The Stalled Gender Revolution and the Rise of Top Earnings in the United States, 1980 to 2017

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Abstract: The steep rise of top wages is acknowledged as one of the main drivers of the rise in earnings inequality between workers in most postindustrial labor markets. Yet its relation to gender stratification, in particular to the stagnation in the gender pay gap, has received very little scholarly attention. Using data from the U.S. Current Population Survey, conducted between 1980 and 2017, we provide evidence of the enormous weight that the dynamic at the top of the earnings distribution exerts on the gender pay gap. We also show how this dynamic inhibits the consequences of the countervailing process of gender vertical desegregation. Although developments in gender inequality and in the rise of top wages have drawn extensive scholarly attention and have even penetrated into the public discourse in recent years, the two dimensions of inequality are often perceived as unrelated to one another. Our findings, then, highlight the connection between different forms of inequality—class inequality and gender inequality—a relation that demands much more attention in the new economy.

Keywords: gender wage gap; top earnings; earnings polarization; gender segregation

ONE of the most troubling processes in postindustrial labor markets is the polarization of earnings between workers. An exception to this general trend is the declining earnings gap between men and women since the 1980s in most postindustrial labor markets. A closer look at the two processes over the course of time shows that whereas the polarization of earnings has steeply risen in the last two decades, the pace of the convergence of men’s and women’s earnings has decelerated over the same period. The extensive discussion on the mechanisms that fuel the first process has identified the rise of top wages as one of its main drivers (Piketty and Saez 2006; Saez 2017; Schneider and Tavani 2016). In the United States, for example, the wages of the top one percent increased by 160 percent between 1979 and 2019, as compared with a wage increase of about 26 percent in the bottom 90 percent (Mishel and Kandra 2020). At the same period a continuous upward mobility of women has taken place in almost all areas of life in postindustrial societies. In particular, women’s college graduation rates have surpassed men’s, their advantage keeps expanding, and their entry into lucrative professional and managerial occupations has consistently continued (England 2010; Mandel 2013). Given these trends, the deceleration of the narrowing of the gender pay gap is surprising.

Motivated by the two opposing processes, in this study we examine the persistence of gender inequality in the American labor market in recent decades, focusing on the stagnation of the gender pay gap—the most evident display of this persistence. We argue that the steep rise of top wages has an enormous effect on the stagnation of the gender wage gap in the new millennium because it interacts with
one of the most prominent characteristics of gender inequality, namely, the “glass ceiling.” Although the glass ceiling phenomenon is in decline, it is still particularly prominent among top-tier positions in all modern labor markets, the same positions in which wages have skyrocketed in recent decades. Our findings indeed show that the joint effect of these two factors is associated with the narrowing of the gender wage gap during the 1980s and 1990s and its subsequent stagnation afterward. Specifically, gender vertical desegregation (which involves the penetration of women into top and lucrative positions) contributed to narrowing the gender pay gap during the 1980s and 1990s, but the sharp rise of top earnings when approaching the new millennium has offset the equalizing effect of this desegregation due to the (still persisting) underrepresentation of women above the glass ceiling.

Responding to calls for expanding the study of the links between macroeconomic processes and gendered outcomes (Seguino 2013, 2020), our study is set to contribute to an underdeveloped strand in the vast literature on gender stratification by revealing the consequences of structural processes—for example, the rise in top earnings—for gender inequality. Although this rise is a hot topic in the study of labor income dynamics, this emerging topic is studied in relation to economic, political, and cultural forces that are generally regarded as non-gendered. Furthermore, to the best of our knowledge, the effect of top earnings on trends in the gender wage gap has yet to be examined in the U.S. labor market, although it is an ideal context for this goal. This is because the sharp rise in top earnings, as well as the countervailing processes of gender desegregation, although evident in almost all postindustrial countries, have been particularly noticeable in the United States (England and Li 2006; Saez 2017).

Our focus on the effect of top earnings on the gender pay gap underscores the importance of widening class inequality for understanding developments in gender inequality. Highlighting the connection between class and gender inequality is of particular importance today, a time in which the rise of top earnings keeps fostering the expansion of earnings inequality, with no signs of this process being mitigated in the future. Given the substantial and troubling rise of top earnings in all modern societies, and its effect on class and gender inequalities, our investigation concretizes the idea that confronting gender inequalities cannot be detached from class inequality, as the two forms of inequality are inherently related. Our conclusions therefore carry clear practical implications for the ways societies can and should confront inequality.

