217	0.035***	-0.215	0.035***	-0.215	0.035***
Other	0.018	0.076	0.018	0.076	0.018	0.076	0.018	0.076
Working hours (<15 = ref)								
15 – 29	0.099	0.052†	0.098	0.052†	0.099	0.052†	0.099	0.052†
30 +	0.241	0.049***	0.239	0.049***	0.240	0.049***	0.240	0.049***
Marital status (married = ref)								
Divorced/separated	0.138	0.026***	0.139	0.026***	0.139	0.026***	0.139	0.026***
Widowed	-0.012	0.048	-0.011	0.048	-0.011	0.048	-0.011	0.048
Cohabiting	0.010	0.037	0.011	0.037	0.011	0.037	0.011	0.037
Never married/not cohabiting	0.112	0.030***	0.112	0.030***	0.112	0.030***	0.112	0.030***
Children in household (no = ref)								
Yes, currently	-0.071	0.026**	-0.072	0.026**	-0.071	0.026**	-0.071	0.026**
Yes, in past	-0.056	0.035	-0.057	0.035	-0.057	0.035	-0.057	0.035
Age	0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
Religious attendance	-0.072	0.007***	-0.072	0.007***	-0.072	0.007***	-0.072	0.007***
Ethnic minority (no = ref)	-0.110	0.026***	-0.109	0.026***	-0.110	0.026***	-0.110	0.026***
Urbanization	0.016	0.008*	0.016	0.008*	0.016	0.008*	0.016	0.008*
Educational level mother	0.031	0.006***	0.031	0.006***	0.031	0.006***	0.031	0.006***
Working mother (no = ref)	0.027	0.021	0.027	0.021	0.027	0.021	0.027	0.021
Variance								
Country	0.171	0.047***	0.181	0.050***	0.167	0.046***	0.167	0.046***
Sector*Country	0.001	0.002	0.001	0.002	0.001	0.002	0.001	0.002
Individual	0.742	0.011***	0.742	0.011***	0.742	0.011***	0.742	0.011***
-2 log likelihood	25,132.7		25,133.9		25,131.5		25,131.5	

Source. European Social Survey Round 5 (2010), *N* countries = 27; *N* sector\*country = 320; *N* respondents = 9,846 (two-tailed).

Note. A dummy variable for Finland (not shown) was included to control for the missing values on marital status. All interval variables were mean centered.

†  $p < 0.1$ . \*  $p < .05$ . \*\*  $p < .01$ . \*\*\*  $p < .001$ .

percentage of females in a country's labor market almost reached significance (significant if tested one-tailed). Nevertheless, Hypothesis 3a was rejected. Remarkably, none of these indicators were significantly related to family role attitudes of working women (Model 1a

in Table 5; H1a, H2a, and H3a were rejected for women). When analyzing the items used to measure family roles separately, exposure to female labor force participation (on all levels) was largely similarly related to both items. Two exceptions were found: The percentage of

females working in an occupational sector was not significantly related to men's support regarding the item related to men having more rights on a job (although the effect was in the same direction), and the percentage of females in the national labor market proved positively related to both men's and women's support on this issue.

Model 1b in Table 4 and Table 5 demonstrates to what extent people's family roles were influenced by the gender of their supervisors. First, we found that men with a female supervisor had more egalitarian family roles than men with a male supervisor ( $b = 0.084$ ; Model 1b in Table 4; H1b is partially supported). In addition, the percentage of female supervisors in sectors was positively related to men's egalitarian family role attitudes ( $b = 0.196$ ; H2b is partially supported). Although only about 15% to a quarter of men in our data work in a female-dominated workplace or occupational sector, the exposure mechanisms are not only relevant to a small group of men: Contact with working women in male-dominated sectors was also positively related to egalitarian family roles. Contradictory to our expectations, the percentage of females in managerial positions on the country level was not significantly related to men's family roles (H3b is rejected). Similar to our results on exposure to female colleagues, exposure to female supervisors was not associated with family role attitudes of working women at all (Model 1b, Table 5; H1b, H2b, and H3b are rejected for women). Exposure to females in managerial roles (on all levels) is similarly related to either item used to measure the dependent variable when analyzing them separately.

