Born to Care (or Not Care):
How Gender Role Attitudes Affect Occupation Choice

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Abstract:

Occupation segregation explains a significant portion of the gender wage gap, with women sorting into lower paid female-dominated occupations especially care occupations. To understand how gender biased norms about work influence this occupational sorting, we estimate the effect of childhood and adolescent exposure on occupation choice and demonstrate the role it plays in inefficiently allocating talent for both women and men. We document that early life exposure to traditional gender role attitudes, which view women's role as caretakers, increase women's likelihood of employment in care occupations and decrease the likelihood for men, thereby increasing the gender care occupation gap. A decomposition of the care occupation choice shows that a primary channel for this is through the choice of post-secondary field of study.

Keywords: gender role attitudes, occupation choice

JEL Codes: J24, J31, R23

Data Availability Statement:
This paper uses confidential data from the Bureau of Labor Statistics (BLS). The data can be obtained through application to the BLS (The Geocode Application Document : U.S. Bureau of Labor Statistics (bls.gov)). The authors are willing to assist. Redacted statistical programs for replication are available in the Online Appendix.

Disclosure Statements:
The authors declare that they have no relevant or material financial interests that relate to the research described herein.

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I. Introduction

"What do you want to be when you grow up?" …

Finally, the teacher called on me.

Without hesitation, I answered emphatically, "I want to be a scientist."

… the teacher replied, "Don't you mean a nurse?"

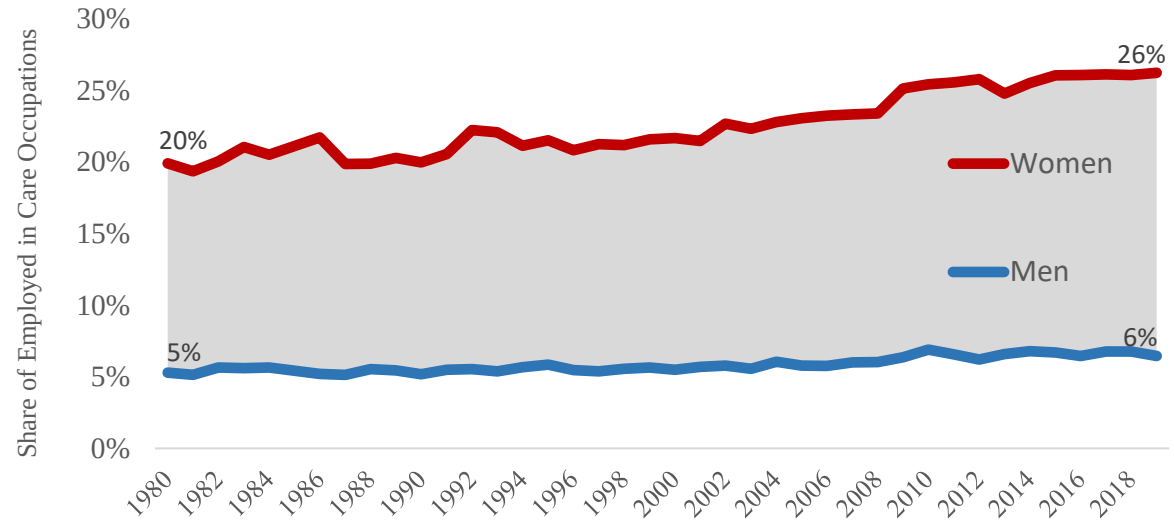
--autobiography of Dr. Mae Jemison, NASA Astronaut (2001)

Occupation segregation with women sorting into lower paid female-dominated occupations explains about half of the gender wage gap (Blau and Kahn, 2017). Women's occupation choice is traditionally viewed through the lens of optimality rather than discrimination, where women choose lower paying occupations that offer more flexibility or fewer hours to accommodate unpaid family care work (Goldin, 2014). Yet, this contrasts with evidence that women determine their career path before marriage and children (Goldin, 2006). We provide the first evidence, to our knowledge, of how early life exposure to different gender norms influences occupational sorting through the series of educational attainment, post-secondary field of study, labor force participation, and occupational choices.

Over time, the gender wage gap has narrowed as occupation segregation has declined. The decline in occupational segregation is largely driven by women increasingly entering male-dominated occupations (notably business and finance), and **not** by men entering female-dominated occupations. At the same time, overall female labor force participation has increased. Thus, although women are increasingly entering male-dominated fields, women are also increasingly choosing female-dominated *care* occupations (healthcare and education); and men still largely avoid these occupations. Together this has resulted in a widening gender gap in care occupations

(Figure 1).[1] This widening of the gender gap in care occupations is happening despite the notable rise of men in nursing (noted by Munnich and Wozniak, 2020) and despite the share of men employed in care occupations increasing from 5% in 1980 to 6% in 2018 (Figure 1).

FIGURE 1. WOMEN ARE INCREASINGLY ENTERING INTO CARE OCCUPATIONS

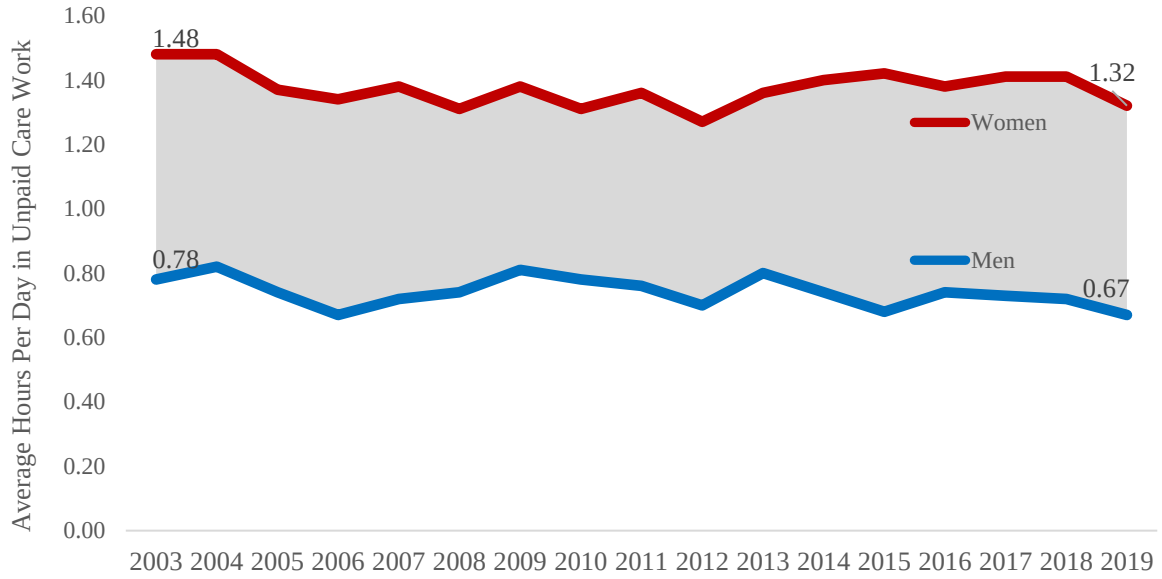


Source: IPUMS Census/ACS

Since overall occupation segregation has been decreasing, this increase in the gender gap in paid care occupations presents a puzzle. Examining *unpaid* care work may provide some insight into this puzzle. The gender gap in unpaid care work has been stubbornly persistent over time, with women shouldering the larger share of *unpaid* care work (Figure 2; Sullivan, 2013); and there is evidence that the gap actually widened dramatically during the coronavirus pandemic (Heggeness, 2020). While attitudes regarding women in the workplace (especially married women with children) may have changed dramatically over the last century, longstanding gender role attitudes about women and care work (both unpaid and paid) appear to be persistent.

[1] Care occupations generally include any occupation in healthcare and education (specifically, we use 2010 census occupation codes 2200-2340, 2540, 3000-3650).

FIGURE 2. THE GENDER GAP IN UNPAID CARE WORK[2]



Source: American Time Use Survey, U.S. BLS

In fact, Fortin (2015) suggests that, beginning in the 1990s, the U.S. saw a reversion to more traditional gender role attitudes. Traditional gender role attitudes that assign care work (both inside and outside the home) exclusively to women can differentially act as a perceived constraint on the "acceptable" employment options available to both women *and* men or impose a cost on those that step out of gender norms.[3] At the same time, research shows female-dominated care work occupations are de-valued, all else equal, because of the same underlying cultural ideas on gender roles and the feminine-typed skills associated with these occupations (England, Budig, and Folbre, 2002; Yavorsky, Ruggs, and Dill, 2021). Thus, both women and men have less of a financial incentive to choose care occupations due to their lower wages.

[2] We defined unpaid care work as all activities classified as caring for a household or non-household member or volunteer time in social service and care activities

[3] For example, traditional gender role attitudes can deter women from engaging in entrepreneurial activities (Patrick, Stephens, and Weinstein, 2016).

While women and men can make contemporaneous choices about specific jobs, one challenge is that occupational choice is the outcome of many prior decisions including labor force participation, educational attainment, college major, etc., all of which are conditional on both individual and family characteristics and likely prevailing local social constructs. Social norms and role models from childhood and adolescence shape children's views of their own innate talents and abilities, fundamentally altering the career paths that they view as attainable or acceptable (Eccles, Jacobs, Harold, 1990). Thus, gender role attitudes at birth or in adolescence, "background sexism," are associated with lower women's wages – widening the inequality between men's and women's wages, i.e., the gender wage gap (Charles, Guryan, Pan, 2018). Yet, the precise mechanism through which gender role attitudes affect women's wages is not understood.

