Attitudes about Women's Work and Childcare in the United States: An Age, Period, and Cohort Analysis

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Abstract

Despite the almost even split in labor force participation between men and women in the United States, men have been much slower to take on roles that women previously occupied at home. Scholars have argued that the gender revolution has stalled, or is at the midpoint. Further, although working, women are still penalized in the workplace. One potential mechanism underlying the gender revolution may be perceptions of women, work, and childcare. Using data from the General Social Survey (1972-2016), we examined Age, Period, and Cohort effects in American views toward women working and children going to childcare. Age-period-cohort models were the best fit to the data. Preliminary analyses suggest older adults and more recent cohorts are less supportive of women working and childcare than younger participants and cohorts born around the 1950's. However, period effects show that more recent periods are increasingly supportive of mothers working and children in childcare.

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The gender revolution, which began in the 1960's, led to more women than ever before working outside the home. Approximately 47% of workers in the United States are female and 70% of those are mothers with children under the age of eighteen (DeWolf, 2017). Despite the almost even split in labor force participation between men and women, men and women do not have an even split on the work of the home, including housework and parenting (Bianchi, Milkie, Sayer, & Robinson, 2012; Cha, 2010). Thus, researchers have suggested that the gender revolution has stalled (Cotter, Hermsen, & Vanneman, 2011; England, 2010) or that we are entering the second half of the gender revolution whereby men increasingly share the work of housework and parenting (Goldscheider, Bernhardt, & Lappegård, 2015). Whereas men have increased their time in housework (Bianchi et al., 2012), women still do much more housework and childcare than men, even when both partners are working full time (Yavorsky, Kamp Dush, & Schoppe-Sullivan, 2015). Women experience penalties in the workplace, particularly when they are mothers (Correll, 2017; Correll, Benard, & Paik, 2007). One of the mechanisms underlying women's gender penalties at work has been posited as structural bias in views of women (Cotter et al., 2011). But, could this structural bias be changing as women are now gaining more education than men (DiPrete & Buchmann, 2013) and make up half the workforce (DeWolf, 2017)? We examine age, period, and cohort trends in attitudes about women, work, and childcare in the US using the General Social Survey to answer this question.

Also using the General Social Survey, Cotter et al. (2011) created a gender attitude scale that confounded attitudes about women, work, politics, and childcare. Rather than conducting age-period-cohort analyses, Cotter et al. (2011), accounting for cohort and period only, noted that the general momentum towards gender equality has leveled off over time. Using data from the General Social Survey from 1972-2016, we extend this work by examining age, period, and cohort, and focusing specifically on women, work, and childcare. Age-period-cohort methods allow us to disentangle if attitudes about women, work, and childcare are changing or stalling across age, time periods, or by changing attitudes within cohorts.

Method

We used data from the General Social Survey (GSS) (Smith, Marsden, & Hout, 2016). The GSS is an ongoing survey with a repeated cross-section design; this paper utilizes data collected between 1972 and 2016 (n = 62466). Data were collected annually through 1978, biannually between 1978 and 1982, annually between 1982 and 1994, and biannually thereafter. The sample at each year ranged from a minimum of n = 1372 (1990) to a maximum of n = 4510 (2006). On average, the sample size was about 1500 between 1972 and 1993 and about 2700 between 1994 and 2016.

To create the sample for this paper, we dropped cohorts before 1916 and after 1981 due to cell sizes less than n = 150 in these cohorts. We also dropped ages less than 18 and greater than 77 due to cell sizes less than n = 150. The attitudinal variables we use were only collected in years 1977, 1985-1986, 1988-1991, 1993, and then every other year starting with 1994 through 2016. The final sample size was n = 24878.

Variables

Gender Attitudes Towards Women Working and Childcare. The following questions were measured at each year of data collection: 1) "A working mother can establish just as warm and secure a relationship with her children as a mother who does not work", 2) "A preschool child is likely to suffer if his or her mother works", and 3) "It is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family". The variables were all coded as 1 = strongly agree, 2 = agree, 3 = disagree, and 4 = strongly disagree. For our analyses, we collapsed the categories by combining strongly agree and agree together and strongly disagree and disagree together. A series of dummies were created for the analyses. Period was coded as the year of the interview. Cohort was coded as the birth year. Age was the difference between Period minus Cohort.

Analytic Plan

Analyses were conducted in R. We used the Clayton and Shiffler's modeling techniques (Clayton & Schifflers, 1987a, 1987b) which estimate parameters for age, period, and cohort effects in an iterative approach through the use of multiple fit statistics (i.e., Akaike information criterion, Bayesian information criterion, likelihood-based deviance statistics, and penalizing additional degrees of freedom) and selects the best fitting model.

The age parameter is fit first, which looks at the overall age effect. Next, the overall linear change, which is called the "age-drift" in the literature and is a sum of cohort and period effects, was fit. The age-drift is unable to distinguish between cohort and period effects. Unique coefficients for period and cohort effects, which are called curvatures, were next obtained. We used 1947 at the referent group for cohort effects. The period referent group was 1977. Modeling was conducted using the "apc.fit" function in the "Epi" package in R. We conducted three separate analyses using our dichotomous indicators of attitudes towards women working and childcare.