Model 2 in Table 4 examines the relation between exposure to female colleagues and supervisors and family role attitudes for all exposure measures simultaneously (excluding the percentage of female supervisors in sectors attributable to multicollinearity). The previously found association between men's family role attitudes and having a female supervisor appeared to be interpreted by the percentage of female colleagues: We still observed that men's family role attitudes were more egalitarian as the percentage of female colleagues at their work and in their sector was higher, but there was no additional influence of having a female supervisor over and above the general association with female colleagues (although significant when tested one-tailed). As in the earlier models, no country characteristics were relevant. Similar

to the previous models, exposure to female colleagues or supervisors was not significantly related to family roles attitudes of working women (Model 2, Table 5).

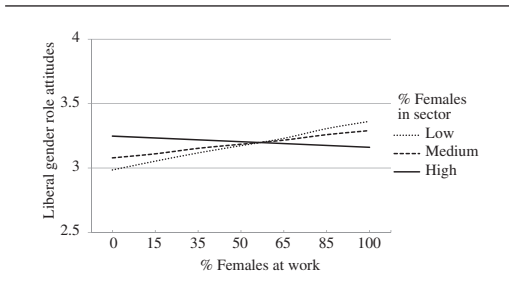
Model 3 in Table 4 presents a test of the predicted interaction. Among men, the positive relation between the percentage of female colleagues at work and egalitarian family roles indeed was weaker as the percentage of females in the sector was higher. Additional analyses (not presented) showed that the positive relation between the percentage of female colleagues at work and egalitarian family role attitudes was also weaker as the percentage of female supervisors in the sector was higher. Hence, in line with Hypothesis 4, the positive association of exposure to female colleagues at work with men's egalitarian family role attitudes was smaller in sectors where female labor force participation (either employees or supervisors) in general was high. We found no significant interaction among working women (Model 3, Table 5; H4 is partially rejected).

Figure 1 presents a visualization of the previously described interaction for men. We observe that for men working in a sector where the percentage of women was low ( $\approx 15\%$ ), the positive relation between exposure to female colleagues at work and egalitarian family role attitudes was largest. For men working in a sector where the percentage of female colleagues was high ( $\approx 85\%$ ), the association of the percentage of female colleagues with egalitarian family role attitudes was smallest and exposure to female colleagues seemed to be associated with less egalitarian family roles.

To examine the varying influence of exposure more elaborately, we analyzed the influence of exposure among people working in female-dominated sectors (education and health, percentage of women  $>70$ ) and male-dominated sectors (agriculture, mining, electricity, water supply, construction, manufacturing, and information and communication, percentage of men  $>70$ ; based on Eurostat data) as a robustness test. In male-dominated sectors, we found that exposure to female colleagues and female supervisors was similarly positively related to egalitarian family role attitudes of men and not significantly related to women's attitudes. In female-dominated sectors, having a female supervisor was positively related to men's egalitarian attitudes regarding family roles also, but the percentage of female colleagues at



FIGURE 1. ASSOCIATION BETWEEN THE PERCENTAGE OF FEMALE COLLEAGUES AT WORK AND EGALITARIAN FAMILY ROLE ATTITUDES FOR MEN, IN SECTORS WITH A LOW, MEDIUM, AND HIGH PERCENTAGE OF FEMALE COLLEAGUES



Source. European Social Survey Round 5 (2010), *N* countries = 27; *N* Sector\*Country = 320; *N* respondents = 9,222.

the workplace was negatively related to their egalitarian family roles attitudes.