This paper fills this gap in the literature by empirically investigating how childhood and adolescent exposure to local gender norms affect occupation choice, particularly the sorting into care occupations, which due to their female-dominance have suffered from lower wages and are commonly associated with the gender wage gap. This is a natural first step in understanding how gender role attitudes affect occupational choice and the resulting wage gap as traditional (less egalitarian) gender role attitudes assign the role of care work (both inside and outside of the home) exclusively to women.

We first document the relationship between childhood exposure to gender role attitudes and the choice of care occupations, the care occupation gap, and care wages using a large sample of nationally representative microdata. We find childhood exposure to more progressive (more egalitarian) gender attitudes reduces the gender gap in care occupations. We then investigate the channels through which these stylized facts operate by combining restricted-use microdata that includes sociodemographic information, parental data, aptitude and ability scores, educational

attainment, post-secondary education and field(s) of study, and a complete labor market history, with metrics for gender role attitudes and female role models in an individual's location at birth and in adolescence. Using an empirical method developed by Arcidiacono and Koedel (2014), we then determine the specific pathways through which early life exposure to gender role attitudes affect future labor market decisions, including the choice of higher education and the choice of major.

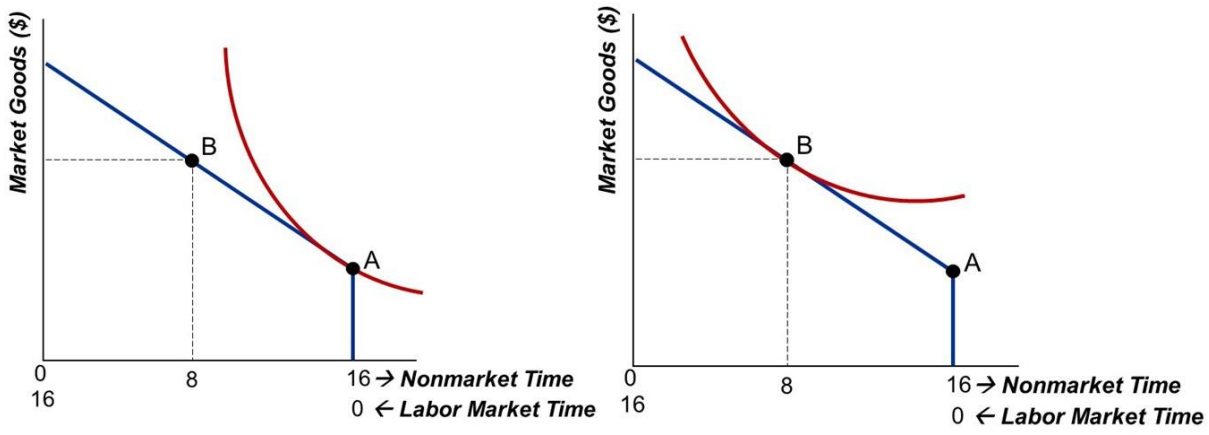
We find that if individuals exposed to traditional gender role attitudes chose a post-secondary field of study like those in progressive places (conditional on individual characteristics), the occupation gap would be smaller for older cohorts. Among younger cohorts, we find that childhood exposure to traditional gender role attitudes contributes to fewer people sorting into care occupations, likely a response to care work being de-valued as more women enter into paid care work. In both cohorts, our decomposition indicates that the primary channel for this is the choice of post-secondary (vocational, two-year, four-year, or graduate) major. We repeat this exercise using gender role attitudes in the individuals' location at age 14 as well as using a composite measure of gender role attitudes and exposure to female role models. We then extend our analysis to occupations with care skills (rather than limiting it to traditional care occupations).

Our results suggest a role for occupation choice and major choice as a mechanism underlying Charles, Guryan, and Pan's (2018) findings that women born in states with more traditional gender role attitudes ("background sexism") have lower labor force participation and wages. Since pervious research has documented that changes in education and major can affect the gender wage gap (Gill and Leigh, 2000). In other words, this partially explains why women continue to suffer from the double wage gap – lower wages in female dominated occupations and lower wages (than men) in occupations overall.

II. Gender Role Attitudes and Occupation

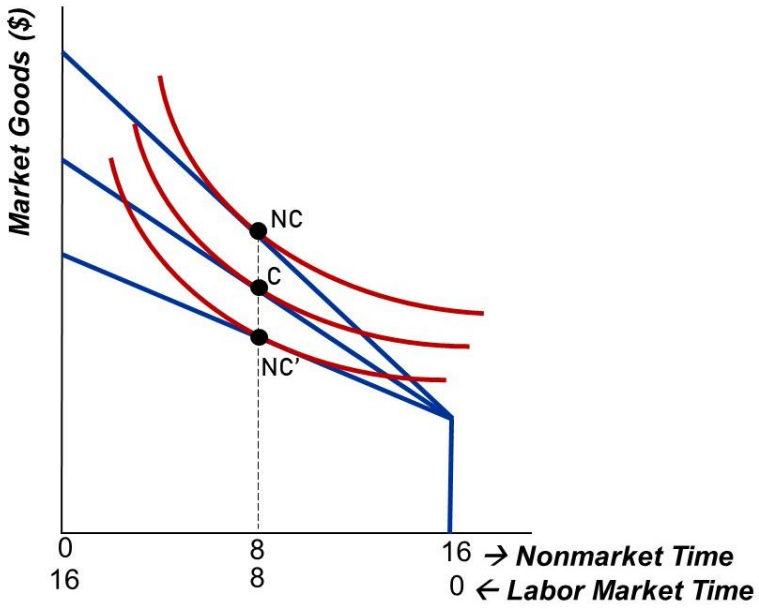
We are interested in how gender role attitudes and the role models that people are exposed to in early life affect their occupational choices later in life. Previous literature has shown that cultural attitudes transmitted from the source countries of immigrants (Fernández and Fogli, 2009; Blau, Kahn, and Papps, 2011; Blau et al., 2013), or from mothers to their children (Farré and Vella, 2013; Fernández, Fogli, and Olivetti, 2004) affect the labor market preferences of women. There is also evidence that women's exposure to more progressive regional gender role attitudes is associated with higher female labor force participation rates (Patrick, Stephens, Weinstein, 2016; Charles, Guryan, Pan, 2018). In a model of utility maximization (Figure 3), progressive gender role attitudes may affect women's preferences, moving their optimal choice from point A to point B (depicting an increase in labor force participation). Changes in preferences that result from exposure to more progressive gender role attitudes could also affect women's preferences for market time spent in non-care occupations over care occupations. Thus, changes in preferences resulting from exposure to more progressive gender role attitudes may increase the likelihood of women choosing non-care occupations.

FIGURE 3. THE IMPACT OF GENDER ROLE ATTITUDES ON PREFERENCES



If progressive regional gender role attitudes also reduce occupation segregation, with fewer women crowded into lower paying female-dominated occupations, then women's expected wages would increase. In fact, Fortin (2005) finds that countries associated with more egalitarian views on gender are associated with a lower gender pay gap and higher female employment. Similarly, Charles, Guryan, and Pan (2018) find that exposure to more progressive gender role attitudes helps increase women's wages and shrink the gender pay gap (and increase labor force participation).

FIGURE 4: IMPACT OF GENDER ROLE ATTITUDES ON CONSTRAINTS



In contrast, traditional gender role attitudes may act to constrain the occupation choice of women. In addition, traditional gender role attitudes, which view women's role as caretakers, may impose a cost on women who choose to step out of gender norms by entering into non-care occupations (see Smith 2021 for evidence on costs). This lowers the effective wages (after accounting for these costs) associated with non-care occupations for women in places with more traditional gender role attitudes (from NC to NC' in Figure 4). Thus, women with exposure to more traditional gender role attitudes would be more likely to choose a care occupation (point C) with higher utility than point NC'. On the other hand, women with exposure to more progressive gender role attitudes would be more likely to choose a non-care occupation (point NC) with higher utility than a lower paid care occupation (point C).

Thus, gender role attitudes may change the labor market outcomes and the occupation choice of women (and men) by changing individual preferences and/or changing the constraints they face in their labor supply decisions. Thus, we explore the mechanisms through which this takes place.

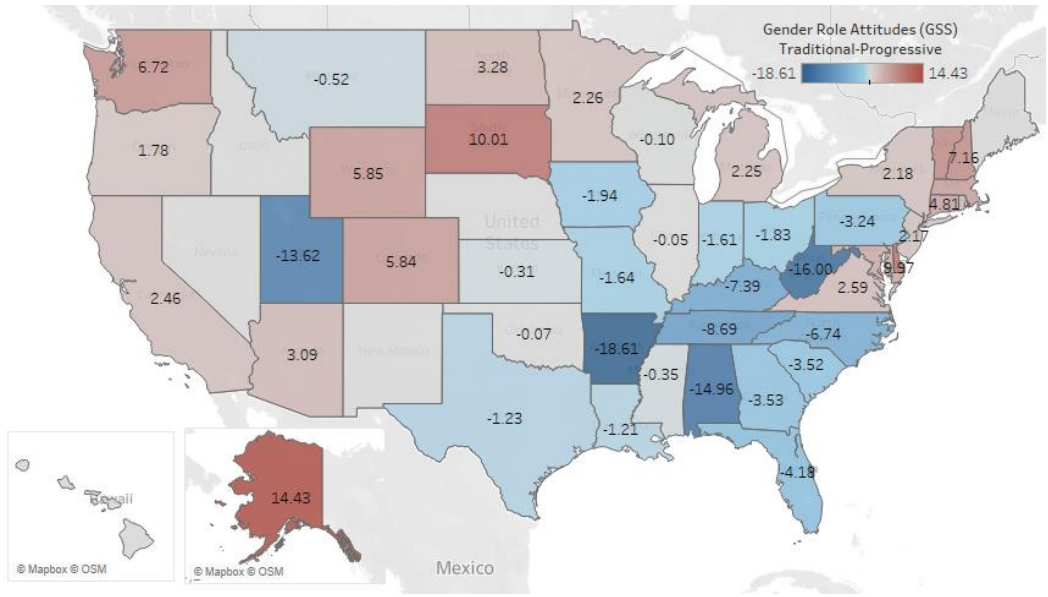
Our primary measure of gender role attitudes uses the restricted access General Social Survey (GSS) geocoded data over time and responses to gender role attitude questions to create a state-level gender role attitude index, where higher values indicate more progressive gender role attitudes.[4] Figure 5 illustrates the variation in our GSS measure across states. In some specifications, we use a measure that also incorporates metrics for other aspects of gender role attitudes including the share of state legislatures that are female[5] as well as the presence of female role models (women's labor force participation rates, and the prevalence of women in care occupations at birth or adolescence).