In the following, we refer to the theoretical field in which our work is anchored and elaborate on our rational and analytical goals. In our empirical investigation we first provide evidence of the two trends we focus on—the rise in top earnings and the process of gender desegregation—to show how evident both trends were in the American labor market between 1980 and 2017. We then provide evidence of the enormous weight the dynamic at the top exerts on the gender pay gap—first, by examining over-time trends in the gender pay gap when the top is omitted, and, second, by employing a counterfactual analysis that holds constant each of the two processes.
Theoretical Background

The last two decades of the twentieth century were marked by a notable shift in gender relations that had profound implications and led to a convergence between men and women in a series of economic indicators. The gender gap in labor market participation has narrowed, as well as the gap in working hours (Blau and Kahn 2017). Women’s educational attainment caught up with men’s and then exceeded it at both the graduate and postgraduate levels (DiPrete and Buchmann 2006). Concomitantly, women entered previously male-dominated occupations and jobs, particularly in professional and managerial occupations, leading to a decline in the occupational segregation between men and women (Blau, Brummund, and Liu 2013). These trends, as well as the growing denouncement of discrimination against women, translated into a substantial decline in the gender wage gap during the 1980s and 1990s (Blau and Kahn 2017; England 2006).1

In contrast to the rapid narrowing of gender inequality during the 1980s and 1990s, for the past two decades the gender wage gap has stagnated, even more so at the top of the wage distribution. Since 2000, the ratio between women’s and men’s wages has fluctuated at around 0.83 for full-time workers and around 0.78 at the top decile (England, Levine, and Mishel 2020). This trend, which indicates a stagnation in the “gender revolution” (England 2010; England, Levine, and Mishel 2020), may seem surprising, as it is at odds with processes that should have advanced gender equality, like the growing advantage of women in terms of educational attainment (DiPrete and Buchmann 2013) and their continuous penetration into traditionally male professional and managerial occupations (Roos and Stevens 2018).

The prevalent explanations for gender inequality cannot help to resolve this conundrum. Three main types of explanations can be identified in the literature, which should be seen as complementary rather than mutually exclusive. First, and most common, are explanations based on the persistence of differences in the characteristics of male and female employees, the types of work they do, and their commitment to the labor market. These explanations focus on gender differences in factors like employees’ work experience, hours of work, and career breaks, as well as men’s and women’s distribution across occupations, jobs, industries, and firms; all are being used to explain the persistent gender pay gap (Blau and Kahn 2017). It is important to note that although gender segregation is declining, it is far from completely eliminated. Because of its vertical dimension, gender segregation of any kind still serves as a key factor responsible for the persistence of wage disparities between men and women (Hegewisch and Hartmann 2014; Levanon and Grusky 2016; Roos and Stevens 2018). In particular, considerable gaps still remain between men’s and women’s representation in STEM occupations (science, technology, engineering, and mathematics), especially engineering and computer-related occupations (Martinez and Christnacht 2021), and, at the other pole of the wage structure, in care occupations (Dwyer 2013; England, Budig, and Folbre 2002). The distinct career paths taken by male and female employees are attributed to a range of underlying factors, from differences between men’s and women’s choices and preferences to differences in their socialization and in their commitment to unpaid care and domestic work (Hakim 2006; Levanon and Grusky 2016).
A second type of explanations for the persistence of the gender pay gap is focused on discrimination, devaluation, and exclusion of women. More broadly, these explanations address the inferior treatment that women—and women’s traits—face in the labor market. Although direct evidence of discrimination is hard to gather systematically, attempts to indirectly assess labor market discrimination suggest that it still plays a significant role in hindering women’s opportunities and prospects in the labor market (see the review in Blau and Kahn 2017). One aspect of discrimination is the devaluation of tasks and jobs associated with women and femininity. The most prominent evidence for the devaluation of women’s work can be found in the deterioration of the rewards in occupations that undergo feminization (Goldin 2014; Levanon, England, and Allison 2009; Mandel 2013). Evidence for the exclusion of women is also generally indirect because it is difficult to differentiate between exclusion and preferences or self-selection. Exclusion is often studied in relation to the glass ceiling effect, namely, the underrepresentation of women as compared with their male counterparts higher up the hierarchy—be it the organizational, occupational, or wage hierarchy. Some explanations for the decreasing representation of women as we go up the hierarchy point to stereotypes concerning women’s incompetence and social closure among male-dominated decision-making circles that inhibit women’s access to top positions and high wages (Ridgeway 2011).