With respect to the control variables, we found the expected relationships. For both men and women, we observed that the higher educated were more egalitarian in their family role attitudes. Also, high-grade professionals supported more egalitarian family roles than routine nonmanuals and workers. Women with full-time jobs expressed more egalitarian family role attitudes when compared with women with marginal jobs (working only a few contracted hours per week in their main job). Regarding family characteristics, women who were never married or who were not cohabiting supported more egalitarian family roles than married women, whereas men in these circumstances held less egalitarian family roles attitudes than married men. Among women, those who were divorced or separated also supported more egalitarian family roles than married women. In addition, mothers expressed less egalitarian family role attitudes than women without children. Age did not significantly affect family roles. Religious attendance and belonging to an ethnic minority group were negatively related to egalitarian family role attitudes of both men and women, whereas urbanization was positively related. Finally, as mother's educational level was higher, preferred family roles of men and women were more egalitarian. For men, those whose mother worked during their youth were more egalitarian in their family roles than those whose mothers did not work.

## DISCUSSION

In this contribution, we examined to what extent exposure to female labor force participation is related to working people's egalitarian family role attitudes. Previous research argued that labor market participation is associated with more egalitarian family role attitudes (e.g., Bolzendahl & Myers, 2004; Kraaykamp, 2012). The underlying explanations related to exposure, however, have hardly been tested empirically. In this article, we therefore examined the role of exposure to female colleagues and supervisors or managers at three contexts: workplaces, sectors, and countries.

In line with exposure theory, our results showed that the percentage of female colleagues at work and in the occupational sector was positively related to egalitarian family roles. This, however, was only true for working men. We controlled for family role socialization (e.g., by examining whether respondents' mother worked during one's youth) and for the exposure to traditional ideas (e.g., via low education or religious affiliation). Hence, the results seemed to imply that for men, actual experiences in the workplace and occupational sector were related to their egalitarian family roles. This supported the idea that exposure to female colleagues at work and in the occupational sector dispels negative ideas about women's capabilities and natural role (Banaszak & Plutzer, 1993; Davis & Robinson, 1991; Gerson, 1987; Klein, 1984) and brings men into contact with nontraditional networks (Rhodebeck, 1996). Because exposure to women at the own workplace was more strongly related to egalitarian family roles than exposure in the sector, men might get a better impression of women's capabilities to perform on the job market (besides managing a family) and might be more easily influenced by their network's (nontraditional) family roles when contact is more direct and frequent. The fact that societal norms in a country (as measured by country characteristics in general) did not affect a person's egalitarian family roles reinforces the importance of the proximity of the contact.

Our study further showed that—again, only for men—the positive relationship between exposure to female colleagues at work and egalitarian family roles was weaker as the percentage of females in the sector was higher. This might indicate that contact with female colleagues raised less awareness of women's equal capabilities in work environments where many

women work. Interestingly, in sectors with the highest percentage of female coworkers, contact with female colleagues at the workplace was negatively related to men's egalitarian family roles. An explanation might be found along the lines of economic threat or feelings of isolation, but future research has to look into this more elaborately. We found no additional relation between female supervisors and egalitarian family role attitudes over and above the general association with exposure to female colleagues, contradictory to the idea that females in managerial positions demonstrate women's capabilities and convey progressive family roles (Kroska & Ellman, 2009; Parboteeah et al., 2008).

Remarkably, exposure to extensive female labor force participation was not at all related to the family role attitudes of working women. This opposed previous studies that argue that personal experiences at work will foremost affect values of women because they belong to the group that is presumed to be discriminated against themselves (e.g., Klein, 1984) and that female role models are more important for women than for men because of obvious similarities (e.g., Hackett et al., 1989). The fact that we only examined working women might partly explain why we found that female labor force participation is not significantly related to their family role attitudes because differences in exposure—and thus family roles—can be expected to be largest between working and nonworking women. Our results were more in line with the idea that working women, precisely because they are working themselves, are well aware of women's capabilities and talents. Their own labor force participation increases their confidence and expectations about financial independence (Klein, 1984). In addition, Rudman and Phelan (2010) demonstrated that female vanguards (i.e., successful women in male-dominated careers) can provoke upward comparison threat rather than inspire self-empowerment among women. Note that our conclusion that exposure to female labor force participation was related to the egalitarian family role attitudes of men, but not of women, was not driven by bottom and ceiling effects: In the 27 European countries we studied, family roles of working men and women did not differ to a large extent. We welcome future studies to explain why exposure worked out differently for men and women.

