

Life in the Balance: Are Women's Possible Selves Constrained by Men's Domestic Involvement?

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Alyssa Croft¹, Toni Schmader², and Katharina Block²

Abstract

Do young women's expectations about potential romantic partners' likelihood of adopting caregiving roles in the future contribute to whether they imagine themselves in nontraditional future roles? Meta-analyzed effect sizes of five experiments (total $N = 645$) supported this *complementarity hypothesis*. Women who were primed with family-focused (vs. career-focused) male exemplars (Preliminary Study) or information that men are rapidly (vs. slowly) assuming greater caregiving responsibilities (Studies 1–4) were more likely to envision becoming the primary economic provider and less likely to envision becoming the primary caregiver of their future families. A meta-analysis across studies revealed that gender role complementarity has a small-to-medium effect on both women's abstract expectations of becoming the primary economic provider ($d = .27$) and the primary caregiver ($d = -.26$). These patterns suggest that women's stereotypes about men's stagnant or changing gender roles might subtly constrain women's own expected work and family roles.

Keywords

gender roles, possible selves, stereotypes, romantic relationships, work–life balance

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Partner with the right person because you cannot have a full career and a full life at home with the children if you are also doing all the housework and childcare.

—Sheryl Sandberg (2013)

In understanding gender disparities in career advancement, social psychologists have focused on how stereotypes about women constrain women's career decisions (Brown & Diekmann, 2010; Ceci & Williams, 2011; Park, Smith, & Correll, 2010; Stout, Dasgupta, Hunsinger, & McManus, 2011). But as Facebook COO Sheryl Sandberg suggests, the dynamics in heterosexual couples can also impact women's ability to freely pursue their career. Although there is an active literature on the gendered distribution of domestic labor in sociology and economics (England, 2010; Haddock, Zimmerman, Lyness, & Ziemba, 2006; Kroska, 2004; Offer & Schneider, 2011), social psychologists have not examined how expectations about men's roles constrain women's own aspirations to adopt counterstereotypic roles. In line with field theory (Lewin, 1939), which highlights how social forces constrain and afford individuals' behavior, it stands to reason that women's expectations of adopting traditional roles (i.e., becoming a caregiver rather than a breadwinner) are causally predicted by their perception that men are becoming more involved in childcare. We tested

this *complementarity hypothesis* across five experiments and an internal meta-analysis.

The Division of Domestic Labor and Asymmetrically Changing Gender Roles

Over the past several decades, gender roles have both changed and stayed the same. In 1970, almost half of all two parent households had a mother who stayed at home, whereas today nearly 70% of families in the United States are comprised of dual-earner parents (Pew Research Center, 2015). Although men generally outearn their partners, women are increasingly likely to be the primary economic provider in their families (Pew Research Center, 2013). Despite this evidence of women's expanding roles, family responsibilities continue to fall disproportionately to them (Hochschild & Machung, 2012). In fact, after having children, women are

¹The University of Arizona, Tucson, USA

²The University of British Columbia, Vancouver, Canada

Corresponding Author:

Alyssa Croft, The University of Arizona, 1503 E University Blvd., Tucson, AZ 85721-0001, USA.

Email: alyssac@email.arizona.edu

more likely than men to reduce their work commitment, earn lower salaries, and advance slowly in their career (Stone, 2007). Many women embrace this choice (Park et al., 2010). However, twice as many working mothers as fathers report that parenting responsibilities stand in the way of their career, particularly among families of highly career-focused men (Pew Research Center, 2015). Such data suggest that many women feel their career choices are constrained by men's lower caregiving contributions (Croft, Schmader, & Block, 2015).

It is not surprising that women, once parents, might make a rational decision to prioritize family over career. Our question is whether women *anticipate* this trade-off in advance of negotiating work and family responsibilities with a partner. Young heterosexual women expect a traditional, gender-based division of labor in their future relationship (Askari, Liss, Erchull, Staebell, & Axelson, 2010; Hodges & Park, 2013; Park, Smith, & Correll, 2008). But what if they believed that men's interest in childcare was increasing? For example, although the percentage of stay-at-home fathers is still low, it has been increasing over the last two decades (Pew Research Center, 2014), and working couples are increasingly sharing family responsibilities equally (Pew Research Center, 2015). Are these, albeit modest, changes in men's caregiving roles incorporated into how young women view their own future?

Schemas of the Self, Others, and Relationships

When women envision their future, they imagine the person they might become (Oyserman & James, 2011). Self-schemas are people's cognitive representations of the self, informed by their past experiences, current context, and future expectations. The self-schemas people have for the person they could become are called *possible selves* (Markus & Nurius, 1986; Smith & Oyserman, 2015). Unlike current self-schemas, possible selves are uniquely based on anticipated social roles and environments people might inhabit. Some past research has shown that possible selves about being a parent or provider can be influenced by pragmatic concerns (e.g., Bloom, Delmore-Ko, Masataka, & Carli, 1999; Lee & Oyserman, 2007, 2009; Smith, James, Varnum, & Oyserman, 2014). Of greater relevance to the current research is the way in which possible selves are shaped by gender stereotypes.

Consistent with social role theory (Eagly & Steffen, 1984; Eagly & Wood, 2013), because young girls see women as caregivers and men as breadwinners, gender-stereotypic role expectations are internalized into possible selves. Such stereotypes are especially likely to influence people's possible selves when imagining themselves in a distant future that is necessarily more abstract. For example, a recent study showed that grade school-aged girls aspire to more gender-neutral (than female-stereotypic) occupations to the extent that their fathers exhibit less male-stereotypic behavior by

engaging in domestic tasks (Croft, Schmader, Block, & Baron, 2014). In addition, there is a notable gender difference in the family-related possible selves of college students who imagine their lives in 10 to 15 years, but no such difference when imagining themselves only 1 year in the future (Brown & Diekmann, 2010). This pattern suggests distant possible selves are shaped, at least to some degree, by stereotypic expectations.

Women's (and men's) possible selves are not only a function of the schemas they have about themselves, but also the schemas about future romantic partners. Aron and Aron (1986) theorized that the perception of oneself includes the resources, perspectives, and characteristics of one's relationship partner. Importantly, relationship schemas are defined not merely by expectations of the self and the partner as individuals, but also by expectations about relationship dynamics (e.g., forecasted division-of-labor). Heterosexual women's stereotypical expectations about their future partner should therefore inform their own possible selves, but the abstract nature of these future forecasts makes them susceptible to stereotypes and norms. Thus, women's own future selves might be shaped by their beliefs that men (and therefore future partners) will continue to be less communal than women (Diekmann & Eagly, 2000).

There is some initial support for gender role complementarity in future selves. In a clever study, men and women who were randomly assigned to imagine becoming the primary breadwinner or primary caregiver of their future families reported preferring a partner with a role complementary to their own (Eagly, Eastwick, & Johannesen-Schmidt, 2009). Our research examines the reverse relationship: When women expect that men's roles are unchanging (i.e., men remain more career- than family-focused), are women *less* likely to imagine themselves becoming the economic provider of their family? And if instead women encounter evidence that men are becoming more family-focused, are they *more* likely to imagine themselves as a future economic provider?

In addition to women's anticipated adoption of provider roles, we also considered their anticipation of becoming the primary caregiver to their children. On one hand, expectations that men are becoming more involved in caregiving might lead women to feel less pressure to take on caregiving responsibilities themselves. However, we also recognize that social pressures and individual expectations surrounding motherhood are quite strong. For example, even when fathers are involved in childcare, women often find it difficult to give up the primary caregiver role and still manage how these tasks are done (Allen & Hawkins, 1999). The role of primary caregiver might be difficult for women's to relinquish given that it can be a source of power (Williams & Chen, 2013). Thus, we examined how change in male roles affects women's anticipation of becoming the primary economic provider and the primary caregiver of their future families as distinct outcomes.

Table 1. Sample Characteristics for All Studies.

Study	N	% who expect graduate degree (for self)	% who expect graduate degree (for partner)	Expected personal income	Expected combined household income	Anticipated work hours M (SD)	Career ambition M (SD)
Preliminary	74	63	64	\$60-70,000	\$110-120,000		
1	33	67	55	\$70-80,000	\$150,000 or more		
2	121	63	56	\$80-90,000	\$140-150,000		
3	114	61	42	\$70-80,000	\$140-150,000	35.32 (10.5)	6.90 (1.20)
4	303	71	57	\$90-100,000	\$150-160,000	39.67 (11.95)	7.25 (1.15)

Note. The first four studies were conducted at a large Canadian university and used CAD for income estimates. Study 4 was conducted at a large American university and used USD for income estimates. Career ambition was measured on a 1 to 9 scale.