The two types of explanations, namely, the differences in the characteristics between men and women and the different sources of women’s exclusion, have been regressing for the last four decades and thus do not resolve the question regarding the enduring gender wage inequality. The third type of explanations, and the least developed in the literature, links the persistence of the gender pay gap to structural factors that are usually regarded as unrelated to gender. At the core of such explanations is the idea that changes in the wage structure—that is, the criteria determining the rewards system in the labor market—have major consequences for gender pay inequality. The works of Blau and Khan (1997, 2006), which dominate this stream, show how consequential the rewards system is for the gender pay gap by referring, for example, to the effect of the rise of wage premiums for years of work experience. Arguably, an increase in returns to work experience is an economic change in the wage structure that has nothing to do with gender. However, the rise of the rewards to work experience has contributed to sustaining gender inequality because of the fact that women tend to have fewer years of experience than men. Thus, men could benefit from these premiums more than women. The same logic applies to changes in the rewards to different occupations and positions in the labor market. When wage gaps widen between occupations—for example, between STEM and teaching or between low-level employees and managers—the wage gap between men and women is affected as well because of the unequal gender composition in these jobs and occupations.

The rise in rewards to specific positions and occupations (like STEM and managers), or forms of human capital (like work experience), has been stimulating the rise in earnings (class) inequality in postindustrial labor markets. Yet the rise of earnings inequality has not been uniform across the earnings ladder. Rather, the extensive discussion on the mechanisms that fuel this process has identified the
steep rise of top wages as one of its main drivers, especially since the beginning of the new millennium (Piketty and Saez 2006; Saez 2017; Schneider and Tavani 2016).

In the United States, for example, the wages of the top one percent increased by 160 percent between 1979 and 2019, as compared with a wage increase of about 26 percent in the bottom 90 percent. In consequence, the top one percent has increased its share of all wages, from below eight percent in the early 1980s to approximately 13 percent in 2010 (Mishel and Kandra 2020). More recently, between 2000 and 2018 the income of full-time full year workers of the top one percent increased by 23.4 percent, as compared with an increase of 6.4 percent in the median (Price and Edwards 2020).

In this work we examine the impact of the steep rise of top wages on the stagnation in the gender wage gap in the new millennium. Embracing the third explanation, we expect the rise of top wages to enlarge pay disparities between men and women because it interacts with one the most prominent characteristics of gender inequality, namely, the glass ceiling. The concept of “glass ceiling” describes the (transparent) barriers that inhibit women’s opportunities to gain promotions and high wages and that lead to the low representation of women at the top of the wage hierarchy. Although this phenomenon is declining, it is still particularly prominent among top-tier positions in all modern labor markets. Because these are the same positions in which wages have skyrocketed in recent decades, the effect of the rise in top earnings on the gender pay gap is expected to be substantial.

When over-time trends are taken into consideration, the upward occupational and educational mobility of women described above is expected to mitigate the glass ceiling effect and, in turn, to narrow the gender wage gap, as indeed happened during the 1980s and 1990s (Barreto, Ryan, and Schmitt 2009). However, the substantial rise of top earnings at the dawn of the new millennium could be the reason why—despite women’s continuous economic advancement—the narrowing of the gender pay gap has slowed down. Put differently, the stagnation in the narrowing of the gender pay gap stemmed from the fact that the rungs of the earnings ladder above the glass ceiling moved farther away from the rest of the distribution.

The findings of Blau and Kahn (1997; 2006) support our expectation, showing that the rising premium for work experience—or in other words, the widening wage structure—makes it harder for women to close the gender pay gap over the course of time because they have less work experience than men’s. Put differently, the rising (overall) wage inequality makes it harder for women to close the gender pay gap because of their inferior positions on the wage ladder. Whereas Blau and Kahn’s works (1997, 2006) concentrate on the effect of returns to skills, or the wage structure as a whole, we refer to a specific portion of it—the effect of the rise of top earnings. This rise and the role it plays in expanding earnings inequality, although they have been widely discussed in the economic research, have received very little attention in studies of gender earnings inequality. In our comprehensive reading, we found only two exceptions (Fortin, Bell, and Böhm [2017] for Canada, Sweden, and the United Kingdom and Bonikowska, Drolet, and Fortin [2019] for Canada), both of which show that the entry of women to the upper rungs of the wage distribution has not kept pace with the increases of top earnings. Despite
being an ideal empirical case, we did not find any study that examined this topic in the United States, although the sharp rise in top earnings and the countervailing processes of gender desegregation are both particularly noticeable in this context (England and Li 2006; Saez 2017).