Preliminary Results

As shown in Table 1, when the change in deviance is positive and significant, this indicates that the fit of the model has improved, whereas significant negative changes in deviance indicates that the model fit is worse. Analyses revealed that all three models fit best when period and cohort were added as parameters in the models.

Figures 1, 2, and 3 show the fitted age-period-cohort models. In each model, a similar pattern was found. The thin lines framing the effects are 95% confidence intervals.

Age. The age time-scale is located on the left x-axis and ranges from 18 to 77. The age y-axis scale is the number per 100 which selected "agree" or "strongly agree" in Figure 1 and "disagree" or "strongly disagree" in Figures 2 and 3. All three figures reveal that younger respondents agreed that working mothers can still form warm relationships with their children, disagreed that preschool children suffer if their mother works, and disagreed that it is better for the man to work and women to stay home, as compared to older respondents.

Cohort and Period. The cohort and period time-scale y-axis represents the risk ratio estimate for the effect of cohort (bottom middle line) and period (top right line). The cohort and period time scale is represented in years and ranges from 1916 to 1981 for cohort and from 1977 to 2016 for period. The cohort estimates were compared to a reference cohort of 1947; thus, the lines can be interpreted as the average proportion of those who agree/disagree with the three gender attitude statements compared to those born in 1947. The figures show a similar pattern,

an upside-down U-shape, which indicates that older cohorts were progressively more supportive of mothers working and children being in childcare and peaked in cohorts born around 1947, and then each cohort after has been progressively less supportive. The period estimate used 1977 as a referent and can interpreted similarly, the average proportion of those who agree/disagree with the three gender attitude statements compared to those in 1977. As shown in the figures, the period effects show a steep increase in support of mothers working and children being in childcare across time, but there was a decline around the late 1990's, but after the early 2000's support has been increasing at a steady rate.

Planned Analyses

Our preliminary analyses suggest that Age and Cohort may be driving the stall in the gender revolution, and actually suggest declining cohort support for women working. In contrast, Period effects appear to be steadily rising in support of women working. In future analyses, we plan to test the age, period, and cohort effects separately by gender and test if the results are different by parental status. We also plan to conduct additional sensitivity analyses, including varying the excluded year in the period and cohort models.

Table 1. Model Fit Statistics for Age-Period-Cohort Models of Attitude Towards Women Working and Childcare

	Change in Deviance (Degrees of Freedom)					
Model Parameter	Working mother warm relationship		Preschool kids suffer if mother works		Better for man to work, woman tend home	
Age	-		-		-	
Age-drift	295.89***	(1)	680.80***	(1)	617.80***	(1)
Age-cohort	79.01***	(3)	49.90***	(3)	216.80***	(3)
Age-period-cohort	81.03***	(3)	96.60***	(3)	162.70***	(3)
Age-period	-73.39***	(-3)	-47.20***	(-3)	-202.70***	(-3)
Age-drift	-86.66***	(-3)	-99.20***	(-3)	-176.8***	(-3)

Fit statistics are computed in an iterative fashion; first the age model is fit, and then the age-drift model and so on. Significant positive parameters are indicative of an increase in model fit, whereas a significant negative parameter is indicative of a decrease in fit. For all three variables, the age-period-cohort model deviance change suggested this model was the best fit to the data.

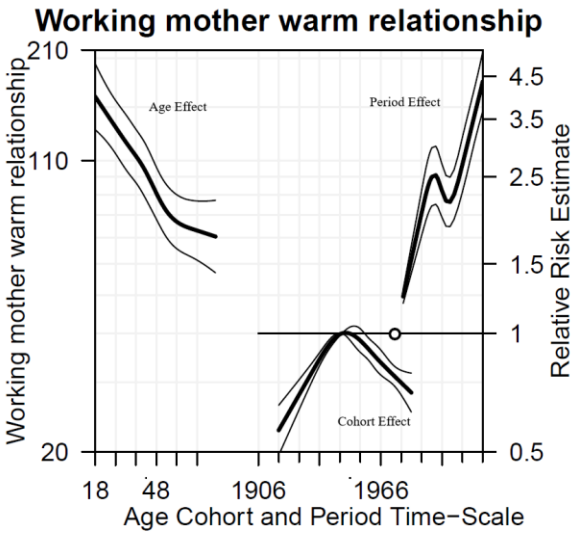

Figure 1. Age, period, and cohort effects on the probability that American's report that they "agree" or "strongly agree" that working mothers can still form a warm relationship with their children.