The introduction of three contexts at which exposure takes place, namely, an individual's

own work situation, occupational sector, and country of living, enhanced our understanding. First, we exemplified that exposure takes place at several levels that are independently and differently related to egalitarian family role attitudes. Second, we showed that our conclusion on the association with female colleagues and supervisors in the workplace for men held even when selectivity issues regarding occupational choices into male- or female-dominated sectors were largely taken into account.

Although adaptation effects are more consistent and larger than selection effects regarding the association between labor force participation and gender roles (Berrington et al., 2008), a previously mentioned drawback of our cross-sectional study is that nonrecursive effects occur. People's work environments not only affect their family role attitudes but also people's family roles may affect employment choices as well. Issues of selection seem to be relevant mainly at the sector level. By controlling for occupational sector characteristics, socialization influences (in particular, the presence of a working mother during one's youth and mother's educational attainment), major life events (having children or getting married), and social norms in the environment other than the workplace (e.g., urbanization, religious attendance), we have tried to deal with selection effects to our best ability with the ESS data. Although our conclusions only pertain to associations, not effects, we cannot refute the exposure explanation for men (but we can for women).

A second drawback of the current study is that we were only able to examine the (perceived) presence of women at work and not the actual frequency or content (positive or negative) of contacts. Nor were we able to disentangle how exactly exposure might affect family roles. To get a better grasp at the underlying mechanisms, it would be interesting for future studies to include factual numbers on the presence of women at work and to examine more in detail what it is that people are exposed to, such as work performance by female colleagues, communication on family roles by female colleagues, or possible discriminatory situations at work. In addition, it might be of interest to examine prevailing organizational characteristics that implicitly or explicitly reflect views on family roles, such as child-care facilities or possibilities of flexible work schedule arrangements.

Our study presented an elaborate test of exposure hypotheses: Exposure to females in work situations fosters egalitarian family role attitudes. We conclude that this hypothesis held true for working men, but not for working women. Emancipation of men regarding their family role attitudes was related to exposure to working women at their own workplace and also in their occupational sector. Future studies could advance our understanding by examining more specifically how this exposure to female colleagues affects family role attitudes.