Summary, Objectives, and Significance

In an attempt to understand the persistence of gender inequality in postindustrial labor markets, our work joins other studies that ask, why has the gender revolution been stalled for over two decades (England, Levine, and Mishel 2020)? Our assertion is that much of the stagnation in the gender pay gap stems from structural forces that relate to the dynamic at the top of the earnings distribution, namely, the steep rise of earnings at the higher rungs. More specifically, we examine the effect of two processes—gender vertical (de)segregation and earnings polarization at the top—on over-time trends of the gender pay gap. These two processes have opposite effects on the wage gap between men and women. On the one hand, the convergence between men’s and women’s occupational and wage distributions over the course of time contributed to the rapid narrowing of the gender wage gap during the 1980s and 1990s. On the other hand, because women’s representation among high earners still lags far behind men’s, the liftoff of top earnings in recent decades mostly benefited men and thus contributes to mitigating the continuing decline in gender pay gaps. This investigation yields important contributions:

1. It is set to contribute to the least developed strand in the vast literature on gender stratification by revealing the consequences of structural factors and processes—such as the rise in top earnings—for gender inequality. These factors and processes are driven by economic, political, and cultural forces that are not explicitly gendered. From this perspective, acknowledging that the way workers are rewarded unintentionally, but systematically, favors men is vital for understanding the persistence of gender earnings inequality.

2. Related to the point above, the focus on the interactive effect of the two processes challenges the boundaries within the current academic literature. Research on the rise of top incomes, although a hot topic in the study of labor income dynamics, pays very little attention to gender (Atkinson, Casarico, and Voitchovsky 2018; Boschini, Gunnarsson, and Roine 2020). The opposite is true as well—the examination of the gender pay gap and the exclusion of women from high-paying positions is often detached from the broader dynamics of earnings inequality. Contributing to bridging this gap, our work turns the spotlight on the connection between different forms of inequality—earnings (class) inequality and gender inequality. The former, which is generally regarded as non-gendered, sets the structure within which gender inequality is shaped and evolves. It thereby answers the call for expanding the study of the links between the macroeconomy and gendered outcomes, particularly gender wage disparities (Seguino 2013, 2020).

3. Understanding the significance of top earnings for trends in gender inequality is of particular importance today, with the substantial and troubling rise of
top earnings in all modern societies. The rise of top earnings has become a key driver of the rise in earnings inequality in recent decades, and there are no signs that in the new economy this process will be mitigated (Saez 2017). These recent and expected future trends—which offset women’s economic achievements—raise many questions that should concern anyone who cares about gender inequality and inequality in general.

4. Because the stagnation in the gender revolution is so widespread, as is the rise in class inequality in recent years (OECD 2011), such an investigation carries clear practical implications for the way societies can and should confront inequality. The implications are that rather than asking, “What should women do more in order to overcome their wage disadvantage?,” we should be paying much more attention to questions like, “How do structural changes in the labor market—such as the widening pay gaps between STEM and other occupations—contribute to sustain wage disparities between men and women?”

Data Sample and Variables

The study exploits data from the Annual Social and Economic Supplements of the Current Population Survey (CPS), conducted between 1980 and 2017 by the Integrated Public Use Microdata Series-CPS (IPUMS-CPS) (Flood et al. 2017). In order to focus on workers with a stronger attachment to the labor market, our sample is restricted to full-year employees aged 25 to 64 with positive earnings. We analyze employees’ annual wages, measured by the total annual pretax wage and salary income from the calendar year that preceded the survey, adjusted for inflation (2017 basis).

We conduct our analysis of the gender wage gap after controlling for the effects of the following background characteristics: college education (defined as bachelor’s degree or higher, or, in the surveys before 1992, at least four years of college), typical working hours, age (in years) and age squared, race (white; black; Hispanic; “other,” including respondents from mixed, Asian, or Pacific origins), marriage, and number of children.

Rising Earnings Inequality from the Top

As noted at the outset, it is well documented that earnings inequality in the American labor market has increased tremendously over the past four decades. A central driving force of this trend was the spiraling wages at the top of the wage distribution. Figure 1 illustrates this process. Figure 1(a) shows the ratio between the top and the median annual wage and its changes since 1980. Specifically, the annual earnings at the top 80th, 90th, and 95th percentiles are compared with the median, which makes it possible to evaluate the disparity between different points at the upper part of the distribution and its midpoint. To provide a closer look at the dynamic at the top, Figure 1(b) shows the annual wage ratio within the right tail between the 95th percentile and the 80th and 90th percentiles.
Figure 1: (a) Wage ratios between top percentile points and the median. (b) Wage ratios between the 95th percentile and lower percentile points at the top. (Loess smoothed trend lines.)

Figure 1(a) shows that the gap between the median and the three percentile points at the top has widened over time, but not at the same rate. As we compare the median with a point higher up the wage hierarchy, the ratio rises at a faster pace. This finding indicates that the increase of wage inequality is indeed characterized by the stretch of the right tail of the distribution. Providing further evidence of this stretch, Figure 1(b) shows that over time the very top earnings have indeed grown at a rapid pace and moved further away from the rest of the distribution, including the lower parts of the right tail. Notice that during the last few years the gap within the top has been increasing at an even faster rate than before.