Overview of the Current Research

Five studies (total $N = 645$) provide a test of the complementarity hypothesis—stating that the likelihood that heterosexual women anticipate adopting nontraditional gender roles in their future families (i.e., becoming the primary breadwinner, and not the primary caregiver) is at least partly contingent upon their expectations about men's willingness to adopt nontraditional roles (i.e., becoming the primary caregiver). Although parallel complementarity effects could be tested for men's future role expectations, we limited our focus to outcomes for women but will consider the generalizability of these effects in the general discussion. In the Preliminary Study, we used counterstereotypical male exemplars to prime women with thoughts of family-oriented men (vs. career-oriented men) prior to measuring their career- and family-related possible selves and estimates of the time they will spend on work and childcare. In Studies 1 to 4, we sought to broaden the ecological validity of the design by providing participants with normative messages (like those they might read in the news) indicating that men are increasingly assuming caregiving roles (as opposed to staying more career-focused). We recruited larger sample sizes with each subsequent study and preregistered hypotheses and analyses for Study 4.

Preliminary Study: Evidence for Complementarity

In this preliminary study, participants viewed a set of profiles of men who were either career-oriented, family-oriented, or career-family balanced. We originally designed this study to examine how exposure to these profiles might influence men's expected gender roles, but the key discovery was that women primed with more family-oriented (as compared with career-oriented) male exemplars were more likely to envision themselves, complementarily, as the primary economic provider in their future families. Because these initial effects were used to formulate the complementarity hypothesis, we focus our presentation on these preliminary findings among women in the sample. The data for men are summarized in Supplementary Online Materials (SOM) and footnoted in results when relevant.

Method

Participants and Design

A sample of 74 heterosexual undergraduate women participated in this study for course credit (62% East Asian/23% White). Age data were not collected in this study. Participants were randomly assigned to one of three male exemplar prime conditions in a between-subjects design. This study was run in 2011, and the sample size was planned based on conventions at that time (Simmons, Nelson, & Simonsohn, 2011). More sample characteristics for each of the studies are provided in Table 1 and SOM; sensitivity analyses for this and all studies are detailed alongside key effects for the critical comparisons in Table 3.

Procedure

In a two-part study on life narratives, participants were first asked to rate five similar profiles of men to ostensibly help us select stimuli for future research. Based on random assignment to condition, these profiles were all either (a) career-oriented, (b) family-oriented, or (c) career-family balanced. After viewing each profile, participants completed questions that included the manipulation checks. During the second part of the study, participants imagined and made ratings of their lives 15 years in the future. Measures central to the complementary hypothesis are reported here, but all additional measures included in this exploratory study (and each subsequent study) are listed in SOM.

Materials and Measures

Exemplar primes. The profiles were adapted from Stout et al. (2011; Study 2). In the *family-oriented condition*, the men took time off from their successful careers (as women often do) to raise small children, whereas in the *career condition* the men worked full-time (as men often do). In the *balanced condition*, the exemplars were portrayed as having thriving careers paired with flexible schedules that allowed for some childcare (see SOM). Across condition, facts about men's (former) occupation, children, and wives' careers were held

Table 2. Manipulation Check Results for All Studies, Broken Down by Attention Checks (Recall of Manipulation About Men's Roles) and Personal Beliefs About Men's Roles.

Study	Conditions	<i>n</i>	Attention Check 1	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i>	Attention Check 2	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i>	Personal Belief 1	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i>	Personal Belief 2	<i>M</i> (<i>SD</i>)	Cohen's <i>d</i>	
Prelim	Family	24	Item A	3.23 (0.55)	-3.40***										
	Career	25		5.17 (0.59)											
	Balance	24		4.08 (0.55)											
1	Rapid	17	Item B	5.82 (1.33)	2.25***				Item D	5.24 (1.20)	.85*				
	Slow	16		2.69 (1.45)					4.00 (1.67)						
2	Rapid	36	Item C	2.19 (1.39)	-.97***				Item E	3.25 (1.23)	-.46*				
	Slow	40		3.68 (1.66)					3.88 (1.49)						
	Control	45		—					3.87 (1.67)						
3	Rapid	59	Item B	4.95 (1.39)	2.52***	Item C	1.72 (1.25)	-.90***	Item E	3.12 (1.27)	-.41*				
	Slow	55		1.85 (1.09)			2.79 (1.12)			3.67 (1.43)					
4	Rapid	138	Item B	5.59 (1.39)	1.84***	Item C	1.48 (0.93)	-1.27***	Item E	3.43 (1.47)	-.17	Item F	4.12 (1.18)	.78***	
	Slow	165		2.72 (1.71)			2.92 (1.30)			3.67 (1.29)			3.41 (1.34)		

Note. Text in bold denotes comparison groups for Cohen's *d* calculations. All Cohen's *d* were calculated using <http://www.uccs.edu/~lbecker/>. Attention check items: (A) Rate the individual's level of balance between family and career: 1 = family-oriented, 4 = balanced, 7 = career-oriented; (B) According to the graphs you saw in today's study, what is the rate at which men's roles in society are changing?: 1 = very slowly, 7 = very rapidly; (C) According to the graphs you saw in today's study, men are: 1 = increasing their focus on family, 4 = staying the same, 7 = increasing their focus on career. Personal beliefs items: (D) Please indicate whether or not you agree with the following statement: Men's roles in society are changing and will continue to do so in future years: 1 = completely disagree, 7 = completely agree; (E) I personally believe that men are: 1 = increasing their focus on family, 4 = staying the same, 7 = increasing their focus on career; (F) I personally believe that men's roles are changing: 1 = very slowly, 7 = very rapidly. **p* < .05. ****p* < .001.

constant. Pilot data on a separate sample of 25 undergraduates (both men and women participated, but no gender data were collected) revealed that the career-focused exemplars were rated as significantly more career-oriented ($M = 5.96$) than the family-oriented exemplars ($M = 2.19$), and both were significantly different from the balanced exemplars ($M = 4.14$), all $ps < .001$ (1 = family-oriented; 4 = balanced; 7 = career-oriented).

Ratings of exemplars. Participants' ratings of each of the five exemplars' degree of career–family balance on a 7-point scale (1 = family; 4 = balanced; 7 = career) were averaged to provide a *manipulation check* ($\alpha = .84$). Participants also rated the exemplars' *agency* ($\alpha = .89$) and *communion* ($\alpha = .89$) on the 16 item Personal Attribute Questionnaire (PAQ; Spence, Helmreich, & Stapp, 1975) using a 1 (*not at all descriptive*) to 5 (*very descriptive*) scale.

Participants' future lives. Participants first provided *demographic information* for their future life expectations by indicating whether or not (yes/no) and how likely (1 = *not at all likely* to 7 = *extremely likely*) they will be to be married and have children. They also rated the highest level of education anticipated for themselves and their spouse, and their projected annual household and personal income.

Participants rated their abstract *future roles* as the likelihood of becoming the *primary economic provider* (“breadwinner”) and *primary caregiver* of their future families on two 7-point scales (0 = *not at all likely*, 6 = *extremely likely*).

To assess more *concrete task estimates*, participants first allotted a percentage of their total waking hours they would spend on each of several daily tasks (e.g., work, childcare). They also completed an adapted Day Reconstruction Method (DRM; Kahneman, Krueger, Schkade, Schwarz, & Stone,

2004) to forecast a typical Wednesday in their lives 15 years in the future (see SOM). These anticipated daily schedules were then manually tallied for the number of hours spent at work and on childcare. Because these two ways of quantifying time spent working, $r(67) = .69$, $p < .001$, and on childcare, $r(67) = .36$, $p = .003$, were correlated, the percentage and DRM measures were standardized and averaged to create two variables of *estimated time for work and childcare*. Correlations among study variables in this and all studies are summarized in SOM.

Results and Discussion

Ratings of Exemplars

A one-way analysis of variance (ANOVA) on exemplar ratings revealed the expected effect of condition with all means differing from one another, all $ps < .001$, $F(2, 68) = 69.42$, $p < .001$, $\eta_p^2 = .67$ (see Table 2).¹ There were also condition differences in perceived exemplar agency, $F(2, 68) = 18.63$, $p < .001$, $\eta_p^2 = .35$, and communion, $F(2, 68) = 9.83$, $p < .001$, $\eta_p^2 = .22$. The career-oriented exemplars were rated as significantly more agentic ($M = 4.03$, $SD = .33$) and less communal ($M = 3.15$, $SD = .52$) than both the family-oriented and balanced exemplars, both $ps < .001$. The family-oriented and balanced exemplars were rated as similarly agentic ($M_{family} = 3.22$, $SD = .57$; $M_{balance} = 3.43$, $SD = .48$) and communal ($M_{family} = 3.82$, $SD = .65$; $M_{balance} = 3.82$, $SD = .61$) to one another, both $ps > .12$.