## REFERENCES

- André, S. C. H., Gesthuizen, M. J. W., & Scheepers, P. L. H. (2013). Support for traditional female roles across 32 countries: Female labour market participation, policy models and gender differences. *Comparative Sociology, 12*, 447–476. doi:10.1163/15691330-12341270
- Ajzen, I. (1991). The theory of planned behaviour. *Organizational Behavior and Human Decision Processes, 50*, 179–211.
- Banaszak, L. A., & Plutzer, E. (1993). Contextual determinants of feminist attitudes: National and subnational influences in Western Europe. *American Political Science Review, 87*, 147–157.
- Baxter, J., Buchler, S., Perales, F., & Western, M. (2015). A life-changing event: First births and men's and women's attitudes to mothering and gender divisions of labor. *Social Forces, 93*, 989–1014. doi:10.1093/sf/sou103
- Berrington, A., Hu, Y., Smith, P. W., & Sturgis, P. (2008). A graphical chain model for reciprocal relationships between women's gender role attitudes and labour force participation. *Journal of the Royal Statistical Society: Series A (Statistics in Society), 171*, 89–108. doi:10.1111/j.1467-985X.2007.00510.x
- Bolzendahl, C., & Myers, D. J. (2004). Feminist attitudes and support for gender equality: Opinion change in women and men 1974–1998. *Social Forces, 83*, 769–790. doi:10.1353/sof.2005.0005
- Brooks, C., & Bolzendahl, C. (2004). The transformation of US gender role attitudes: Cohort replacement, social-structural change, and ideological learning. *Social Science Research, 33*, 106–133. doi:10.1016/S0049-089X(03)00041-3
- Cassidy, M. L., & Warren, B. O. (1996). Family employment status and gender role attitudes, a comparison of women and men college graduates. *Gender and Society, 10*, 312–329. doi:10.1177/089124396010003007
- Charles, M., & Bradley, K. (2009). Indulging our gendered selves? Sex segregation by field of study in 44 countries. *American Journal of Sociology, 114*, 924–976. doi:10.1086/595942
- Cohen, P. N., & Huffman, M. L. (2007). Working for the woman? Female managers and the gender wage gap. *American Sociological Review, 72*, 681–704. doi:10.1177/000312240707200502
- Coverdill, J. E., Kraft, J. M., & Manley, K. S. (1996). Employment history, the sex typing of occupations, pay and change in gender-role attitudes: A longitudinal study of young married women. *Sociological Focus, 29*, 47–60. doi:10.1080/00380237.1996.10571071
- Cunningham, M. (2008). Changing attitudes toward the male breadwinner, female homemaker family model: Influences of women's employment and education over the lifecourse. *Social Forces, 87*, 299–323. doi:10.1353/sof.0.0097
- Cunningham, M., Beutel, A. M., Barber, J. S., & Thornton, A. (2005). Reciprocal relationships between attitudes about gender and social contexts during young adulthood. *Social Science Research, 34*, 862–892. doi:10.1016/j.ssresearch.2005.03.001
- Davis, N. J., & Robinson, R. V. (1991). Men's and women's consciousness of gender inequality: Austria, West-Germany, Great-Britain and the United States. *American Sociological Review, 56*, 72–84. doi:10.2307/2095674
- Davis, S. N., & Greenstein, T. N. (2009). Gender ideology: Components, predictors, and consequences. *Annual Review of Sociology, 35*, 87–105. doi:10.1146/annurev-soc-070308-115920
- Dodson, T. A., & Borders, L. D. (2006). Men in traditional and nontraditional careers: Gender role attitudes, gender role conflict, and job satisfaction. *Career Development Quarterly, 54*, 283–296. doi:10.1002/j.2161-0045.2006.tb00194.x
- Eccles, J. S. (1994). Understanding women's educational and occupational choices. *Psychology of Women Quarterly, 18*, 585–609. doi:10.1111/j.1471-6402.1994.tb01049.x
- Elliott, J. R., & Smith, R. A. (2004). Race, gender and workplace power. *American Sociological Review, 69*, 365–386. doi:10.1177/000312240406900303
- Erikson, R., Goldthorpe, J., & Portocarero, L. (1979). Intergenerational class mobility in three Western European societies: England, France and Sweden. *British Journal of Sociology, 30*, 415–451. doi:10.2307/589632
- Eurostat. (2008). NACE Rev. 2: Statistical classification of economic activities in the European Community. Luxembourg: Office for Official Publications of the European Communities, 2008.
- Eurostat. (2014). *Nace Rev. 2: Statistical classification of economic activities in the European Community*. Retrieved from <http://ec.europa.eu/eurostat>
- European Social Survey Round 5 Data. (2010). Data file edition 3.2. NSD—Norwegian Centre