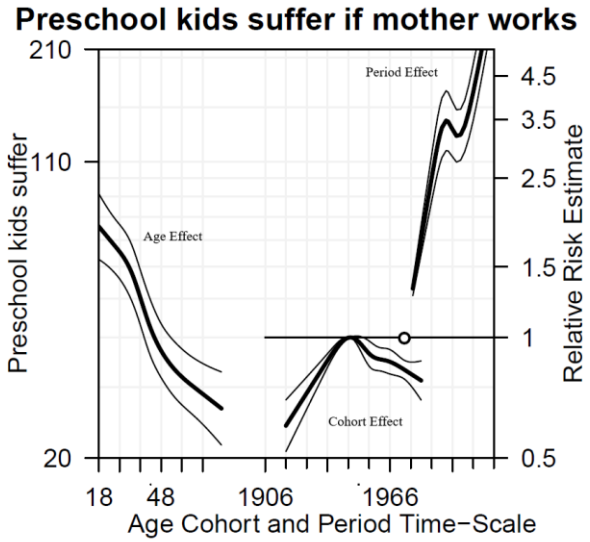

Figure 2. Age, period, and cohort effects on the probability that American's report that they "disagree" or "strongly disagree" that a preschool child is likely to suffer if his or her mother works.

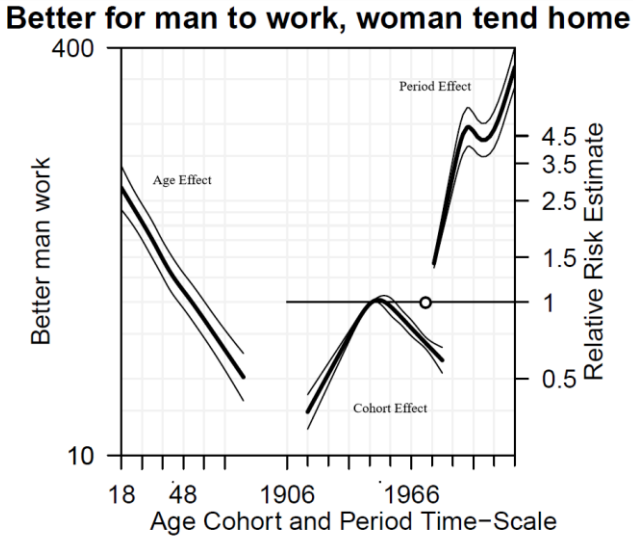

Figure 3. Age, period, and cohort effects on the probability that American's report that they "disagree" or "strongly disagree" that it is much better for everyone involved if the man is the achiever outside the home and the woman takes care of the home and family.

References

Bianchi, S. M., Sayer, L. C., Milkie, M. A., & Robinson, J. P. (2012). Housework: Who did, does or will do it, and how much does it matter? *Social Forces, 91*(1), 55-63.

Cha, Y. (2010). Reinforcing separate spheres: The effect of spousal overwork on men's and women's employment in dual-earner households. *American Sociological Review, 75*(2), 303-329.

Clayton, D., & Schifflers, E. (1987a). Models for temporal variation in cancer rates. I: Age–period and age–cohort models. *Statistics in Medicine, 6*(4), 449-467. doi:10.1002/sim.4780060405

Clayton, D., & Schifflers, E. (1987b). Models for temporal variation in cancer rates. II: Age–period–cohort models. *Statistics in Medicine, 6*(4), 469-481. doi:10.1002/sim.4780060406

Correll, S. J. (2017). SWS 2016 feminist lecture: Reducing gender biases in modern workplaces: A small wins approach to organizational change. *Gender & Society, 31*(6), 725-750. doi:10.1177/0891243217738518

Correll, Shelley J., Benard, S., & Paik, I. (2007). Getting a job: Is there a motherhood penalty? *American Journal of Sociology, 112*(5), 1297-1339.

Cotter, D., Hermsen, J. M., & Vanneman, R. (2011). The end of the gender revolution? Gender role attitudes from 1977 to 2008. *American Journal of Sociology, 117*(1), 259-89.

Dewolf, M. (2017). *12 Stats About Working Women*. Retrieved September 17, 2018, from https://blog.dol.gov/2017/03/01/12-stats-about-working-women

DiPrete, T. A., & Buchmann, C. (2013). *The Rise of Women: The Growing Gender Gap in Education and What it Means for American Schools.* New York, NY: Russell Sage Foundation.

England, P. (2010). The gender revolution: Uneven and stalled. *Gender & society, 24*(2), 149-166.

Goldscheider, F., Bernhardt, E., & Lappegård, T. (2015). The gender revolution: A framework for understanding changing family and demographic behavior. *Population and Development Review, 41*(2), 207-239. doi:10.1111/j.1728-4457.2015.00045.x

Smith, T. W., Marsden, P. V., & Hout, M. (2016). *General social surveys, 1972-2014 [machine-readable data file]*. 1 data file (59,599 logical records) and 1 codebook (3,485 pp).

Yavorsky, J., E, Kamp Dush, C., M, & Schoppe-Sullivan, S., J. (2015). The production of inequality: The gender division of labor across the transition to parenthood. *Journal of Marriage and Family, 77*(3), 662-679. doi:10.1111/jomf.12189