Future Roles

The complementarity hypothesis (based on the results of this study) posits that women's imagined roles are shaped by

Table 3. Descriptive Statistics, Estimates of Effect Size, and Sensitivity Analyses for Future Role Measures in All Studies.

Study	Conditions	<i>n</i>	Sensitivity analysis	<i>M</i> (<i>SD</i>) Provider	Cohen's <i>d</i> Provider	95% CI Provider	<i>M</i> (<i>SD</i>) Caregiver	Cohen's <i>d</i> Caregiver	95% CI Caregiver
Prelim	Family	24	<i>d</i> = .82	3.25 (1.29)	.64*	[0.06, 1.21]	3.58 (1.71)	-.33	[-0.89, 0.24]
	Career	25		2.36 (1.50)			4.12 (1.48)		
1	Balanced	24	<i>d</i> = .89	2.25 (1.45)	.90*	[0.18, 1.61]	3.33 (1.83)	-.24	[-0.92, 0.45]
	Rapid change	17		3.71 (0.85)			4.29 (0.59)		
2	Slow change	16	<i>d</i> = .58	2.75 (1.24)	.58*	[0.12, 1.04]	4.50 (1.10)	-.44	[-0.89, 0.02]
	Rapid change	36		3.28 (0.88)			4.08 (0.87)		
3	Slow change	40	<i>d</i> = .47	2.65 (1.27)	.13	[-0.24, .50]	4.55 (1.22)	-.13	[-0.50, 0.24]
	Rapid change	59		2.91 (1.17)			4.07 (1.19)		
4	Slow change	55	<i>d</i> = .29	2.93 (1.29)	.13	[-0.15, 0.41]	4.22 (1.05)	-.25*	[-0.23, 0.03]
	Rapid change	138		3.29 (1.19)			3.79 (1.28)		
	Slow change	165		3.13 (1.25)			4.11 (1.33)		
	Rapid change	138		3.90 (0.91)	.28*	[0.05, 0.51]	4.30 (0.74)	-.32*	[-0.55, -0.09]
	Slow change	165		3.64 (0.95)			4.57 (0.93)		

Note. Text in bold denotes comparison groups for Cohen's *d* calculations and sensitivity analyses ($\alpha = .05$, $1 - \beta = .80$, two-tailed for preliminary study, one-tailed for Studies 1-4). All Cohen's *d* calculated using <http://www.uccs.edu/~lbecker/>. Studies 1 to 4 excluded participants who are not heterosexual or do not anticipate having a partner and/or children. CI = confidence interval.
**p* < .05.

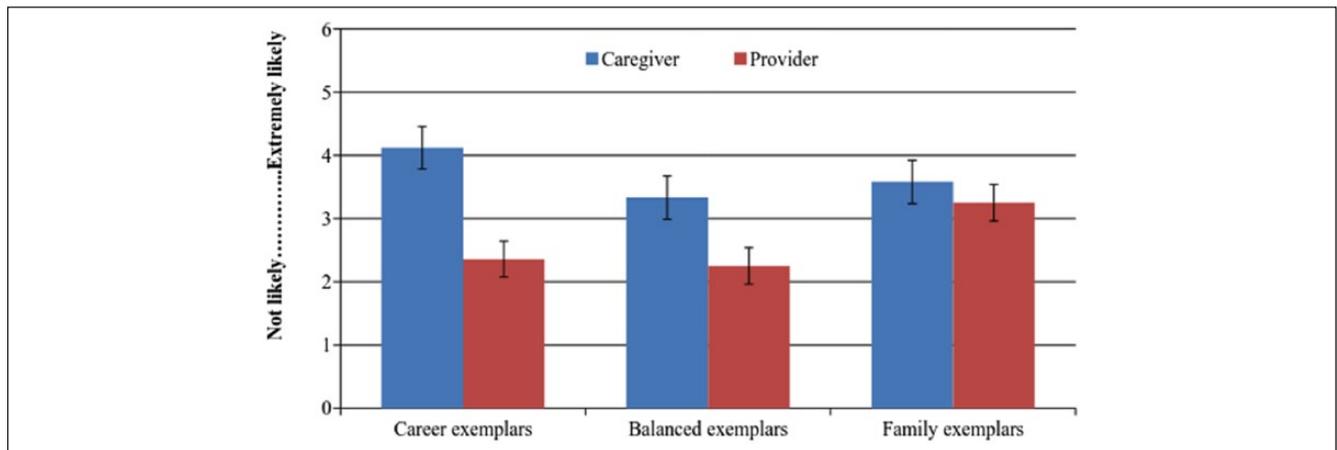


Figure 1. Preliminary study: Women's expected likelihood of becoming the primary economic provider and primary caregiver for their families, 15 years in the future.
Note. Error bars represent standard errors.

their perceptions of men's childcare engagement. A one-way ANOVA on expectations of becoming the primary economic provider yielded a significant effect of condition, $F(2, 70) = 3.61, p = .03, \eta_p^2 = .09$ (see Figure 1). As expected, women who viewed family-oriented men anticipated becoming the primary provider more than those who viewed either career-oriented, $d = .64, p = .03$, or balanced men, $d = .73, p = .02$ (see Table 3). The manipulation had no significant effect on becoming the primary caregiver, $F(2, 70) = 1.41, p = .25, \eta_p^2 = .04$, and ratings of these two roles were uncorrelated,

$r = -.08, p = .52$.² Additional analyses in this and all studies directly comparing the provider to the caregiver ratings can be found in SOM.

Concrete Tasks

One-way ANOVAs of the concrete task measures revealed no effects on estimated time on work, $F(2, 71) = .92, p = .40, \eta_p^2 = .03$, or childcare, $F(2, 71) = .22, p = .80, \eta_p^2 = .01$ (see Table 4). Interestingly, these concrete time estimates

Table 4. Descriptive Statistics and Estimates of Effect Size for Concrete Task Measures in All Studies.

Study	Conditions	n	M (SD)	Cohen's <i>d</i>	M (SD)	Cohen's <i>d</i>
			Time working	Time working	Time caregiving	Time caregiving
Prelim	Family	24	-.21 (0.98)	-.39	-.01 (0.94)	-.12
	Career	25	.16 (0.90)		.10 (0.89)	
1	Balanced	24	-.07 (1.04)	.12	-.05 (0.65)	-.64
	Rapid change	17	.02 (0.81)		-.20 (0.79)	
	Slow change	16	-.08 (0.85)		.33 (0.86)	
2	Rapid change	36	.20 (0.71)	.64**	-.04 (0.80)	-.20
	Slow change	40	-.35 (0.98)		.12 (0.76)	
	Control	45	.15 (0.75)		-.09 (0.73)	
3	Rapid change	59	.002 (1.06)	.01	-.12 (0.91)	-.27
	Slow change	55	-.003 (0.94)		.14 (1.08)	

Note. All mean values are standardized; higher numbers indicate above average anticipated time spent working or caregiving. Text in bold denotes comparison groups for Cohen's *d* calculations. All Cohen's *d* calculated using <http://www.uccs.edu/~lbecker/>. Study 2 to 5 excluded participants who are not heterosexual or do not anticipate having a partner and/or children.

were generally unrelated to women's abstract roles expectations (see Table 4).

The patterns from this exploratory study suggested that women's abstract possible selves (but not their concrete task estimates) might be contingent upon the extent to which they perceive men as interested in childcare. Interestingly, these effects were specific to the economic provider and not the caregiver role, which led us to formulate the complementarity hypothesis, whereby a prime of men's caregiving behavior would have a complementary effect on women's imagined provider role in their future family.

Study 1

Because the Preliminary Study had not been specifically designed to test the complementary hypothesis, we developed a more focused test for Study 1. Out of a concern that extreme exemplars would be subtyped and treated as "exceptions to the rule," rather than seen as indicative of broader norms (Weber & Crocker, 1983), we developed a new manipulation. Specifically, in all further studies women viewed graphs suggesting that men are either rapidly or slowly taking on more caregiving roles before completing the same dependent measures from the Preliminary Study. We hypothesized that when women were led to believe that men's roles are changing rapidly (vs. slowly), they would be more likely to imagine becoming the primary economic provider in their future family. We again tested for parallel effects on becoming the primary caregiver and other concrete task estimates.