As shown in Figure 6, using 2018 American Community Survey (ACS) data, we find more progressive gender role attitudes at place of birth are associated with lower overall occupational segregation in the population measured using the index of dissimilarity.

FIGURE 5. BACKGROUND SEXISM ACROSS THE U.S

[4] From the GSS, we use fework, fehome, fepres, fepol, fechld, fepresch, fehelp, fefam, questions about attitudes toward women's roles in the home, in the workplaces and society. We rescale them so higher is more progressive and construct an index that is based on the sum of the z-scores for each state. This is similar to that used in Charles, Guryan, and Pan (2018) and in Patrick, Stephens, and Weinstein (2016).

[5] As in Reynolds and Weinstein (2021).



Source: General Social Survey

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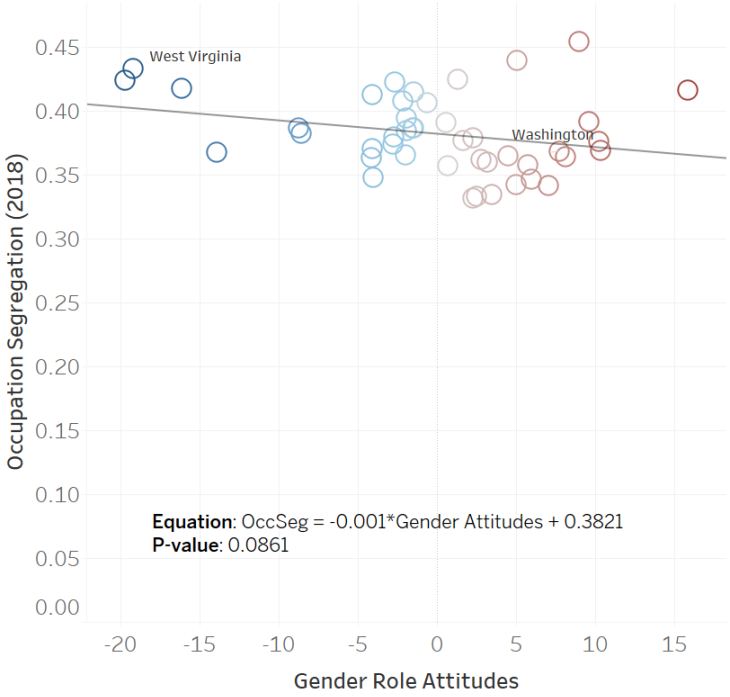
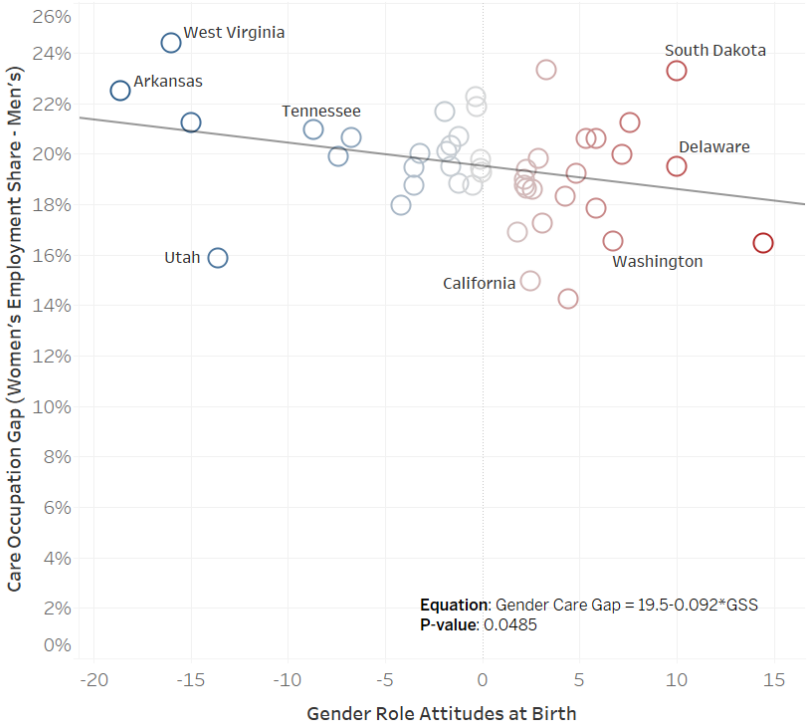
FIGURE 6. OCCUPATIONAL SEGREGATION DECREASES WITH PROGRESSIVE GENDER ROLE ATTITUDES



We next examine the gender gap in *care* occupations as a function of gender role attitudes using the ACS data from 2018. We find that the share of employed women in care occupations is lower for women born in states with more progressive gender role attitudes and the share of employed

men in care occupations is higher for men born in states with more progressive gender role attitudes. Thus, as illustrated in Figure 7, this results in a smaller gender care occupation gap (the difference between the share of employed women in care occupations and the share of employed men in care occupations by birth state) for individuals born in states with more progressive gender role attitudes.[6]

FIGURE 7. PROGRESSIVE GENDER ROLE ATTITUDES DECREASE THE GENDER CARE OCCUPATION GAP



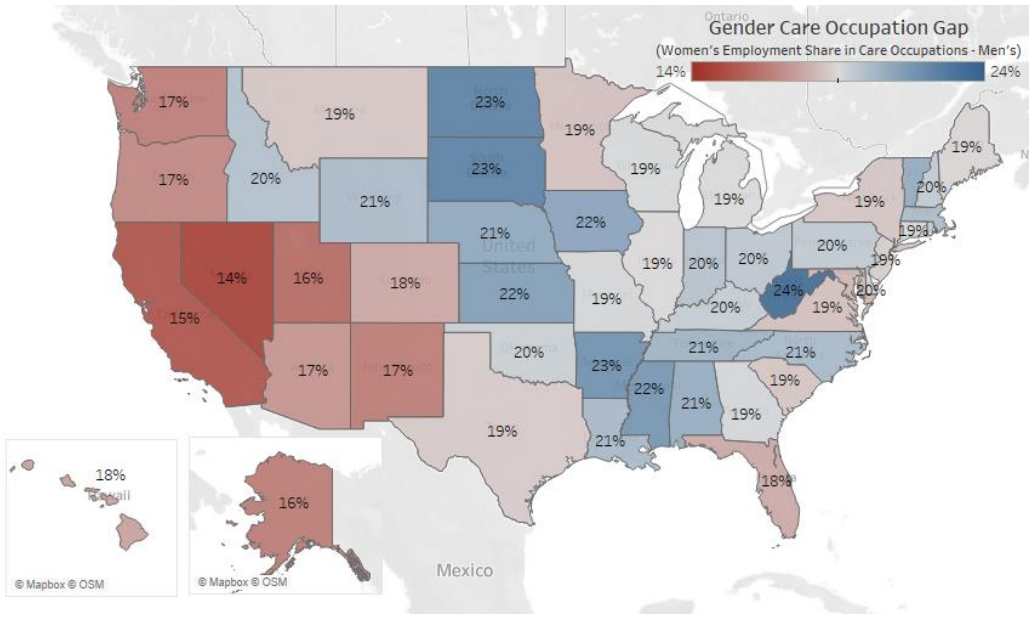
SOURCE: IPUMS ACS (2018) AND THE GENERAL SOCIAL SURVEY

While these results suggest that gender role attitudes are important to the choice to enter a care occupation, regional patterns are also evident. As shown in Figure 8, when we map the gender care occupation gap by birth state using ACS data from 2018, some of the largest gender care

[6] Care occupations generally include any occupation in healthcare and education (specifically, we use 2010 census occupation codes 2200-2340, 2540, 3000-3650.

occupation gaps are in the South and Midwest where gender role attitudes tend to be more traditional.

FIGURE 8. THE GENDER CARE OCCUPATION GAP BY BIRTH STATE



SOURCE: IPUMS ACS (2018)

Next, we use the ACS data (in 2000, 2010, and 2018) to estimate empirically the impact of gender role attitudes in a person's birth state (background sexism) on the care occupation choice.[7] Specifically, we estimate whether being exposed to more progressive gender role attitudes at birth affects the likelihood an individual is either in a care occupation, non-care occupation, or not employed using multinomial logistic regression. Table 1 presents the marginal effects of this analysis. Our results show that both men and women born in more progressive states are more likely to be employed. Thus, both men and women benefit (in terms of higher employment rates) from exposure to more progressive gender role attitudes. Women born in more progressive states are also less likely to be in care occupations while *men born in more progressive states are more likely to be in care occupations*. Thus, progressive gender role

[7] We restrict our analysis to individuals between the age of 23 and 64.

attitudes are associated with a smaller gender gap in care occupations and more traditional gender role attitudes (background sexism) are associated with a larger gender care occupation gap (as shown in Figure 5).[8] Our results are consistent with Munnich and Wozniak (2020) that show more progressive gender role attitudes are associated with a higher share of men becoming registered nurses. The results are largely consistent over time with some evidence that progressive attitudes at birth are increasingly associated with expanding the likelihood of overall employment for both men and women.