Declining Gender Segregation and Women’s Persistent Underrepresentation at the Top

As noted above, gender segregation in the labor market makes a major contribution to the gender pay gap because of its clear vertical dimension. Women’s jobs not only differ from men’s but also tend to be inferior in terms of earnings, prestige, and power (England 2005; Hegewisch and Hartmann 2014). Because we highlight the importance of top earnings vis-à-vis the vertical (hierarchical) dimension of segregation, we measure gender segregation across the earnings distribution. This makes it possible to capture directly the vertical dimension of sex segregation and expose the glass ceiling. Specifically, we divide the annual wage distribution into percentile groups and compare men’s and women’s representation within them.

Figure 2 shows the representation of women in each of the 100 percentiles of the wage distribution. Because the respective shares of men and women in the labor
force are not equal, we compare men’s and women’s share in each percentile, after accounting for men’s higher labor force participation in each year (Kopczuk, Saez, and Song 2010). We therefore calculated the ratio between the share of women in each percentile and their share among all (full year) employees in the same year. A ratio of 1 means that women’s representation in a given percentile is equal to their share in the labor force. A ratio above or below the value of 1 means that women are either over- or underrepresented, respectively. Figure 2 uses a colored scale to represent the extent of gender segregation in wage percentiles since 1980, where shades of blue and pink indicate men’s and women’s overrepresentation, respectively, and percentiles with close to equal representation appear in yellow. (A table format of these results, including the values in each cell, is presented in the online supplement of this article.)

Figure 2 shows the polarization that characterized the early 1980s, as men were overrepresented in the upper half of the wage distribution, women were overrepresented at its bottom, and in only a small fraction in the middle men’s and women’s shares were similar to their proportion in the labor force. The dark blue and dark pink colors indicate that during the 1980s the top and bottom percentiles were extremely segregated, with men populating almost the entire upper part of the wage distribution and women dominating the bottom. At the end of the 1980s this extreme polarization gradually faded. This process of desegregation over time is manifested in lighter colors of blue and pink at the extremes and in the widening yellow section in the middle of the figure, which takes up more than a third of the distribution at the end of the period. Whereas in 1980 men’s and women’s representation in the wage distribution was similar in less than 10 percent of the distribution, by the end of the period this balanced section in the middle had expanded to about 40 percent. Nevertheless, although the extent of women’s over- and underrepresentation at the bottom and top has fallen, the extremes remain segregated, with a clear overrepresentation of women in the bottom five percent and of men in the top five percent even in the 2000s.

As elaborated in the theoretical section, the persistent underrepresentation of women at the very top of the wage distribution is highly consequential for the gender wage gap. To highlight this, Figure 3 focuses directly on the representation of women at the top, presenting the men-versus-women odds ratios of being in the top 20, 10, and 5 percent of the wage distribution. It shows that at the beginning of the period men’s odds of being at the top were much higher than women’s and that their advantage increased further up the wage hierarchy (from about 12 times more in the top 20 percent to 18 times more in the top five percent). The upward mobility of women during the 1980s and 1990s led to a striking decline in men’s advantage, but this decline has slowed down since the mid-1990s. In recent years, despite the slow but steady increase of women’s representation in the right tail of the wage distribution, they remain a minority, and men’s odds of being at the top remain about 2.5 times higher than women’s (with higher odds ratios higher up the hierarchy). Such extreme segregation, even if slowly declines over time, can be very costly in times of extensive growth in wage inequality, especially if it is driven from the very top, as shown in Figure 1. In the next section, we explore the ramifications of this finding for the gender wage gap.
As suggested above, the joint effect of two factors—the rising wages at the higher rungs and the persisting underrepresentation of women in these rungs—contributed to the slowdown of the narrowing of the wage gap between men and women. We have suggested that these two factors may offset the effect of gender desegregation (shown in Figure 2), which made a major contribution to the narrowing of the gender pay gap.
gender pay gap in the past. Testing this proposition requires an analysis that integrates changes in a compositional factor (changing gender (de)segregation) with a structural/contextual change (rising earnings inequality) in order to examine their impact on the gender wage gap. To examine whether the mechanisms we have proposed are indeed in play, we first provide evidence of the enormous weight that the dynamic at the top carries, as regards the gender pay gap, by examining the gender pay gap when the top is omitted. We then present evidence for the distinctive effect of each mechanism by employing a counterfactual analysis that estimates over-time trends in the net gender pay gap after holding constant the contextual and compositional factors.