Method

Participants. A sample of 37 heterosexual undergraduate women below age 25 ($M_{age} = 19.44$, $SD = 1.27$) participated for course credit (44% East Asian/25% White). Because the complementarity hypothesis should only apply to women

who expect to have a male partner and children, four participants were excluded for not meeting these criteria.³ Data were collected in 2013, and we had aimed to collect 20 participants randomly assigned to each condition (Simmons et al., 2011), but stopped data collection when the term ended. We recognize that this is a small sample by today's conventions, a limitation we address with the later meta-analysis and discussion of the sensitivity analyses.

Procedure. The procedure was similar to the Preliminary Study, except that normative trend primes replaced the exemplar primes in Part 1 of the session. As part of a study of how changing trends affect people's own life narratives, participants spent 5 min studying graphs on food consumption, weather changes, smoking rates, and stay-at-home fathers, before completing the same primary measures used in the Preliminary Study.⁴ This fourth graph varied by condition to manipulate changing norms.

Materials and measures

Graph primes. The focal graph depicted data on stay-at-home fathers in Canada between 1986 and 2010 (Statistics Canada, 2010). However, the graph and figure caption were manipulated to show rapid or slow change (see SOM). In the slow change condition, the y-axis ranged from 0% to 100% and the figure caption described that the percentage of stay-at-home fathers is projected to remain relatively low in the coming years. In the rapid change condition, the y-axis was condensed to create a steep positive slope, and the figure caption emphasized projected increases in stay-at-home fathers in the coming years.

Manipulation checks. Following this manipulation, participants rated the speed at which the graph depicted men's gender roles as changing (1 = *very slowly*, 7 = *very rapidly*) and their personal beliefs that men's roles are changing rapidly (1 = *strongly disagree*, 7 = *strongly agree*).

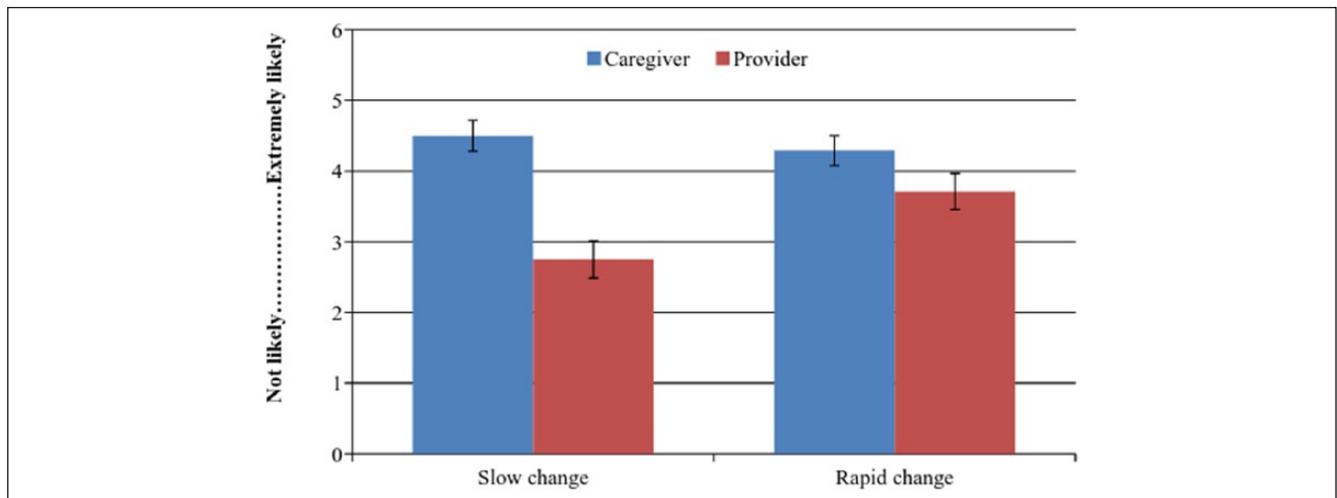


Figure 2. Study 1: Women's expected likelihood of becoming the primary economic provider and primary caregiver for their families, 15 years in the future.

Note. Error bars represent standard errors.

Dependent measures. The same measures of future gender roles and concrete task estimates used in Study 1 were again assessed in Study 2. We again combined measures of estimated time doing work (same as Study 1), $r(31) = .30$, $p = .10$, and childcare, $r(29) = .37$, $p = .05$. Other measures and descriptive statistics are provided in SOM.

Results and Discussion

Manipulation checks. Independent samples t tests revealed that women in the rapid (vs. slow) change condition recalled the graph showing more rapid change of men's roles, $t(31) = 6.48$, $p < .001$, $d = 2.25$ (see Table 2), and were also more likely to agree that men's roles are changing rapidly, $t(31) = 2.45$, $p = .02$, $d = .85$.

Future roles. Independent samples t tests yielded significant condition differences on women's provider expectancies, $t(31) = 2.60$, $p = .01$, $d = .90$, but their caregiver expectancies did not reach statistical significance despite a small-to-moderate effect size between conditions, $t < 1$, $d = -.24$ (see Table 3; Figure 2). Again, women's ratings of these two roles were uncorrelated, $r = -.01$, $p = .98$.

Concrete tasks. Parallel t tests on concrete tasks revealed no significant differences and a weak effect of condition on women's work time estimates, $t(31) = .36$, $p = .72$, $d = .12$, whereas women's childcare estimates showed a nonsignificant trend of being reduced in the rapid compared with the slow change condition, $t(31) = -1.84$, $p = .08$, $d = -.64$ (see Table 4).

Study 1 provided further evidence that women's expectation of becoming primary providers in the future might be complementary to their perceptions about men's changing

roles. Again, the suggestion of rapidly changing roles did not significantly affect women's anticipated role as the primary caregiver, although it did produce a meaningful effect size estimate on this measure, and somewhat diminished their estimates of time spent on childcare. Though these findings are intriguing and provide a conceptual replication of the Preliminary Study, Study 2 was carried out as a direct replication of Study 1 with the inclusion of a control condition and a larger sample size.

Study 2

Method

Participants and procedure. Participants were 136 heterosexual undergraduate women under age 25 ($M_{age} = 20.16$, $SD = 1.89$) who completed the study for either course credit or payment (47% East Asian, 23% white). Women who planned to be single ($n = 3$) or childless ($n = 12$) were excluded, leaving a final sample of 121 women.⁵ This study was run in Spring 2014, and the sample size was planned to double the number of participants in each condition compared with Study 1.

Procedures and measures were the same as in Study 1, except that a third of participants were randomly assigned to a third, no information, control condition that included only the three filler graphs. The manipulation check was modified so that participants indicated the degree to which the graphs showed that men are 1 (*becoming more family-oriented*), 4 (*staying the same*), to 7 (*becoming more career-oriented*). We again assessed women's future providing and caregiving roles. As in the prior studies, concrete time estimates were aggregated across the percentage and day reconstruction task measures for time spent on work, $r(119) = .47$, $p < .001$, and childcare, $r(117) = .15$, $p = .12$.

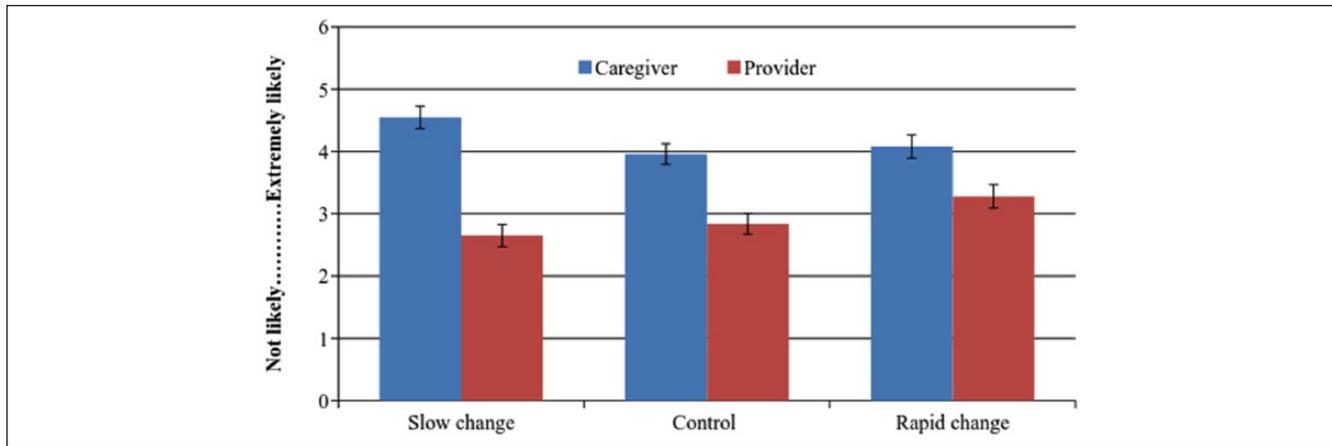


Figure 3. Study 2: Women's expected likelihood of becoming the primary economic provider and primary caregiver for their families, 15 years in the future.