TABLE 1— MARGINAL EFFECTS OF PROGRESSIVE GENDER ROLE ATTITUDES AT BIRTH ON OCCUPATION CHOICE

	2000		2010		2018	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**
	1,681,041	1,735,794	476,771	493,651	623,507	629,487
CARE Occupation	0.0004***	-0.0005***	0.0004***	-0.0006***	0.0003***	-0.0004***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
NON-CARE Occupation	0.0009***	0.0028***	0.0012***	0.0032***	0.0017***	0.0036***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)
Not Employed	-0.0014***	-0.0023***	-0.0015***	-0.0026***	-0.0020***	-0.0032***
	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)	(0.0001)

*** SIGNIFICANT AT THE 1 PERCENT LEVEL ** SIGNIFICANT AT THE 5 PERCENT LEVEL * SIGNIFICANT AT THE 10 PERCENT LEVEL

We also estimate the impact of gender role attitudes at birth on different age cohorts separately, using data for ages 23-34, 35-49, and 50-64 (Table 2). We find the impact of progressive gender role attitudes on the choice of occupation is the largest for younger women, with younger women exposed to more progressive gender role attitudes in childhood more likely to choose a non-care occupation and less likely to choose a care occupation. This could be that younger women have been more exposed to more progressive gender role attitudes as gender role attitudes across states

[8] As a robustness check, we focus on the impact of gender role attitudes at birth on movers, individuals who live in a state other than their birth state (Appendix A). We find similar results for movers though the magnitudes are smaller or less significant indicating a role for "residential sexism" as well as "background sexism" similar to Charles, Guryan, and Pan. (2018).

have diverged, with more progressive states getting even more progressive over time.[9] This result could also indicate that prevailing gender role attitudes affect women differently based on age.

TABLE 2— MARGINAL EFFECTS OF PROGRESSIVE GENDER ROLE ATTITUDES AT BIRTH ON OCCUPATION CHOICE BY AGE COHORT

	Age 23-34		Age 35-49		Age 50-64	
	Men	**Women**	**Men**	**Women**	**Men**	**Women**
	190,801	185,661	218,698	218,017	214,008	225,809
CARE Occupation	0.0001	-0.0014***	0.0003**	-0.0004***	0.0005***	0.0003
	(0.0001)	(0.0001)	(0.0001)	(0.0002)	(0.0001)	(0.0002)
NON-CARE Occupation	0.0007***	0.0043***	0.0018***	0.0031***	0.0024***	0.0035***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)
Not Employed	-0.0008***	-0.0028***	-0.0021***	-0.0027***	-0.0029***	-0.0038***
	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)	(0.0002)

*** SIGNIFICANT AT THE 1 PERCENT LEVEL** SIGNIFICANT AT THE 5 PERCENT LEVEL* SIGNIFICANT AT THE 10 PERCENT LEVEL

Conversely, the impact of more progressive gender role attitudes encouraging men to enter into care occupations is the largest for older men. One explanation for this is that prevailing gender role attitudes may benefit older men who are more comfortable in care roles especially after marriage and children. This result could also indicate that older men facing unemployment as they are displaced from declining male-dominated occupations, such as manufacturing, are more willing to maintain employment by entering growing care occupations; especially if they were exposed to more progressive gender role attitudes in childhood.

Finally, we consider how the impact of gender role attitudes may vary across race. Though trends in the share of Black women in care work are similar to White women, the employment share in care occupations for Black women is consistently higher (28 percent in 2018 compared to 26 percent for White women).[10] Black women have historically filled the demand for care work (Conrad et al., 2014; Banks, 2019). Interestingly, our results suggest that Black women's

[9] Due to data limitations our gender role attitude measure from the GSS does not vary over time by state. Thus, the results by cohort could be indicative of the impact of more progressive places becoming even more progressive over time (divergence in gender role attitudes across states over time).

[10] Up from 23 percent in 2000 for Black women and 19 percent for White women.

concentration in care occupations is not associated with prevailing regional gender role attitudes (Table 3). This aligns with previous research that finds Black women themselves tend to have the most progressive gender role attitudes and are affected less by regional attitudes (Carter, Corra, and Carter, 2009; Powers et al., 2003). Black women also face opposing forces affecting the impact of gender role attitudes on their occupation choice: (1) progressive gender role attitudes may encourage Black women to pursue more non-care occupations, decreasing the likelihood of choosing a care occupation (similar to White women); however, (2) as gender role attitudes become more progressive, increasing White women's labor force participation, the demand for low-wage care work increases, and that work is often filled by Black women (Conrad et al., 2014; Banks, 2019). Overall, while the effects are smaller, we find evidence that Black women exposed to more progressive gender role attitudes are more likely to be employed in non-care occupations and more likely to be employed (Table 3).

TABLE 3— MARGINAL EFFECTS OF PROGRESSIVE GENDER ROLE ATTITUDES AT BIRTH ON OCCUPATION CHOICE FOR THOSE NOT LIVING IN THEIR BIRTH STATE

	2018			
	White Men	**White Women**	**Black Men**	**Black Women**
	515,116	518,746	64,937	67,850
CARE Occupation	0.0001*	-0.0005***	0.0007***	0.0001
	(0.0001)	(0.0001)	(0.0002)	(0.0003)
NON-CARE Occupation	0.0013***	0.0038***	-0.0004	0.0022***
	(0.0001)	(0.0001)	(0.0004)	(0.0004)
Not Employed	-0.0014***	-0.0033***	-0.0003	-0.0023***
	(0.0001)	(0.0001)	(0.0004)	(0.0003)

*** SIGNIFICANT AT THE 1 PERCENT LEVEL.** SIGNIFICANT AT THE 5 PERCENT LEVEL* SIGNIFICANT AT THE 10 PERCENT LEVEL

At the same time, there is evidence that more progressive gender role attitudes have a larger effect on whether Black men choose care occupations. Black men are more likely to be employed in a care occupation when they are exposed to more progressive gender role attitudes from birth. For both White and Black Americans, our results suggest that more progressive (more egalitarian)

gender role attitudes seem to close the gender gap in care occupations. Said another way, more traditional (less egalitarian) gender role attitudes appear to contribute to a widening of the gender care occupation gap. Thus, a growing gender gap in care occupations could reflect a return to more traditional gender role attitudes (as suggested by Fortin, 2015).

III. Decomposition Methodology

We would expect persistent gender gaps in undergraduate major choice (Turner and Bowen, 1999) to affect gender gaps in the occupations these majors lead to and widen the gender wage gap (Brown and Corcoran, 1997). To more precisely estimate the mechanisms leading to the current gender care occupation gap, we decompose the gender care occupation gap to understand the role of educational attainment and major choice. To do so, we use confidential geocoded data from the National Longitudinal Surveys of Youth from 1979 and 1997 (NLSY79 and NLSY97).[11] The two surveys provide detailed information on individuals, their occupations, work history, education, and college major (if applicable) as well as their location at birth and in adolescence. Combining these with the gender role attitude measures we developed using the geocoded GSS data and our other measures of gender role attitudes, we are able to decompose the relationship between gender role attitudes in the location at birth and in adolescence and occupational choice. This includes considering the numerous choices that affect one's current occupation including the level of educational attainment and choice of major.

[11] NLSY79 includes individuals born between 1957 and 1964; the NSLY97 includes individuals born between 1980 and 1984.

We use the methodology developed by Arcidiacono and Koedel (2014) to define the probability that an individual of gender g with individual characteristics x choses a care occupation using equation (1)

$$\Pr(y = 1|g, a) = \sum_{x \in X} \sum_{m \in M} \sum_{c \in C} \Pr(y = 1|c, m, x, g, a) \Pr(c, m, x, g, a) =$$

$$\sum_{x \in X} \sum_{m \in M} \sum_{c \in C} \Pr(y = 1|c, m, x, g, a) \Pr(c|m, x, g, a) \Pr(m|x, g, a) \Pr(x|g, a) \quad (1)$$

Based on post-secondary education (c), post-secondary major (m), gender attitudes in the location of birth (a), and occupational choice (y), as defined below.

$$y = \begin{cases} 0 \; if \; individual \; i's \; occupation \; is \; not \; classified \; as \; a \; care \; occupation \\ 1 \; if \; individual \; i's \; occupation \; is \; classified \; as \; a \; care \; occupation \end{cases}$$

We define individual i's occupation using the 1970 Census Code reported occupation of the primary job in 1994 for the NLSY79 and the 2000 Census Code reported occupation for the primary job in round 16 (2013) for the NLSY97. In 1994, NLSY79 individuals have a mean age of 32 and in 2013 the NLSY97 individuals have a mean age of 32. We believe that these points are far enough into adulthood that the individuals will have completed their education and obtained jobs in their primary occupations. Although some unemployed and not working individuals in the data report occupations, most do not – meaning that choosing one point in time at which to define occupation limits our sample to predominantly people who are employed at that point in time. Thus, to account for limited unemployment stints at the time of the surveys, we also calculate the modal occupation for each individual in the previous five years and use that to define their occupation when there is missing occupational data in our chosen years.