If indeed the top of the earnings distribution is so consequential for the gender wage gap, then calculating the gap while omitting high earners from the analysis should result in a substantially smaller gap between men and women. Figure 4
Figure 4: Wage ratios between female and male employees in truncated samples (Loess smoothed trend lines).

shows exactly that. It presents the wage ratio between women and men among all employees and among a series of truncated samples that were cut at different percentile points. Note that the figure does not present the raw ratios between women’s and men’s average observed wages but rather between their estimated wages from ordinary least squares regressions controlling for the employees’ background characteristics detailed in the data section. All gender wage ratios presented in the article are estimated in this way.

The black trend line represents the ratio among all employees and shows the well-documented trend of narrowing gender gap during the 1980s and 1990s and
the stagnation in the years that followed, in which the ratio fluctuated at around 0.77. After excluding the 10 percent of employees with the highest earnings (most of whom are men, as seen in Figure 2), we find a similar trend but with much smaller gender gaps: a ratio that has fluctuated around 0.85 in the past two decades. Excluding the top 20 percent yields even smaller disparities and a gap that has slowly kept closing in recent years. In fact, if we look at the bottom 80 percent of employees, the gender wage gap has recently dropped to almost 10 percent, which is far less than the values we often think of when it comes to the gender pay gap. These findings not only illustrate the magnitude of the effect that top earners have on the overall gender pay gap but also, no less importantly, show that this effect has increased over time. During the 1980s, the gap among the bottom 90 percent was less than 20 percent lower than the gap among all employees, whereas since 2000—with the rise of top earnings—it has been more than 35 percent lower on average.

Figure 4 not only illustrates the importance of the dynamic at the top for gender inequality but also reveals an important phenomenon at the bottom of the wage hierarchy, which is a mirror image of the processes at the top. It shows that although the stagnation in the gender wage gap is evident under all estimations, among the bottom half of the wage distribution, and even more so at the bottom quintile, there are almost no gender disparities between men’s and women’s earnings. This is a significant finding in its own right, as it suggests that despite the relatively higher gender segregation in low-skill occupations in comparison with high-skill occupations (Hegewisch and Hartmann 2014), wage differences between men and women are much smaller in the lower half of the wage distribution. The figure therefore underscores the significance of the combination of segregation and the wage structure: among low-paying jobs—where the wage structure is compressed—gender segregation does not generate wage disparities, whereas among high-paying jobs—where the wage structure is stretched—segregation plays a key role in maintaining women’s earnings disadvantage.

The fact that much of the gender gap comes from the top advances our goal of revealing the mechanism responsible for the perpetuation of the gap for the last two decades. However, as noted above, the interplay of two factors lies at the core of this mechanism, so it is essential to differentiate between them in order to understand their combined effect. We do so by taking a counterfactual approach that enables us to simulate what would have happened to the gender wage gap if gender segregation and earnings inequality had been held constant throughout the period.

Two types of simulations are carried out. In both, the gender wage ratios were estimated after controlling for respondents’ characteristics listed above (equations of the simulations appear in the online supplement).

1. The wage ratio between women and men is estimated under the condition of no change in gender segregation, that is, as if the representation of men and women across wage percentiles had remained as it was in 1980. We attain this “constant segregation condition” by reweighting respondents using weights that equate the proportions of men and women in each percentile to their proportion in the corresponding percentile in 1980. By doing so, we...
“freeze” the composition of men and women across the wage distribution while allowing the values of the wages themselves to change between years, as they really did.

2. The gender wage ratio is estimated under the condition of no change in earnings inequality. This “constant inequality condition” was attained by assigning to respondents in each percentile the mean wage of their corresponding percentile from 1980. This makes it possible to freeze the wages and artificially prevent the rise of earnings inequality while allowing the composition of men and women across the distribution to change as it really did. (See endnote for the validity test.)

The trends of the simulated female-to-male wage ratios under these two conditions are presented in Figure 5, alongside the trend of the actual ratios. Considering first the constant segregation condition (the green line), the discrepancy between the simulated and the actual ratios is striking. The gap between men’s and women’s wages would have been much larger if the gender composition across wage percentiles had remained at the 1980 levels (i.e., if women’s and men’s representation in wage percentiles is kept unchanged, as in the vertical column for 1980 in Figure 2, but wage differentials between percentiles are not). Undoubtedly, the process of desegregation shown in Figure 2, namely, women’s upward mobility through the earnings hierarchy, has contributed immensely to the narrowing of the gender pay gap. The substantial divergence between the real wage ratios and the simulated ratios (horizontal green line) indicates the contribution of women’s upward mobility on the earnings hierarchy to reducing their wage disadvantage relative to men. Until 1995, and especially during the 1980s when the overall wage inequality was more restrained, the pace of desegregation contributed greatly to the declining gender wage gap. This suggests that if women had not improved their positions on the earnings distribution during this period, the gender wage gap would have remained the same, that is, it would not have rapidly declined as it actually did.