Note. Error bars represent standard errors.

Results and Discussion

Manipulation checks. An independent samples *t* test confirmed that women were more likely to recall the graph as depicting men becoming more family-oriented in the rapid as compared with the slow change condition (the control condition was excluded given the absence of the fourth graph), $t(73) = -4.19, p < .001, d = -.97$ (see Table 2). One sample *t* tests also confirmed that men were seen as becoming significantly more family-oriented compared with the scale midpoint in the rapid change condition, $t(35) = -7.79, p < .001$, but statistically similar to the midpoint in the slow change condition, $t(38) = -1.21, p = .23$.

A one-way ANOVA on participants' personal beliefs yielded the expected effect of condition, $F(2, 118) = .12, p < .001, \eta_p^2 = .04$ (see Table 2). Women in the rapid change condition displayed a nonsignificant trend toward being more likely than women in either the slow change or control conditions to believe that men are becoming more family-oriented, both $ps = .07$, the planned comparison of rapid to slow change was significant, $t(74) = -1.99, p = .05, d = -.46$. Thus, women accurately perceived the manipulation, and internalized it to some extent, though perhaps not as strongly as in the prior study, an issue we return to in Study 3.

Future roles. A one-way ANOVA on anticipation of becoming an economic provider replicated earlier studies, now with a larger sample, $F(2, 118) = 3.05, p = .05, \eta_p^2 = .05$ (see Table 3; see Figure 3). Women anticipated becoming the primary economic provider more when primed with rapid as compared with slow change in men's roles ($d = .58$). Ratings of women in the control condition fell between the two treatment conditions but did not differ significantly from either (control vs. rapid, $p = .09, d = .43$; control vs. slow, $p = .43, d = -.16$).

In contrast to previous studies with lower power, there was also a significant effect of condition on anticipation of being the primary caregiver, $F(2, 118) = 3.16, p = .05, \eta_p^2 = .05$. Women were more likely to expect becoming the primary caregiver in the slow change condition as compared with both the control, $p = .02, d = .48$, and rapid change conditions, $p = .08, d = -.44$. The control and rapid change conditions did not differ from one another, $p = .61, d = .11$. The rated likelihoods of these two roles were negatively correlated in this sample, $r = -.25, p < .01$.

Concrete Task Estimates. In this larger sample, there was a significant effect of condition on women's work time estimates, $F(2, 118) = 5.38, p = .01, \eta_p^2 = .08$ (see Table 4), consistent with the complementarity hypothesis. Women anticipated working less in the slow change as compared with the rapid change ($d = .64, p = .004$) or control condition ($d = .57, p = .01$). There were no significant condition effects on estimated childcare time, $F(2, 118) = .84, p = .44, \eta_p^2 = .01$ ($d_{\text{rapid vs. slow change}} = -.20, d_{\text{control vs. rapid change}} = -.07, d_{\text{control vs. slow change}} = -.28$).

These findings provide further evidence for the complementarity hypothesis and also suggest that effects might be driven more by the effect of perceived slow or stagnant change constraining women's future likelihood of becoming an economic provider compared with a no-information control. Interestingly, across these first three studies, we did not observe a clear inverse relationship between an increase in envisioning oneself as the primary provider and a decrease in envisioning oneself as the primary caregiver, an issue we return to in the meta-analysis of all five studies. In this study, the effect sizes on women's providing expectations ($d = .58$) and anticipated work time ($d = .64$) were consistently larger than effects on primary caregiver expectations ($d = -.44$) and anticipated caregiving time ($d = -.20$), though all effects are interpretable as significant in this larger sample.

Study 3

Our prior three studies suggested that when women perceive men's roles as becoming less traditional (vs. remaining stable), women are, complementarily, more likely to envision themselves enacting less traditional roles. The goal of Study 3 was to again replicate the previous studies and potentially strengthen the effects by requiring participants to actively reflect upon the graphical information about men's changing roles during a brief writing exercise.⁶

Method

Participants. Participants in this study were 116 heterosexual undergraduate women below age 25 ($M_{age} = 20.06$, $SD = 1.63$; 42% White, 36% East Asian) who were only eligible if they indicated during prescreening that they expected to have a male partner and children (thus no data were excluded based on these criteria). Data from two participants were excluded due to technical problems (final $N = 114$). Data collection occurred in Fall 2014 and we had planned to collect a minimum of 50 participants in each condition but continued data collection through the end of the term.

Procedure. Study 3 followed the same procedure as Studies 1 and 2, with one modification intended to foster internalization of the normative information. Participants studied the graphs for 2 min and then were given 3 min to answer the following question about an ostensibly randomly selected graph (which always depicted men's changing roles): "In your own words, what is this graph saying about current trends and their predicted patterns for the future?" and then immediately answered a manipulation check question ("I personally believe that men are: 1 = *increasing their focus on family*; 4 = *staying the same*; 7 = *increasing their focus on career*"). After this writing period, participants completed the same life narrative survey from the prior studies, although the day reconstruction task was omitted to save time (meaning that concrete task estimates for this study are based only on the percentage of time participants expected to spend working and taking care of children). New to this study, measures of career ambition and traditional gender role beliefs (counterbalanced in order)⁷ were included as potential moderators after this survey to mask our explicit interest in gender roles when primary outcomes were assessed. Finally, participants were asked the attention check questions from Study 1 (did the graph show rapid vs. slow change in men's roles?) and Study 2 (did the graph portray men as becoming family- vs. career-oriented?).

Results

Manipulation checks. Independent samples t tests confirmed that women were more likely to recall the graph depicting rapidly changing male roles in the rapid as compared with

slow change condition, $t(107) = 12.85$, $p < .001$, $d = 2.52$. They also recalled the graph depicting men becoming more family-oriented in the rapid change compared with the slow change condition, $t(108) = -4.74$, $p < .001$, $d = -.90$ (see Table 2). Finally, women seemed to internalize this information immediately after reading and writing about it, as they reported a stronger belief that men are becoming more family-oriented in the rapid compared with the slow change condition, $t(112) = -2.19$, $p = .03$, $d = -.41$.

Future roles. Despite the above evidence that the manipulation was accurately perceived and internalized, independent samples t tests revealed no significant condition differences between the rapid and slow change groups in this sample on either the provider, $d = .13$, or caregiver variables, $d = -.13$, both t s < 1 (see Table 3), though both effects were still in the predicted direction.

Concrete tasks. Similar to the results for future roles, independent samples t tests comparing participants' concrete task estimates revealed no significant condition differences on either the time spent working, $t < 1$, $d = .01$, or enacting childcare responsibilities, $t(112) = 1.47$, $p = .15$, $d = -.27$ (see Table 4).

Discussion

In sum, Study 3 yielded no support for the complementarity hypothesis and yielded smaller observed effect sizes compared with the previous three studies. One possibility is that, although women initially reported a condition difference in beliefs about the change in men's roles after writing about this trend (the manipulation check question), putting them in this more deliberative mind-set during the manipulation might have undermined the effectiveness of this kind of priming on future roles, and perhaps even caused reactance among some participants (e.g., Brehm, 1966; Molden, 2014). Therefore, in Study 4 we returned to the same manipulation used in Study 1 and carried out a final preregistered replication of the predicted complementarity effects on primary provider and caregiver ratings in a larger American sample (preregistration link: <https://osf.io/qdg6w/register/564d31db8c5e4a7c9694b2c2>). Because we were also interested in assessing not only beliefs about taking on the *primary* role of provider or caregiver, but also in whether women imagine *sharing* these roles equally, we also included new measures that allowed participants to rate the relative contribution in their future relationships to both breadwinning and caregiving.