We also define the gender role attitudes in the individual's state of birth and state in adolescence (age 14 for NLSY 79 and age 12 for NSLY 97) as

$$a = \begin{cases} 1 & if \; location \; is \; in \; the \; bottom \; of \; the \; distribution \; of \; gender \; attitude \; metric \\ 2 & if \; location \; is \; in \; the \; top \; half \; of \; the \; distribution \; of \; gender \; attitude \; metric \end{cases}$$

We define *c* as having completed one of four post-secondary educational options, or having no post-secondary degree or certificate such that

$$c \in \{4\ year\ college\ degree\ or\ above, 2\ year\ degree\ or\ vocational\ training\ certificate\ or\ license, no\ post - secondary\ \ credential\}$$

To construct *c,* we use the highest grade completed and highest degree received as well as the college and vocational/technical training histories and completion years. We group 2-year college degrees with vocational training certificates and licenses because the NLSY 79 data lists nursing school as a vocational degree until 1986 and as a degree program after this point. However, we are unable to distinguish the major for other types of vocational certificates beyond 1986 for this cohort.

We define college major *m* at the time of graduation as either care or non-care using the major codes in the NLSY. Based on the occupations, we classify all biological sciences, education, health profession, home economics, and psychology majors as care majors. Further, we classify all those with a vocational type as nursing school prior to 1986 as having a care major. Note that major applies to the field of study for which the individual obtained a vocational training certificate or license, two-year degree, four-year degree, or graduate degree.

Table 4 contains key characteristics of the individuals used in our analysis by sex and gender role attitudes at place of birth. In the older cohort (NLSY79), about 3 percent of men report a care occupation compared to 15-16 percent of women. The gap between men and women is slightly smaller among those born in more progressive places than those born in locations with more traditional gender role attitudes. Four percent of male respondents chose a care-related field of study for their vocational or college credentials, while 9-10 percent of women chose care majors.

Both men and women born in places with more progressive gender role attitudes achieve higher levels of education and have more educated mothers than those born in traditional locations. Respondents born in progressive places also have significantly higher AFQT scores than those born in traditional places. It is also important to note that the share of Black respondents born in progressive places is significantly lower than the share born in traditional places. The trends are similar with the younger cohort (NLSY97), although significantly more women chose care majors (compared to men) in this cohort.

Table 4: Individual Characteristics by Gender and Gender Norms

	NLSY79		
	Men	Women	Gap (Men-Women)
Traditional Gender Role Attitudes at Birth			
	3,084	3,072	
Care Occupation (y)	0.034	0.160	-0.126
Care Major (m)	0.036	0.087	-0.051
Post-secondary educational attainment category (c)	1.274	1.321	-0.047
Black	0.333	0.334	-0.001
AFQT score	35.825	36.425	-0.601
Mother's years of education	10.986	10.764	0.222
Progressive Gender Role Attitudes at Birth			
	2,589	2,500	
Care Occupation (y)	0.031	0.150	-0.120
Care Major (m)	0.039	0.104	-0.065
Post-secondary educational attainment category (c)	1.336	1.378	-0.043
Black	0.191	0.174	0.016
AFQT score	43.563	41.819	1.744
Mother's years of education	11.486	11.338	0.148
GAP (Progressive - Traditional)			
Care Occupation (y)	-0.003	-0.010	
Care Major (m)	0.003	0.017	
Post-secondary educational attainment category (c)	0.062	0.057	
Black	-0.142	-0.159	
AFQT score	7.739	5.394	
Mother's years of education	0.500	0.574	

	NLSY97		
	Men	Women	Gap (Men-Women)
Traditional Gender Role Attitudes at Birth			
	1,659	1,562	
Care Occupation (y)	0.039	0.150	-0.111
Care Major (m)	0.043	0.131	-0.088
Post-secondary educational attainment category (c)	1.436	1.647	-0.210
Black	0.390	0.401	-0.011
ASVAB score*	40699.12	44002.10	-3302.98
Mother's years of education	12.645	12.660	-0.015
Progressive Gender Role Attitudes at Birth			
	1,580	1,433	
Care Occupation (y)	0.037	0.134	-0.097
Care Major (m)	0.037	0.137	-0.099
Post-secondary educational attainment category (c)	1.565	1.784	-0.218
Black	0.173	0.178	-0.005
ASVAB score*	50532.51	52856.94	-2324.43
Mother's years of education	13.371	13.233	0.138
GAP (Progressive - Traditional)			
Care Occupation (y)	-0.002	-0.016	
Care Major (m)	-0.005	0.006	
Post-secondary educational attainment category (c)	0.129	0.137	
Black	-0.217	-0.223	
ASVAB score*	9833.39	8854.84	
Mother's years of education	0.725	0.573	

* Armed Services Vocational Aptitude Battery (ASVAB) is used instead of the AFQT as an aptitude test with the NLSY97 cohort.

Using equation (1) and the methodology developed by Arcidiacono and Koedel (2014) provides a natural way of decomposing the effects of *c*, *m*, and *x* on occupational choice:

(i) Conditional on college major and individual background, how much do the different ways that (men and) women in locations with more progressive gender role attitudes (more female role models) and more traditional gender role attitudes (fewer female

role models) choose post-secondary education account for differences in the choice to enter a care occupation?

(ii) Conditional on individual background, how much do the different ways that (men and) women in locations with more progressive gender role attitudes (more female role models) and more traditional gender role attitudes (fewer female role models) choose their post-secondary major account for differences in the choice to enter a care occupation?

We predict counterfactual occupational choices for individuals with childhood exposure to more traditional gender role attitudes based upon the choices of those individuals with childhood exposure to more progressive gender role attitudes (conditional on individual characteristics).

Resorting the level of post-secondary education conditional on care or non-care major choice effectively allows individuals to choose whether they are interested in fields broadly related to care or not, and, based upon that interest, then decide the level of education attainment. In other words, our post-secondary-only resorting demonstrates how differences in the choice of post-secondary educational attainment among the groups revealing interest in care-related majors influences final sorting into care or non-care occupations.

Resorting on both major and post-secondary education choices allows us to consider the way in which individuals with different early life exposure to gender norms differentially pursue care related fields of study and post-secondary education.

The following sections describe the estimation process in more detail.

A. Reducing the State Space

Given the nature of Equation (1), we first need to reduce the state space for purposes of estimation. To do so, we follow Arcidiacono and Koedel (2014) and estimate a function that incorporates individual backgrounds, gender, and gender role attitudes into what we call a background index, *BI*.

The background index (Equation 2) is formed from information on individuals' gender, $g_i = 1$ if female and zero otherwise, gender role attitudes in birth/adolescence location, a_i, race, $b_i = 1$ if African American and zero otherwise[12]:

$$BI_i = \gamma_0 + \gamma_1 f_i + \gamma_2 I(a_i = 2) + \gamma_3 [f_i * I(a_i = 2)] + \gamma_4 b_i \quad (2)$$

We then make two assumptions about how BI interacts with the choices of post-secondary option (*c)* and major (*m)*. First, we assume that the probability of choosing a CARE occupation is independent of *x*, *g*, and *a* (individual characteristics, gender, and gender role attitudes) once we condition on *c*, *m*, and *BI*:

$$\Pr(y = 1|c, m, BI, x, g, a) = \Pr(y = 1|c, m, BI) \forall \{x, g, a\} \quad (3)$$

In other words, using equation (3), differences in occupational choice between women (and men) in locations with progressive and traditional gender role attitudes, conditional on choosing the same post-secondary education option and major, operate through the background index.

Second, we assume that the effects of *x* (individual characteristics) on choice of post-secondary education and major operate through the background index, based on equations (4) and (5):

$$\Pr(c|m, BI, x, g, a) = \Pr(c|m, BI, g, a) \, \forall x \quad (4)$$

$$\Pr(m|x, AI, g, a) = \Pr(m|BI, g, a) \forall x \quad (5)$$

[12] We estimated alternative specifications in which BI is also a function of AFQT/ASVAB score percentile and mother's educational attainment. However, we prefer this specification as aptitude scores and mother's educational attainment are likely endogenous in our context.

These assumptions still allow (men and) women exposed to different gender role attitudes to make different post-secondary and major choices given their background.

B. Probability of Choosing a CARE occupation

With this framework, we can now estimate the conditional probability in (1). In other words, the choice of a care occupation is determined by individuals' latent utility from the occupation. The latent utility for individual *i*, which depends upon post-secondary option choice, major choice, background, and cohort *t*, is defined in equation (6):

$$y_i^* = \sum_c \sum_m \sum_t I(c, m, t|i)\delta_{0cmt} + \sum_c \sum_m I(c, m|i)BI_i\delta_{1cm} + \varepsilon_i, \qquad (6)$$

where $I(c, m, t|i)$ is an indicator variable for whether i made post-secondary choice c with major m, and is part of cohort t. Cohorts are defined based upon 2 birth-year windows for each dataset (NLSY79 and NLSY97) to allow for the possibility that individuals born at different times respond differently at the age of the choice of post-secondary education and field of study (major). $I(c, m|i)$ is a similarly defined indicator variable that is not cohort specific. ε_i is an individual-specific preference shock with a Type I extreme value distribution such that we can estimate the probability of choosing a care occupation using a logit model.

C. Sorting into Post-Secondary Education

Next, we consider how individuals sort into post-secondary education based upon gender and childhood exposure to gender role attitudes; where obtaining a particular type of post-secondary education c depends upon gender, g_i, childhood exposure to gender role attitudes, a_i, major, m, cohort, t, background index, BI, and an unobserved preference, η, that follows a Type I extreme value distribution.

$$U_{ic} = \sum \; I(m,t|i)\big[\phi_{0cmt} + \phi_{1cmt} f_i + \sum_{a=1}^{2} I(a_i = a)\phi_{2cmt} + \sum_f \sum_{a=1}^{2} [f_i * I(a_i = a)]\phi_{3cmt} + BI_i\big(\phi_{4cmt} + \phi_{5cmt} f_i + \sum_{a=1}^{2} I(a_i = a)\phi_{6cmt} + \sum_f \sum_{a=1}^{2} [f_i * I(a_i = a)]\phi_{7cmt}\big)\big] + \eta_{ic} \quad (7)$$

Equation (7) implies that we can estimate a separate multinomial logit for each cohort based on gender and childhood exposure to gender role attitudes separated by those who choose a care major and those with a non-care major.