From the mid-1990s onward, the simulated ratios under the constant segregation condition are drawn farther away from the actual ratios. This divergence indicates that without the process of desegregation—that is, if men’s and women’s compositions across the wage hierarchy had remained as they were in 1980—the gender wage gap would have grown substantially during this period, from 36 percent (a ratio of 0.64 in the mid-1990s) to 42 percent (a ratio of 0.58 in 2017). The outcome of holding constant the (over)representation of men in the higher positional ranks while allowing these ranks to move farther away from the rest of the distribution (as they did during that period; see Figure 1) is the rising gender disparities denoted by the descending green trend line in Figure 5.

The direct effect of rising earnings inequality is displayed in the second simulation, in which we examine what would have happened to the female-to-male wage ratio if earnings inequality in the labor market had remained as it was in 1980. The results of this simulation are represented by the red line in Figure 5. The distance between the observed and the simulated wage ratios reveals the contribution of widening wage inequality to the gender pay gap. As expected, when earnings inequality is held constant, wage disparities between men and women are
much lower, and the trend of a declining gender wage gap gradually but steadily continues, reflecting the ongoing process of desegregation and women’s upward mobility. In other words, to use the “swimming upstream” analogy (Blau and Kahn 1997), rising earnings inequality over the past decades is what generated the current against which women had to swim. During the 1980s, when earnings inequality did not significantly widen (see Figure 1(a)), the discrepancy between the simulated and the actual ratios was small. During this time, then, the rapid upward mobility of women contributed to a decline in the gender wage gap, without the countervailing effect of rising earnings inequality. Since the mid-1990s, the rapid rise of earnings inequality has offset the effect of desegregation, leading to relative stability in the gender wage gap.

As pointed out, we argue that much of the effect of rising earnings inequality comes from the overrepresentation of men at the top, which leads to men benefiting much more than women from the rapid rise of wages in these higher ranks. To examine whether this is indeed the case, we performed an additional series of simulations that modify the constant inequality condition so that only selected percentile groups from the top are held constant (at their 1980 levels), rather than
the entire distribution. Specifically, we add to our initial analysis three simulations of the wage ratio between women and men in which we freeze only the top quintile, top decile, or top five percent of wages, holding them at their 1980 levels. The results—presented in Figure 6—confirm our argument. Indeed, the simulated wage ratios in which only the top wages were held constant are very similar to the simulated ratios in which all wages were held constant, and all differ from the actual ratios. To reiterate, if we only prevent the rise of top wages, we find almost the same effect on gender wage disparities as if we held constant the whole distribution. After the mid-1990s, when the rise of wage inequality gained momentum, the trends of the simulated and the actual ratios significantly diverge, underscoring the significance of top earnings for the overall level of gender wage inequality.

In sum, the two types of simulations presented here suggest that desegregation, namely, women’s upward mobility, has immensely contributed—and still contributes—to narrowing the pay gap. However, desegregation has had only limited success at the top, and therefore the persistent overrepresentation of men among high earners, together with the growing wage differentials between the top and the rest of the distribution since the 1990s, have mitigated the effect of overall desegregation on the gender wage gap. Even if men’s persistent overrepresentation
at the top is slowly declining, it has allowed them to maintain their wage advantage relative to women. In other words, women’s absence from the very top became more costly after the mid-1990s because of the expansion of top earnings, which explains the slowdown in the progress of declining gender wage inequality.

Discussion

The stagnation of the gender wage gap in postindustrial labor markets over the past two decades is well recognized. Despite steadily decreasing gender segregation and the increasing representation of women in lucrative professions, the wage gap persists, and this has drawn the attention of researchers and policymakers. Many studies of this trend focus on identifying and highlighting the disadvantages that women still have as explanations for the persistence of the gender wage gap (Blau and Kahn 2017). This approach essentially asks how women should further assimilate to reduce their wage penalty. Inspired by others before us (Blau and Kahn 1996; Mandel and Shalev 2009), the current article highlights the significance of structural conditions within which gender differences translate into wage differentials. This structural perspective on gender stratification yields a different kind of conclusions. Rather than identify what women should do in order to overcome their wage disadvantage, it identifies changes in the structure of the labor market that, if implemented, would narrow the wage gap between men and women.