Study 4

Method

Participants. We preregistered a target sample size of 302 needed not only to detect the main effects of our manipulation

on key outcomes but also to test whether a measure of career ambition significantly moderated these effects (see Note 7 and preregistration), estimated using G*power with $f^2 = .03$, three predictors, $\alpha = .05$, and $1 - \beta = .80$. Anticipating exclusions, we recruited 364 undergraduates from a large university in the Southwestern United States to participate in this lab study for either course credit or payment. As preregistered, we excluded those who did not self-identify as female ($n = 4$) or heterosexual ($n = 32$), who were older than 25 ($n = 1$), and who did not anticipate having a spouse/partner ($n = 12$) or children ($n = 12$) in the future. The final, usable sample was 303 heterosexual women ($M_{age} = 18.76$, $SD = 1.17$; 57% Caucasian). Analyses without these exclusions can be found in the SOM.

Procedure and measures. The procedure was adapted from Study 1, wherein women saw graphs that depicted either rapid or slow change in men's roles before reporting their expected future roles. Measures were the same with the following exceptions. First, we included two additional items to assess expected caregiver and breadwinner roles *relative* to participants' expected partners: (a) "When it comes to earning money and contributing financially to my future household, I expect that": 1 = *My partner will definitely be the primary economic provider for our family*; 4 = *My partner and I will make equal economic contributions for our family*; 7 = *I will definitely be the primary economic provider for our family*; (b) "When it comes caring for our future children (e.g., feeding, cleaning, coordinating schedules, activities, transportation, etc.), I expect that: 1 = *My partner will definitely be the primary caregiver for our children*; 4 = *My partner and I will make equal contributions to childcare*; 7 = *I will definitely be the primary caregiver for our children*. These measures of *relative economic provider* and *caregiver* were significantly correlated with the original primary provider, $r = .40$, $p < .001$, and caregiver items, $r = .57$, $p < .001$, respectively. In addition to this key change, we also included exploratory measures of mechanism at the end of the study (see SOM), but excluded measures of gender role beliefs and concrete daily activities. Manipulation and attention check questions, as well as current demographics, were asked at the very end of the survey.

Results and Discussion

Manipulation checks. Independent samples t tests confirmed that participants accurately recalled the graphs as depicting men's roles as changing faster in the rapid than the slow change condition, $t(301) = -15.84$, $p < .001$, $d = 1.84$. They also reported personally believing that men's roles are changing faster in the rapid than in the slow change condition, $t(301) = -4.86$, $p < .001$, $d = .78$.

Women also correctly recalled that the graph showed men becoming more family-oriented (i.e., scores closer to 1) in the rapid than in the slow change condition, $t(301) = 10.84$,

$p < .001$, $d = -1.27$. However, unlike in previous studies, their personal belief about men's family orientation was not significantly different between condition, $t(301) = 1.47$, $p = .14$, $d = -.17$.

Future roles. Independent samples t tests on the future roles measures yielded some support for the complementarity hypothesis. See Table 3 for means and standard deviations. Although there was no significant main effect of condition predicting women's anticipated likelihood of being the primary economic provider, $t(301) = -1.15$, $p = .25$, $d = .13$, this effect was significant on the newly added relative economic provider measure, $t(301) = -2.39$, $p = .02$, $d = .28$. Women in the rapid change condition were significantly more likely to envision making equal economic contributions with their partners (scores close to 4), compared with women in the slow change condition.

In addition, consistent with our complementarity hypothesis, women in the rapid change condition were less likely than women in the slow change condition to expect that they will be the primary caregivers for their future children, $t(301) = 2.15$, $p = .04$, $d = -.25$. Similarly, women in the rapid change condition envisioned sharing more equal caregiving contributions with their future partners, relative to the women in the slow change condition, $t(301) = 2.72$, $p = .01$, $d = -.32$.

Meta-Analysis Across Studies

One limitation of these studies is that several were run before recent discussions surrounding the need for larger samples. It has also been noted that in multistudy papers of true effects, it is highly likely to observe some nonsignificant effects (Lakens & Etz, 2017). Thus, to gain a more precise estimate of the complementarity effect, we meta-analyzed effects on future roles and concrete task estimates using Cumming's (2013) meta-analysis module in the Exploratory Software for Confidence Intervals and recommendations by Goh, Hall, and Rosenthal (2016), using a random effects model (as suggested by Lakens, 2015). The total number of participants across the five samples in the slow change/career and rapid change/family conditions was $N = 575$ ($n_{rapid} = 274$ and $n_{slow} = 301$; see Table 2). As can be seen in Table 3, sensitivity analyses using G*Power with $\alpha = .05$ and $1 - \beta = .80$ suggested that our earlier studies were underpowered to detect small or moderate effects, but the combined sample provides sufficient power to detect effects of at least $d = .21$.

These meta-analyses yielded a significant average estimated effect of $d = .27$, 95% confidence interval (CI) [.11, .44] for the likelihood of becoming the primary economic provider (see Figure 4). The estimated effect size for the likelihood of becoming the primary caregiver was quite similar and significant, $d = -.26$, 95% CI [-.42, -.09] (see Figure 5). These are considered small- to medium-sized effects and are meaningful both in conceptual guidelines (Cohen, 1988) and in past quantitative summaries of effects in social psychology

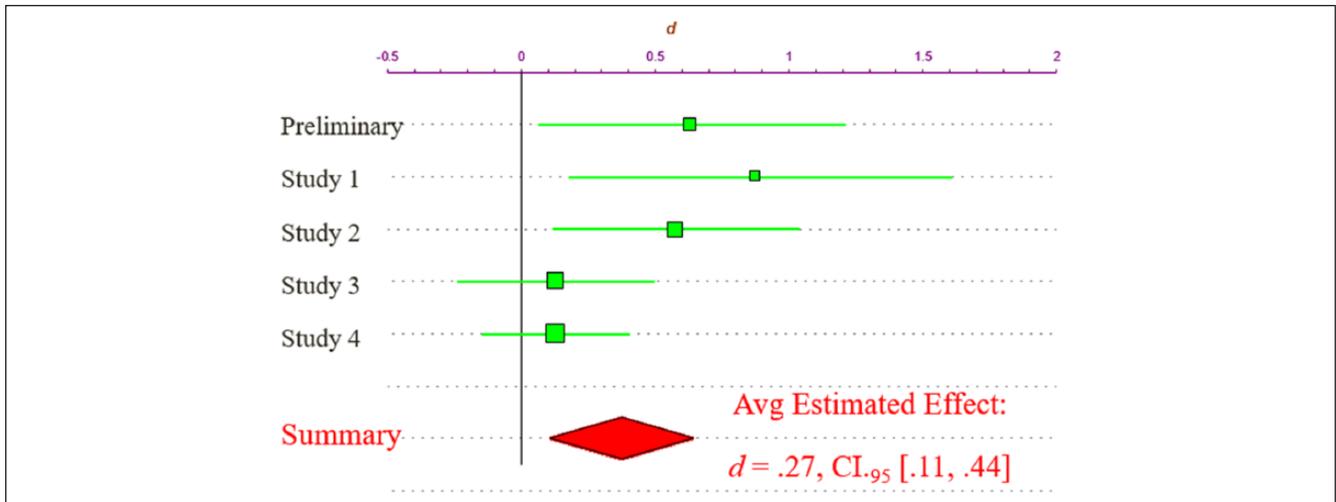


Figure 4. Meta-analysis: Average estimated effect size of anticipated likelihood of becoming the primary economic provider as a function of men’s roles.

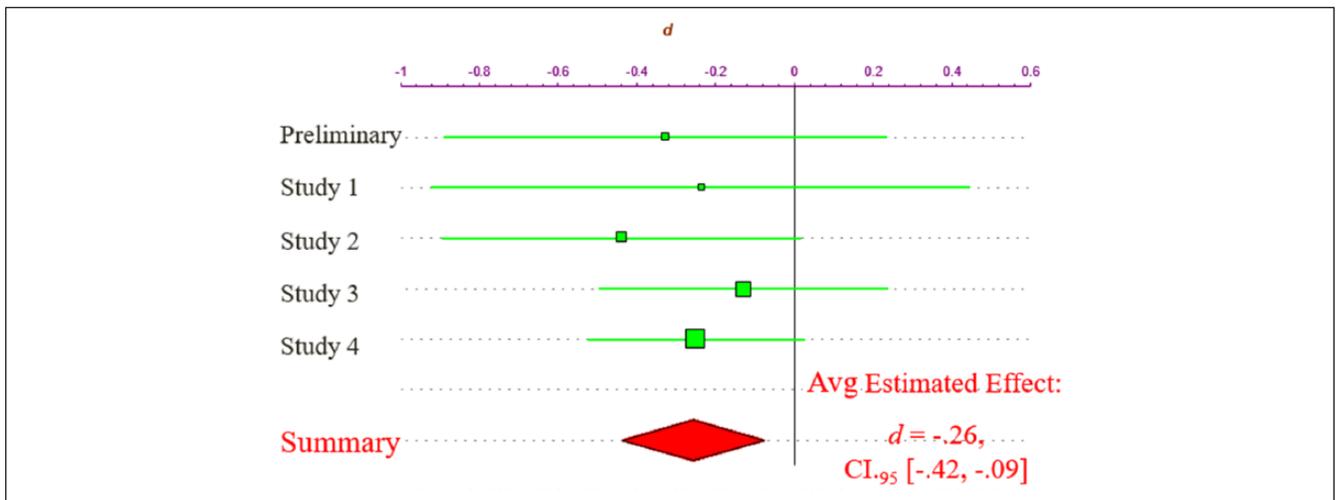


Figure 5. Meta-analysis: Average estimated effect size of anticipated likelihood of becoming the primary caregiver as a function of men’s roles.