D. Major Sorting

Similarly, the latent utility of sorting into a care or non-care field of study or major is given by equation (8):

$$V_{im} = \sum \; I(t|i)\big[\tau_{0mt} + \tau_{1mt} f_i + \sum_{a=1}^{2} I(a_i = a)\tau_{2mt} + \sum_f \sum_{a=1}^{2} [f_i * I(a_i = a)]\tau_{3mt} + BI_i\big(\tau_{4mt} + \tau_{5mt} f_i + \sum_{a=1}^{2} I(a_i = a)\tau_{6mt} + \sum_f \sum_{a=1}^{2} [f_i * I(a_i = a)]\tau_{7mt}\big)\big] + \xi_{im}, \quad (8)$$

where $\xi$is distributed Type I extreme value. We estimate the probability individual *i* chooses a major *m* using separate logit regressions for each gender-attitudes cohort.

IV. Decomposing the Gender Care Occupation Gap

Table 5 presents the results of our decomposition using GSS measured gender role attitudes at place of birth. The results in Table 5 show that our model does a good job of predicting the actual occupational choice of individuals. It also presents an interesting story. For the 1979 cohort, if those born in places with more traditional gender role attitudes choose post-secondary education levels and majors (conditional on individual background) like people born in more progressive locations, then more men and women enter care occupations. As shown in Section III, our

individual background controls include race, so that the resorting, for example, of a Black woman in a traditional gender role attitudes place is compared to a Black woman in a place with more progressive gender role attitudes. The increase in the choice of care occupations in more progressive locations is much greater for men, resulting in an overall decrease in the care occupation gap of 6.6%. The decomposition suggests this is almost entirely attributable to changes in majors.

However, for the 1997 cohort, the story is the opposite. In this case, we see evidence that more progressive gender role attitudes lead to much fewer men entering care professions (especially when conditioning on both major and post-secondary choice), a small decrease in the number of women entering care, and an increase in the gender occupation gap in care.

TABLE 5 — PROGRESSIVE GENDER ROLE ATTITUDES IN THE PLACE OF BIRTH AND THE CARE OCCUPATION CHOICE

	1979			**1997**		
	Men	**Women**	***Gap***	**Men**	**Women**	***Gap***
	3,084	3,072		1,704	1,593	
Actual CARE occupational choice	0.034	0.160	***-0.126***	0.039	0.151	***-0.111***
Predicted CARE occupational choice	0.036	0.159	***-0.123***	0.037	0.150	***-0.114***
Predicted counterfactual CARE occupational choices with alternative post-secondary sorting	0.036	0.157	***-0.121***	0.021	0.138	***-0.117***
Predicted - Counterfactual	***0.000***	***0.002***	***-0.002***	***0.015***	***0.012***	***0.003***
Predicted counterfactual CARE occupational choices with alternative post-secondary and major sorting	0.129	0.186	***-0.057***	0.007	0.144	***-0.137***
Predicted - Counterfactual	***-0.093***	***-0.027***	***-0.066***	***0.030***	***0.006***	***0.023***

Note: Predicted counterfactual occupational choices are from base model. Predicted counterfactual occupational choices with alternative post-secondary (and major) sorting refers to the base model predicted occupational choices for individuals born in traditional gender attitude locations after resorting them into the post-secondary education (and major) choices in progressive places conditional on their background.

We repeat this exercise using GSS gender role attitudes in individuals' locations in adolescence (Table 6). Table 6 reveals very similar patterns to those in Table 5, suggesting that childhood exposure to gender norms may be internalized by the early teens. Again, the exposure to more progressive gender role attitudes increases the propensity for men and women in the 1979 cohort to choose post-secondary majors leading to care occupations, with larger increases for men that contribute to an overall reduction in the gender care gap. On the other hand, both men and women exposed to more progressive gender role attitudes in the 1997 cohort are less likely to choose majors leading to a care occupation. Interestingly, though, in the 1997 cohort, men with adolescent exposure to more progressive gender role attitudes are much more likely to sort into post-secondary educational choices that would lead to a care occupation. However, major resorting eliminates the increase in men choosing care occupations.

TABLE 6— PROGRESSIVE GENDER ROLE ATTITUDES IN THE PLACE IN ADOLESCENCE AND THE CARE OCCUPATION CHOICE

	1979			**1997**		
	Men	**Women**	***Gap***	**Men**	**Women**	***Gap***
	3,092	3,118		1,640	1,526	
Actual CARE occupational choice	0.035	0.161	***-0.126***	0.041	0.148	***-0.107***
Predicted CARE occupational choice	0.038	0.163	***-0.125***	0.039	0.154	***-0.115***
Predicted counterfactual CARE occupational choices with alternative post-secondary sorting	0.036	0.163	***-0.127***	0.125	0.134	***-0.009***
Predicted - Counterfactual	***0.002***	***0.000***	***0.001***	***-0.086***	***0.020***	***-0.106***
Predicted counterfactual CARE occupational choices with alternative post-secondary and major sorting	0.135	0.201	***-0.065***	0.008	0.148	***-0.140***
Predicted - Counterfactual	***-0.097***	***-0.038***	***-0.060***	***0.031***	***0.006***	***0.025***

Note: Predicted counterfactual occupational choices are from base model. Predicted counterfactual occupational choices with alternative post-secondary (and major) sorting refers to the base model predicted occupational choices for individuals who lived in adolescence in traditional gender attitude locations after resorting them into the post-secondary education (and major) choices in progressive places conditional on their background.

Our results are consistent with Zafar (2013) who suggests that gender differences in college majors are not due to differences in academic ability but instead due to gender differences in preferences and tastes formed well before college. Our results confirm that exposure to traditional gender role attitudes affect the care occupation through the choice of major.

V. Sensitivity Analysis

A. Alternative Gender Role Attitudes

To test the sensitivity of our findings we extend our analysis in two important ways. First, we investigate the sensitivity of our main findings to a broader definition of gender role attitudes that includes exposure to female role models. The gender norm metric for Tables 7 and 8 considers exposure to female role models as well as other indicators of gender role attitudes. We combine the GSS data with annual data on the share of elected state legislators that are female, women's labor force participation rate, share of people with a care occupation that are women, and the share of women that are in a care occupation. We normalize each factor across space by calculating its z-score and then add the z-scores for each factor to create a gender norm and female role model metric.

Tables 7 and 8 demonstrate the effect of resorting individuals from places with traditional gender norms and female role models in their places of birth and adolescence, respectively, into more progressive early life locations. In Table 7, greater shares of the older cohorts of men and women born in more traditional places sort into care occupations when they choose majors and post-secondary education like those born in places with more progressive gender norms and role models. However, the increase for men is not quite as strong, resulting in little overall change in the gender care occupation gap. Interestingly, as show in Table 8, the broader gender norm and role model effects in reducing the gender occupational gap are stronger for adolescent exposure in

the older cohort. Greater shares of both men and women living in traditional places sort into care occupations when they make field of study and post-secondary choices like their counterparts living in more progressive places at age 14. However, the increase is greatest for men, resulting in a ten percent decrease in the gender occupation gap.

The results for the younger cohort are almost identical to those using the GSS-only metric, suggesting that role models have little additional effect on their choices.

TABLE 7— GENDER NORMS AND FEMALE ROLE MODELS IN PLACE OF BIRTH AND THE CARE OCCUPATION CHOICE

	1979			1997		
	Men	**Women**	***Gap***	**Men**	**Women**	***Gap***
	3,830	3,767		1,659	1,562	
Actual CARE occupational choice	0.034	0.162	***-0.128***	0.039	0.150	***-0.111***
Predicted CARE occupational choice	0.037	0.164	***-0.128***	0.036	0.152	***-0.116***
Predicted counterfactual CARE occupational choices with alternative post-secondary sorting	0.036	0.126	***-0.090***	0.021	0.137	***-0.116***
Predicted - Counterfactual	***-0.010***	***0.072***	***0.002***	***-0.006***	***0.087***	***-0.116***
Predicted counterfactual CARE occupational choices with alternative post-secondary and major sorting	0.064	0.194	***-0.130***	0.009	0.148	*-0.139*
Predicted - Counterfactual	***-0.027***	***-0.029***	***0.002***	***0.027***	***0.004***	***0.023***

Note: Predicted counterfactual occupational choices are from base model. Predicted counterfactual occupational choices with alternative post-secondary (and major) sorting refers to the base model predicted occupational choices for individuals born in traditional gender attitude locations after resorting them into the post-secondary education (and major) choices in progressive places conditional on their background.

TABLE 8— GENDER NORMS AND FEMALE ROLE MODELS IN PLACE IN ADOLESCENCE AND THE CARE OCCUPATION CHOICE

	1979			1997		
	Men	**Women**	***Gap***	**Men**	**Women**	***Gap***
	3,524	3,495		831	769	
Actual CARE occupational choice	0.036	0.165	***-0.129***	0.030	0.144	***-0.114***
Predicted CARE occupational choice	0.039	0.166	***-0.128***	0.023	0.154	***-0.131***
Predicted counterfactual CARE occupational choices with alternative post-secondary sorting	0.037	0.168	***-0.131***	0.012	0.128	***-0.116***
Predicted - Counterfactual	***0.002***	***-0.002***	***0.003***	***0.011***	***0.026***	***-0.015***
Predicted counterfactual CARE occupational choices with alternative post-secondary and major sorting	0.190	0.217	***-0.027***	0.005	0.144	***-0.139***
Predicted - Counterfactual	***-0.151***	***-0.050***	***-0.101***	***0.018***	***0.010***	***0.008***

Note: Predicted counterfactual occupational choices are from base model. Predicted counterfactual occupational choices with alternative post-secondary (and major) sorting refers to the base model predicted occupational choices for individuals who lived in adolescence in traditional gender attitude locations after resorting them into the post-secondary education (and major) choices in progressive places conditional on their background.