- for Research Data, Norway—Data Archive and distributor of ESS data for ESS ERIC.
- Fan, P. L., & Marini, M. M. (2000). Influences on gender-role attitudes during the transition to adulthood. *Social Science Research, 29*, 258–283. doi:10.1006/ssre.1999.0669
- Geist, C. (2005). The welfare state and the home: Regime differences in the domestic division of labour. *European Sociological Review, 21*, 23–41. doi:10.1093/esr/jci002
- Gerson, K. (1987). Emerging divisions among women: Implications for welfare state policies. *Politics and Society, 15*, 213–221. doi:10.1177/003232928701500207
- Glass, J., Bengtson, V., & Dunham, C. (1986). Attitude similarity in three-generation families: Socialization, status inheritance, or reciprocal influence? *American Sociological Review, 51*, 685–698. doi:10.2307/2095493
- Hackett, G., Esposito, D., & O'Halloran, M. S. (1989). The relationship of role model influences to the career salience and educational and career plans of college women. *Journal of Vocational Behavior, 35*, 164–180. doi:10.1016/0001-8791(89)90038-9
- Hakim, C. (1993). Segregated and integrated occupations: A new framework for analysing social change. *European Sociological Review, 9*, 289–314.
- Hakim, C. (1997). A sociological perspective on part-time work. In H. Blossfeld & C. Hakim (Eds.), *Between equalization and marginalization: Women working part-time in Europe and the United States of America* (pp. 22–70). Oxford: Oxford University Press.
- Hakim, C. (2002). Lifestyle preferences as determinants of women's differentiated labor market careers. *Work and occupations, 29*, 428–459. doi:10.1177/0730888402029004003
- Hochschild, A. (1989). *The second shift*. New York: Avon.
- International Labour Office. (2015). *Women in business and management: Gaining momentum*. Geneva, Switzerland: Author.
- Jacobs, J. (1989). *Revolving doors: Sex segregation and women's careers*. Stanford, CA: Stanford University Press.
- Jacobs, S. C. (1995). Changing patterns of sex segregated occupations throughout the life-course. *European Sociological Review, 11*, 157–171.
- Klein, E. (1984). *Gender politics: From consciousness to mass politics*. Cambridge: Harvard University Press.
- Kraaykamp, G. (2012). Employment status and family role attitudes: A trend analysis for the Netherlands. *International Sociology, 27*, 308–329. doi:10.1177/0268580911423046
- Kroska, A., & Elman, C. (2009). Change in attitudes about employed mothers: Exposure, interests, and gender ideology discrepancies. *Social Science Research, 38*, 366–382. doi:10.1016/j.ssresearch.2008.12.004
- Lockwood, P. (2006). Someone like me can be successful: Do college students need same-gender role models? *Psychology of Women Quarterly, 30*, 36–46. doi:10.1111/j.1471-6402.2006.00260.x
- Organization for Economic Cooperation and Development. (2013). *Employment outlook*. Paris: Author.
- Parboteeah, K. P., Hoegl, M., & Cullen, J. B. (2008). Managers' gender role attitudes: A country institutional profile approach. *Journal of International Business Studies, 39*, 795–813. doi:10.1057/palgrave.jibs.8400384
- Reskin, B. F., & Ross, C. E. (1992). Jobs, authority, and earnings among managers the continuing significance of sex. *Work and Occupations, 19*, 342–365. doi:10.1177/0730888492019004002
- Rhodebeck, L. A. (1996). The structure of men's and women's feminist orientations, feminist identity and feminist opinion. *Gender and Society, 10*, 386–403. doi:10.1177/089124396010004003
- Rudman, L. A., & Phelan, J. E. (2010). The effect of priming gender roles on women's implicit gender beliefs and career aspirations. *Social Psychology, 41*, 192–202. doi:10.1027/1864-9335/a000027
- Sjöberg, O. (2004). The role of family policy institutions in explaining gender-role attitudes: A comparative multilevel analysis of thirteen industrialized countries. *Journal of European Social Policy, 14*, 107–123. doi:10.1177/0958928704042003
- The World Bank. (2010). *International Labour Organization, key indicators of the labour market*. Retrieved from <http://data.worldbank.org>
- Thornton, A., Alwin, D. F., & Camburn, D. (1983). Causes and consequences of sex-role attitudes and attitude change. *American Sociological Review, 48*, 211–227. doi:10.2307/2095106
- Thornton, A., & Young-DeMarco, L. (2001). Trends in attitudes toward family issues in the United States. *Journal of Marriage and Family, 63*, 1009–1037. doi:10.2307/353202
- United Nations Educational, Scientific and Cultural Organization. (1997). *International Standard Classification of Education*. Paris: UNESCO Publishing.
- Voicu, M., Voicu, B., & Strapcova, K. (2009). Household and gender inequality in European countries. *European Sociological Review, 25*, 365–377. doi:10.1093/esr/jcn054
- Yaish, M., & Stier, H. (2009). Gender inequality in job authority: A cross-national comparison of 26 countries. *Work and Occupations, 36*, 343–366. doi:10.1177/0730888409349751