(Richard, Bond, & Stokes-Zoota, 2003). Of note, both of these effects are reduced but remain statistically significant when including participants who were excluded for not wanting a male partner and/or children, $d_{provider} = .26$, 95% CI [.10, .42], $d_{caregiver} = -.24$, 95% CI [-.40, -.08]. We suspect these are important criteria for the hypothesized effect, but the effects observed are not contingent upon their exclusion.

Meta-analyses of the concrete task measures from the earlier studies (not assessed in Study 4) yielded a nonsignificant average estimated effect for women’s estimated time spent at work, $d = .11$, 95% CI [-.31, .52] (see Figure 6), but a significant effect for estimated time on childcare-related tasks, $d = -.26$, 95% CI [-.50, -.03] (see Figure 7). Taken together, these findings suggest that, across five samples using different methods varying in strength of manipulation, providing

women with information about the degree to which men’s roles are changing rapidly versus slowly leads to a small to moderate difference in women’s own imagined economic providing (and to a lesser extent, caregiving) roles for the future. In addition, women primed to believe that men’s roles are changing rapidly might feel some relief on the time spent caregiving, though this did not seem to translate into expecting to work more hours.

General Discussion

These five studies tested the hypothesis that young heterosexual women’s expectations of their future roles are complementarily tied to their expectations of men’s changing (or unchanging) roles. Findings suggested that women primed

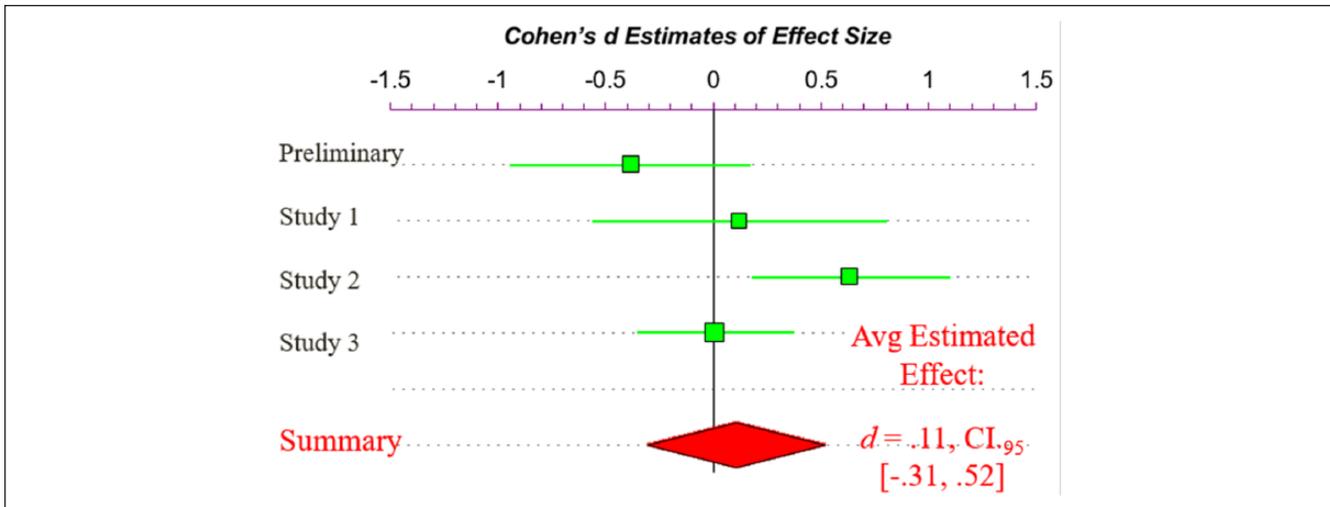


Figure 6. Meta-analysis: Average estimated effect size of anticipated time spent working as a function of men's roles.

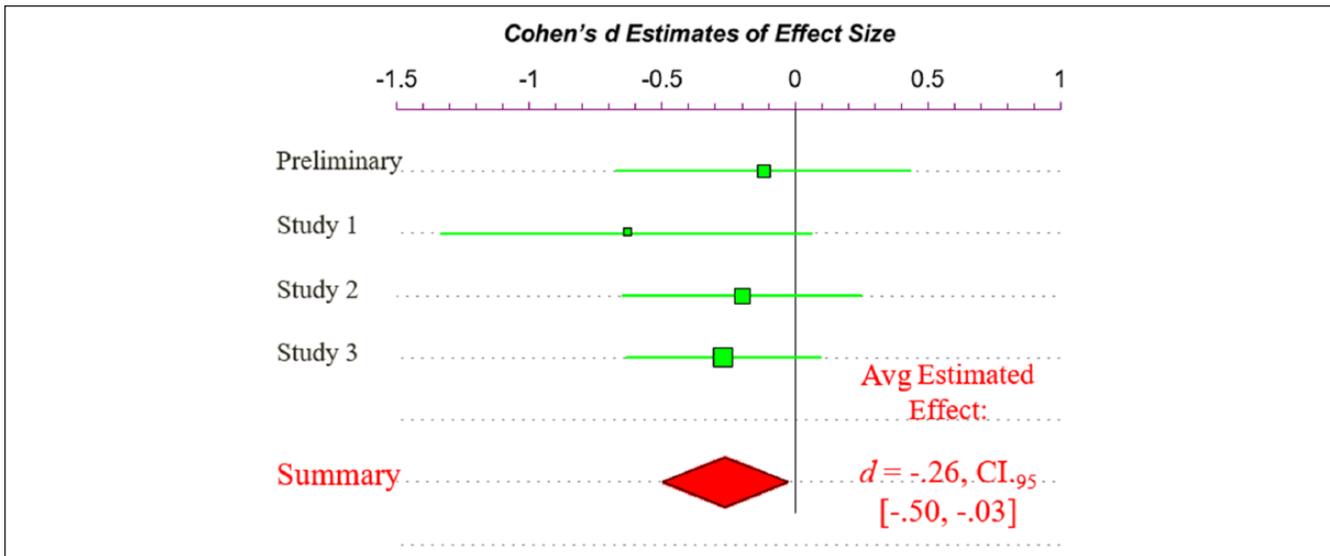


Figure 7. Meta-analysis: Average estimated effect size of anticipated time spent doing childcare tasks as a function of men's roles.

(either through exemplars or normative data) to expect that men will increasingly take on more childcare, more readily envision becoming breadwinners and, in parallel, are less likely to envision becoming the primary caregivers of their future families. Conversely, and still consistent with a complementarity explanation, if primed to believe that men are slow to take on childcare, women themselves were more likely to anticipate being the primary caregiver and less likely to be the primary economic provider of their future family. It is worth noting that these effects were found with samples of women in which the majority expected to earn graduate degrees and work full-time. Taken together, these studies provide the first causal evidence that women's expected future roles, and especially their involvement in

economic providing, are complementary to what they believe men's roles will be. Such findings are novel given that prior research on the barriers to women's adoption of nontraditional gender roles has emphasized stereotypes about women's own traits or abilities, rather than considering the complementary barrier represented by women's expectations about a hypothetical division of domestic labor with their future partner.