B. Care Skills Occupational Choice Decomposition

Second, to test the sensitivity of our analysis to our definition of care occupations, we consider an alternative definition. Blau and Kahn (2017) define care occupations using Folbre's (2012) definition: "occupations in which 'concern for the well-being of others is likely to affect the quality of services provided'. This standard classification (which we use in our original analysis) includes most education and health care occupations, but few occupations outside those sectors. An alternative way of conceptualizing care occupations is to consider the skills associated with the Folbre definition and classify occupations that require high levels of the associated skill as care occupations. Thus, we create a new set of care occupations defined by the level of "service" skills required using the O*NET occupational data. We choose the O*NET service skill as it most closely relates to the above definition of care occupations. Specifically, O*NET skill of Service

Orientation is defined as "actively looking for ways to help people." Our service skills measure is a subset of the people skills examined by Borghans et al. (2014) and Weinstein and Patrick (2020), for example, as we focus more narrowly on service to people and not just interacting with people (which would include sales and managerial occupations that rank among the top occupations in terms of people tasks). In addition to many of the education and health care occupations classified traditionally classified as care, the skill-based definition also includes some social service, law enforcement, and service occupations. We updated the associated major fields of study to correspond with the new skill-based definition.

Table 9 presents the results of our occupational choice decomposition using the alternative definition of care "service" occupations using place of birth and our original gender role attitude measure based on the GSS data. The actual care occupational gap is slightly wider for both samples using the care "service" definition than when using the standard care classification – as are initial occupation shares. The most notable difference between the results in Table 9 and earlier results is that the effect of resorting among the cohorts is reversed. More older cohort men and women born in traditional places choose service occupations after major and post-secondary education resorting, but the effect is much larger for women. This results in an increase in the care occupational gap of approximately five percent (as opposed to the 6-10 percent reductions previously seen in this cohort). As before, this effect is entirely driven by individuals choosing different post-secondary fields of study.

On the other hand, the predicted care "service" occupational gap for the younger cohort falls by six percent rather than increasing by two percent. Under the standard definition of care occupations, younger men and women born in traditional places were much less likely to choose them after resorting into post-secondary education and fields of study like their counterparts born

in progressive places. Using the care-service-skill occupational definition, in the younger cohort, men in more progressive places make post-secondary education choices that increase care (service) occupational choices by six percent while women's choices remain largely unaffected. The overall effect of exposure to more progressive gender role attitudes is a reduction in the care occupation gap.

The results in Table 9 suggest it is not an underlying difference in innate preferences or skill for caring and serving others that drives our results about the role of gender norms in the care occupational gender gap. Instead, it is the classification of occupations serving children and the health needs of others. In our discussion of the main decomposition results, we postulated that the devaluation of "women's work" relative to other types of work may be an underlying reason why so few individuals in our younger sample choose care occupations after resorting. The resorting into service-skill care occupations in Table 9 gives some credence to this idea, which we explore more in the next section.

TABLE 9— PROGRESSIVE GENDER ROLE ATTITUDES IN THE PLACE OF BIRTH AND THE SERVICE SKILL OCCUPATION CHOICE

	1979			**1997**		
	Men	**Women**	***Gap***	**Men**	**Women**	***Gap***
	3,084	3,072		1,704	1,593	
Actual CARE occupational choice	0.084	0.229	***-0.145***	0.113	0.242	***-0.129***
Predicted CARE occupational choice	0.085	0.229	***-0.144***	0.113	0.238	***-0.125***
Predicted counterfactual CARE occupational choices with alternative post-secondary sorting	0.085	0.229	***-0.144***	0.170	0.226	***-0.056***
Predicted - Counterfactual	***0.000***	***0.000***	***0.000***	***-0.057***	***0.012***	***-0.069***
Predicted counterfactual CARE occupational choices with alternative post-secondary and major sorting	0.089	0.287	***-0.198***	0.172	0.234	***-0.062***

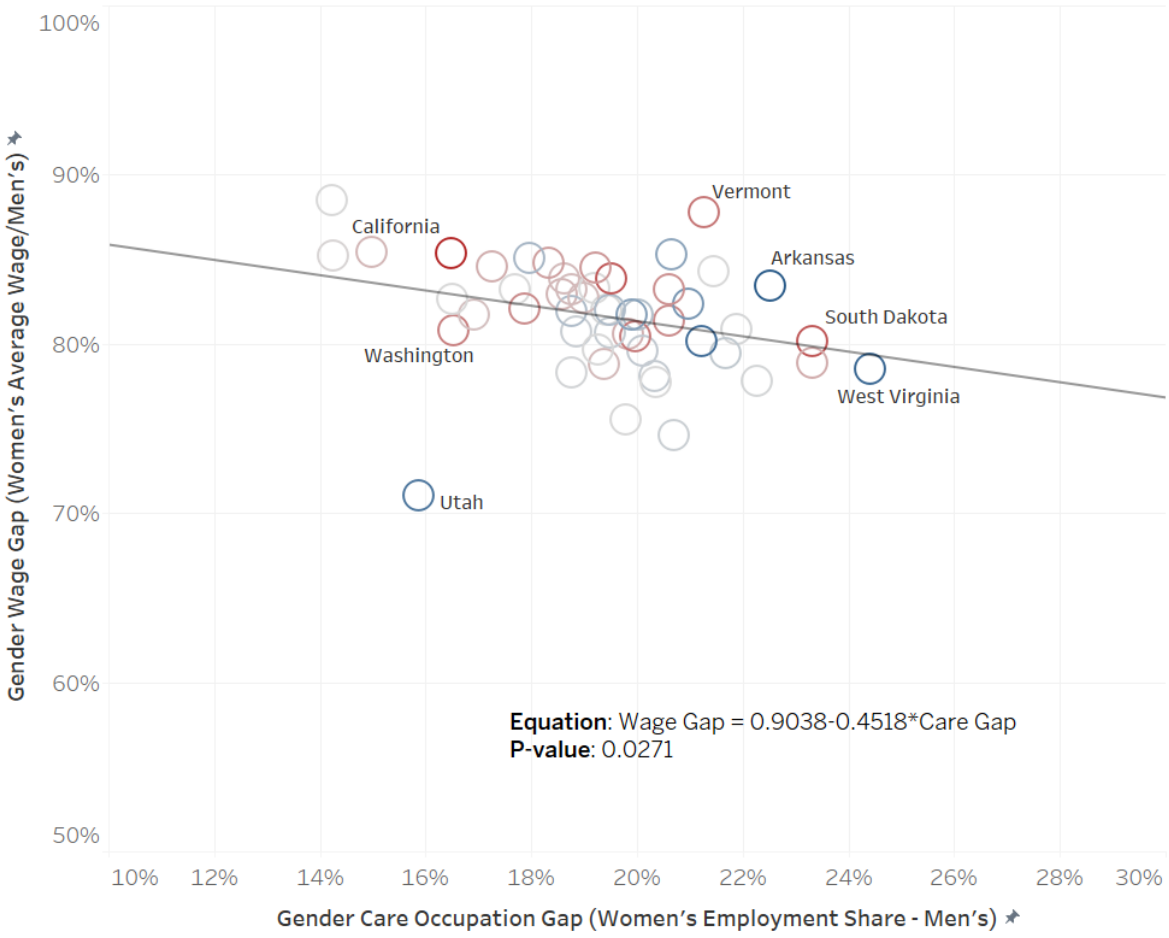
Predicted - Counterfactual	***-0.004***	***-0.058***	***0.054***	***-0.059***	***0.004***	***-0.063***

Note: Predicted counterfactual occupational choices are from base model. Predicted counterfactual occupational choices with alternative post-secondary (and major) sorting refers to the base model predicted occupational choices for individuals born in traditional gender attitude locations after resorting them into the post-secondary education (and major) choices in progressive places conditional on their background.

VI. The Gender Wage Gap

Our results suggest that traditional gender role attitudes may work to segment the labor market for men and women. The dual labor market theory suggests that if women and men are segmented into separate labor markets, then the wage gap between women and men will widen as women are crowded into female-dominated occupations such as care occupations (see for example, Doeringer and Piore, 1971). As evidence of this, we find (using ACS data based on state of birth) that a larger gender gap in care occupations is associated with a larger gender wage gap (Figure 9).

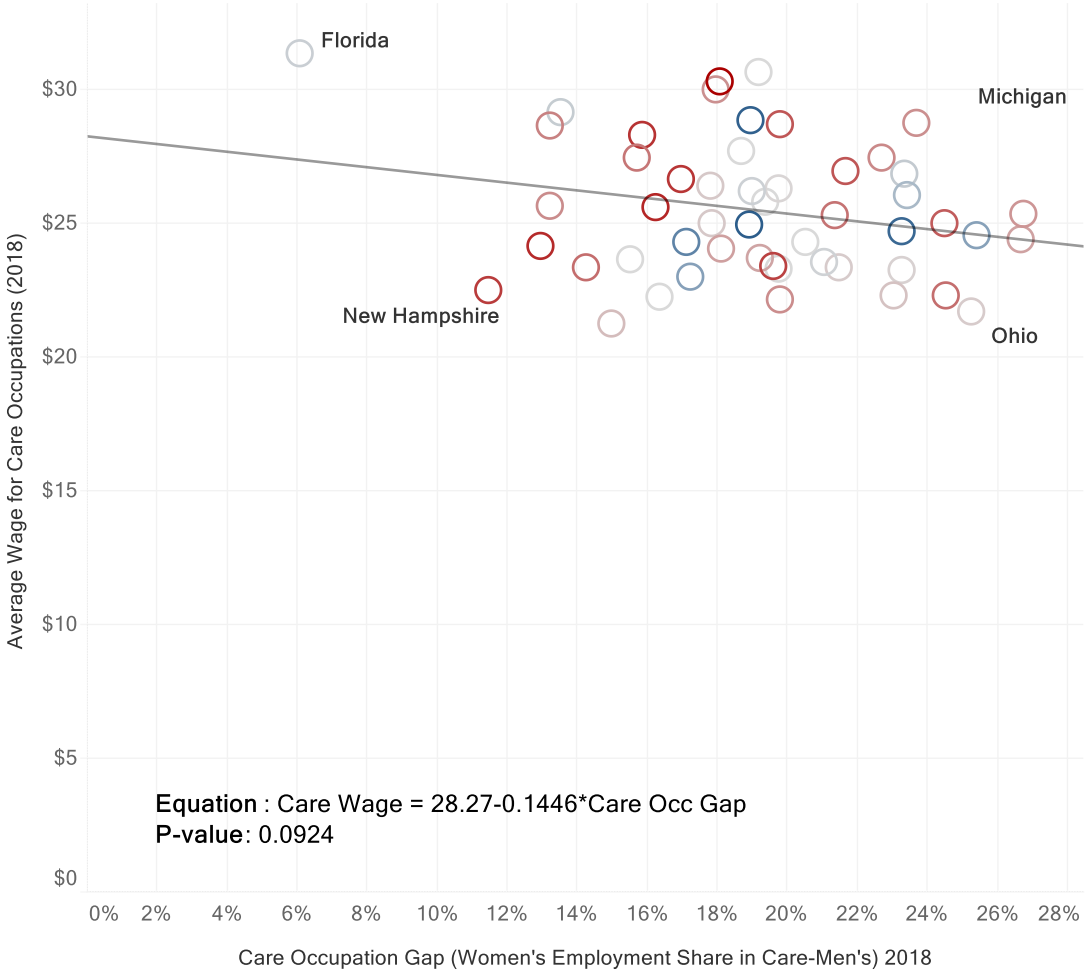
FIGURE 9. THE GENDER CARE OCCUPATION GAP & THE GENDER WAGE GAP



Source: IPUMS ACS (2018) by birth state

This suggests that as care occupations are increasingly female-dominated, this further de-values these occupations, keeping wages low - in line with previous research (Sorenson, 1989, for example) that shows women in female-dominated jobs earn less than comparable women. As evidence of this, inflation adjusted wages for pediatricians and internal medicine doctors (female-dominated) have declined, while wages for surgeons (heavily male-dominated) have increased (Hughes, 2020). As further evidence, Figure 10 shows that states with a larger gender gap in care occupations are associated with lower average wages in the state.

FIGURE 10. THE GENDER CARE OCCUPATION GAP & CARE WAGES



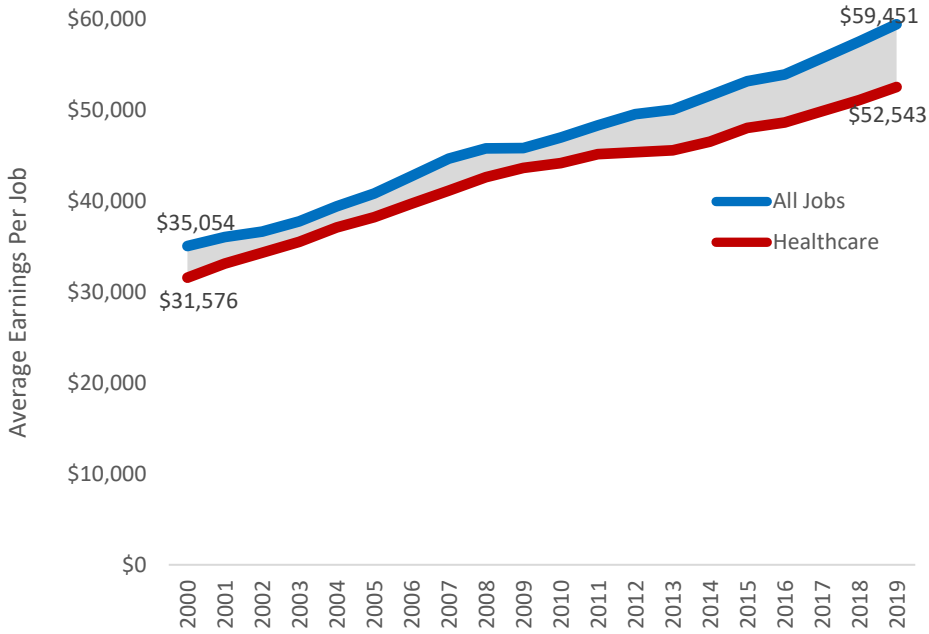
Source: IPUMS ACS (2018) by state

Thus, a widening gender care occupation gap may contribute to the widening of the gender wage gap, even as demand for care occupations, including healthcare, is rising. For example, while spending on healthcare (private and public) has increased 178% since 2000, average earnings in the healthcare sector have only increased by 66% (and employment by 56%).[13] Wage growth in the health sector has also lagged the nation and the gap between average earnings (overall) and

[13] Using total private and public healthcare spending from the Peterson-Kaiser Family Foundation Health System Tracker and data on healthcare employment and healthcare wages and salaries from the U.S. BEA.

average earnings in the health sector has widened (Figure 11). As evidence of the widening healthcare wage gap, the ratio of the average earnings per job in healthcare divided by the average earnings per job (overall) in the U.S. has declined from 90% in 2000 to 88% in 2019.

FIGURE 11. THE HEALTHCARE WAGE GAP



Source: U.S. BEA

As wages have failed to keep pace with the nation, stories of nursing shortages (and teacher shortages) are common (even before the coronavirus pandemic). Higher wages in the care sector would help alleviate these shortages by making jobs in the care economy more attractive to both women and men. If more men enter into care occupations, the value of care work would likely increase as well, further pushing wages up. As the value of care work increases, gendered ideas about care work, both *paid* and *unpaid*, may also become more progressive.

VII. Discussion

Over time, as gender role attitudes became more progressive, women's labor force participation increased. However, in recent decades, women's labor force participation and the closing of the gender wage gap have stalled. At the same time, as suggested by Fortin (2015), the U.S. saw a reversion to more traditional gender role attitudes. Our results suggest that one mechanism by which background sexism or more traditional gender role attitudes work to widen the gender wage gap is through their effect on occupation choice.

Despite women increasingly entering male-dominated fields, the increased demand for paid care work has mostly been filled by women. The increased demand for the work that women typically do led to women's non-farm payroll employment exceeding men's for only the second time in history in January 2020, just before the Coronavirus pandemic. Similarly, when childcare became unavailable to families during the pandemic, the increased demand for *unpaid* care work also fell largely on women (Casselman and Koeze, 2021). Because more of the new care jobs have been filled by women, wages have not risen commensurate with the shift in labor demand as female-dominated work continues to be de-valued. The incentive for men to transition to care work is lower when care work is valued less than other, traditionally male, occupations. Our results show that larger gaps in women and men's employment shares of care occupations are associated with large gender wage gaps.

We also find evidence that the gender occupation gap has been widening over time. While for those close to retirement age, more progressive gender role attitudes can lead more men to choose care occupations, resulting in a smaller gender occupation gap, these trends have reversed. Younger men and women experiencing more childhood exposure to progressive gender role attitudes are less likely to work in a care occupation, but the effect is much more pronounced for

men. Our results suggest that traditional attitudes about gender have played a substantial role in the care occupational segregation that previous research attributes to the devaluing of care work. A decomposition of the care occupation choice shows that a primary channel for this is through the choice of post-secondary (vocational certificate, professional license, two-year, four-year, and graduate) field of study. Among the younger cohort, lower relative care wages make educational attainment higher but care occupational choice less likely (conditional on individual characteristics), for those born in places with more traditional gender role attitudes after resorting into post-secondary education and major choices like those born in more progressive places; but especially for men. This prevents the closing of the gender wage gap.

Our results should concern both men and women. Men that are exposed to more traditional gender role attitudes, "background sexism", are less likely to be employed, in part, because they are less likely to enter care occupations – a growing field that contrasts with the decline of typically male-dominated manufacturing jobs. In fact, Yavorsky, Ruggs, and Dill (2021) found that unemployed men were less willing to take on jobs that required them to perform tasks viewed as more feminine. However, overcoming this stigma has value, as Yavorisky and Dill (2020) found that taking female-dominated jobs after a period of unemployment may actually mitigate the scarring effects of unemployment for men. Interestingly, men appear to benefit the most from more progressive gender role attitudes as our data show that both men and women who were born in states with more progressive gender role attitudes have higher aptitude scores, but even more so for men. Over time, this has led men to increasingly choose non-care occupations which may have contributed to the continuing gender wage gap. Our findings echo the benefits for men and women from removing legal codification of gendered caregiving roles first revealed by Ruth Bader Ginsburg and Marty Ginsburg's 1970s case for Charles Moritz. Although the sole caregiver for

his mother, Moritz was denied caregiving tax deductions because the law distinguished women as caregivers. Through the case, Ginsburg revealed how both sexes are hurt by incorporating gendered caregiving norms into the law (Mar 2020). Our findings suggest both men and women also benefit from changing gendered cultural norms about caregiving.

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