Another novel contribution of the present research was to establish the reliability and effect size estimates of these complementarity effects on women's possible selves. Future research will need to disentangle the explanation for these effects. One possibility is that if women see more men wanting to become primary caregivers, that women then imagine

feeling more *constrained* to make larger economic contribution to their families. A second possibility is that men's increased contributions to childcare allow women to feel *enabled* to take on more demanding careers that would earn a larger paycheck than their partner. A third possibility is that evidence of men's changing gender roles might generally signal *less restrictive gender norms* that cue women to imagine less stereotypical future selves. In Study 4, we made efforts to measure these three mechanisms but found no evidence that the manipulation influenced women's self-reported beliefs on any of these three variables (see SOM for details). Perhaps complementarity is a process that is cued much more automatically, rather than through any of these more conscious and rational considerations. It is worth noting that the manipulation used in these studies was quite subtle—framing the same statistical information in two different ways. Thus, although men's changing norms seems to influence women's own role expectations, women might be unaware that this is happening or why. That said, perhaps a stronger and more explicit manipulation of men's stated intrinsic motivation to share childcare responsibilities (rather than data restricted to stay at home dads) might have a much stronger effect on these explicitly measured mediating mechanisms.

Although our primary focus was on women's more abstract vision of their future roles, the first four studies also assessed their concrete estimates of time spent on tasks related to those roles. We suspected that perceptions of men's roles might have stronger effects on abstract notions of possible selves than concrete estimates of time, consistent with the idea that stereotypes might have a stronger effect in shaping abstract estimates for the future (Brown & Diekmann, 2010). Although effects on these time estimates varied from study to study, the meta-analysis suggested some interesting patterns. Overall, when women believed men's roles were changing rapidly, their greater likelihood of becoming the economic provider was not paralleled by anticipating longer working longer hours. However, the effect size of men's changing roles on reducing women's likelihood of becoming the primary caregiver was similar to the reduced amount of time they imagine spending on caregiving tasks. Taken together, this pattern might suggest that men's changing gender roles could potentially expand women's possible selves to provide greater balance between economic providing and caregiving roles and reduce working women's expectations of shouldering a *disproportionate* amount of childcare responsibilities.

Broader Implications of Complementarity

Our findings are particularly interesting in light of the tendency for some women to “leave before they leave”—to opt out of demanding career tracks before there is the realistic need to do some because of family (Sandberg, 2013; Stone, 2007). The anticipatory complementarity processes documented here

might contribute to women's underrepresentation in leadership and management positions. Recent research suggests, for example, that women rate a promotion as less desirable than do men to the degree that they expect more career–family conflict (Gino, Wilmoth, & Brooks, 2015). Our findings indicate that undergraduate women are affected by complementary stereotypes about men and women when envisioning their futures, long before there is a practical need to negotiate the trade-offs of career and home life with a partner. Perceptions that men's roles remain stagnant and traditional led our highly educated career-focused female samples to expect that their role would be as the primary caregiver rather than economic provider in their future family.

One open question that remains in light of the findings reported here (for women) is whether or not men would display similar complementary patterns in their expected future roles if faced with information about women's changing roles. Specifically, we could imagine competing possibilities with respect to men's outcomes. On one hand, we might predict parallel effects of complementarity among men who receive information about women's changing roles. If men believe that women are increasingly interested in adopting breadwinning roles in a future relationship, men might experience a welcome sense of relief from a (real or imagined) pressure to provide for their families, placed on them by a masculine gender role. On the other hand, from a status value perspective (Ridgeway, 2014), the observed patterns of complementarity might be unique to women envisioning future roles in response to men's role change. Given men's status as the cultural default and the “higher ranking” partner in heterosexual romantic relationships, it might be less likely that they would observe or respond to a need to adapt their own role expectations to that of a future wife's changing roles. Given these alternative predictions, it will be important for future research to examine whether these effects of complementarity generalize to men.

Another important question for future research is to understand whether these processes are specific to relative role trade-offs negotiated within romantic couples or if they extend to women's other career-related choices and behaviors. For instance, does the expectation that men's roles with respect to childcare are changing have any effect on the career trajectory women set for themselves prior to having children or even a long-term partner? Do the expectations of each partner in emerging romantic couples lead one or both of them to adjust their motives or behavior in anticipation of negotiating the division of labor? We suspect that perhaps complementarity processes are unique to dyadically defined roles, given the consistent lack of condition main effects on women's concrete and nonrelative outcomes measured across studies (e.g., anticipated time spent working, career ambition). Thus, it is possible that this phenomenon is linked to relative roles shared within a romantic couple and the trade-offs that are negotiated with one's partner, rather than one's own interest and ambition

in pursuing a particular career. That said, once these hypothetical relative role choices are set in motion, the actual decisions women make could ultimately curtail their career choices and engagement, even if during their college years women are unable to anticipate those effects. Future studies using longitudinal designs or dyadic data from emerging romantic couples could explore these possibilities more systematically.

Limitations

Although complementarity effects on women's economic providing and caregiving expectations appeared robust when aggregating effects across studies, we acknowledge that gaps remain in our understanding of these effects. One limitation is that we manipulated changing roles by focusing on men becoming stay-at-home fathers, a role that is still quite rare. Sharing caregiving equally is becoming increasingly common among dual earning couples (Askari et al., 2010; Pew Research Center, 2015), and in such relationships, there is no "primary" caregiver or economic provider. Study 4 begins to address this limitation with the inclusion of a new measure that allowed women to indicate that they expect to share breadwinning and caregiving responsibilities equally with their partners. Effects on these measures supported the complementarity hypothesis—Women who were primed with men's roles changing rapidly envisioned sharing both breadwinning and caregiving more equally with their partner (i.e., their ratings were closer to a 50/50 split) than women who were primed with men's roles changing slowly. It will be important for follow-up studies to investigate how young women's and men's expectations of equality in a couple (e.g., division of childcare time) affect their possible selves for the future. In addition, future work could use alternative manipulations of gender role change, such as priming incremental or entity theories of changing gender roles (see Kray, Howland, Russell, & Jackman, 2017), in an effort to better define the parameters of these effects.

A second limitation of these complementarity studies is that our samples consisted of particularly ambitious and highly educated women (see Table 1), and additional research is needed to test generalizability to other populations. Women from lower socioeconomic backgrounds also contend with the second shift, but our restricted sample demographics prevent us from concluding that these effects would be as readily observed among noncollege educated women. In fact, the results of Study 3 (see SOM) provide some suggestion that complementarity effects might be particularly relevant for career ambitious women, but this is not to say nonprofessional women do not feel constrained by men's lack of involvement in childcare. Future studies should examine these questions more directly.

Finally, a third limitation is that some of our studies were run prior to current recommendations for using increasingly large samples, and perhaps as a result, effect sizes vary from

sample to sample. In carrying out this research, our emphasis has been to replicate these effects to estimate the effect sizes more accurately. However, we hope that by providing all relevant study materials along with precise estimates of these effects, other researchers will be inspired to replicate and extend these findings to better understand the moderators, mediators, and downstream consequences of these effects.

In conclusion, these studies provide initial evidence for the novel *complementarity hypothesis*—the proposition that the rigidity (or flexibility) of men's caregiving roles place constraints on women's freedom to step into nontraditional roles within heterosexual couples. These patterns might suggest that women's stereotypical expectations about men's roles in the *future* may constrain women's beliefs about themselves, with the potential to impact their choices in the *present*. To extent that women believe that men continue to prefer traditional provider roles, they may feel constrained from considering such roles for themselves. At the same time, our data also suggest that the change we are beginning to see in men's roles might empower some women to take on provider roles that have traditionally been reserved for men, and ultimately relieve women of bearing the burden of the "second shift" at home.

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Notes

1. Degrees of freedom vary due to missing data for three participants.
2. When data from men are included, a 2 (gender) x 3 (condition) ANOVA on economic provider yielded a significant interaction, $F(2, 130) = 5.35, p = .006, \eta_p^2 = .08$. Men reported a lower likelihood of becoming the economic provider in the family compared with balanced condition. This was the only significant interaction with gender. See SOM for details.
3. Results are unchanged when all participants are included in analyses. This is addressed in the meta-analysis and in SOM.
4. An initial pilot test of these new stimuli that did not instruct women to relate the graphs to their own life revealed no effects on anticipated roles. Our failure to include a manipulation check

prevented us from evaluating whether women had internalized the graphical information as intended. Details are available from the first author.

5. Patterns of effects are similar but weaker for the complete sample. See meta-analysis for more information.
6. Note that we ran a previous iteration of Study 3 but discovered after data collection was complete that half of the sample had considerably less time to view the graphs due to experimenter error. Perhaps as a result, the manipulation had no effect on participants' internalized beliefs about changing gender roles. Thus, Study 3 was a repeat of this study.
7. We tested but found no evidence that traditional gender roles moderated effects. Career ambition showed a nonsignificant trend moderating the effect of the manipulation effects on the provider ratings. Because this effect did not replicate in Study 4, we only describe it in the SOM.

Supplemental Material

Supplementary material is available online with this article.

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