Specifically, this article demonstrates the strong connection between the polarization of wages at the very top of the wage distribution and gender wage gap and shows how changes in the former affect the latter. It shows that the rapid rise of wages in the higher ranks of the wage distribution (structural forces), coupled with the (still persisting) underrepresentation of women in these positions (compositional forces), is highly consequential for the persistence of the gender wage gap. The inescapable conclusion is that as long as earnings at the top keep increasing and move away from the rest of the distribution, gender wage disparities are unlikely to narrow. Our article, then, addresses the strong connection between two forms of inequality that are usually studied independently and underscores the importance of incorporating structural approaches for a more thorough understanding of gender stratification. The main takeaway from this is that reducing class inequality—and restraining the rise of top earnings in particular—is a crucial step toward equalizing wage differences between men and women.

Regrettably, recent trends in the new economy are moving in the opposite direction, which raises many questions that should concern anyone who cares about gender inequality and inequality in general. The case of STEM occupations can help us concretize these questions in terms of the dynamics between compositional and structural forces. The share of STEM occupations in postindustrial labor markets is rapidly growing; in the United States between 2009 and 2015, employment in STEM occupations grew much faster than in other occupations, 10.5 percent as compared with 5.2 percent in non-STEM occupations (Fayer, Lacey, and Watson 2017). At the same time, employees with STEM majors earn 64 percent more than employees in teaching and services occupations, $76,000 annually relative to $46,000 annually (Carnevale, Cheah, and Hanson 2015). Given that STEM occupations are dominated
by men, the dynamic between compositional and structural changes of the kind presented here is likely to contribute to widening the gender pay gap if (1) STEM occupations continue to offer a higher wage premium relative to others (structural) and (2) gender segregation between STEM and non-STEM occupations persists (compositional). Recent findings indicate that these processes are not only plausible but might even intensify, as the premium for STEM occupations has grown over time relative to non-STEM occupations, a structural change that favors men much more than women. Moreover, although women are entering STEM occupations in growing numbers, the gender gap in the acquisition of STEM tertiary degrees is still large, and surprisingly it is larger—not smaller—in more gender-equalitarian and rich postindustrial societies (Charles and Grusky 2004; Stoet and Geary 2018), which may give us some indication of future trends.

This brings us back to the theoretical motive of this article, which is to highlight the importance of structural forces by shifting the focus to questions such as “How can structural changes in the labor market narrow the wage gap between men and women?” rather than “What should women do more in order to overcome their wage disadvantage?” We have good reasons to invest more theoretical thought and empirical efforts in the former. First, the latter is prevalent and therefore very heavily researched as compared with the former. Second, the conclusion that arises from the latter—namely, that in order to achieve pay equity with men in the new economy, women would have to further intensify their participation in STEM—is problematic. This is because even in most egalitarian societies the allocation of paid and unpaid work is still highly gendered (Mandel and Lazarus 2021), and therefore most women face many more obstacles than men to enter male-dominated occupations, like the STEM occupations. The prevalent practice in most postindustrial societies is to further encourage women to enter STEM occupations, or in other words, to strengthen compositional processes by helping women develop careers more similar to men’s. But as shown here, structural forces may offset the possible equalizing effect of this change.

Furthermore, expecting women to seek a career more similar to men’s for the sake of achieving equality is unjust, not only because they face more obstacles to doing so but also because this limits their choices and their opportunities to fulfill themselves. This last argument echoes feminists’ ongoing criticism toward the “sameness” approach—that is, the expectations from women to act as men do—for achieving gender equity (Chávez, Nair, and Conrad 2015; Tong 2007). Recent findings may indirectly support these claims by showing that in more gender-egalitarian countries—countries that readily encourage boys and girls to express their “gendered selves”—women “dare” to report that they like math and science less relative to other countries (Charles and Bradley 2009; Charles and Grusky 2004). If, as the researchers suggest, math and science majors are on average less conducive to women’s self-expression, then the conclusion that in order to achieve pay equity with men women will have to intensify their participation in STEM is problematic. An alternative is to seriously consider structural “solutions” that lower the cost of being in non-STEM (vs. STEM) occupations. A first step toward such a solution is to acknowledge that the rewards for working in STEM versus non-STEM occupations are not gender-blind. Rather, they have serious implications for gender inequality.
not only economically but also in terms of self-accomplishment. These changes require reconsidering the criteria that underpin occupational rewards, criteria that are viewed as determined solely by gender-blind supply and demand forces.

Processes at the lower pole of the wage hierarchy—where gender segregation coexists with gender pay equality—provide further evidence of the link between compositional and structural processes and, again, address the complex relationship between occupational segregation and gender wage disparities. As seen above, at the bottom half of the distribution, the gender wage gap is small or even nonexistent, although processes of desegregation are mitigated as compared to the upper half (Hegewisch and Hartmann 2014). This “equality among the poorer” finding may support feminists’ “different but equal” approach (Nentwich 2006). However, we should be careful in drawing general conclusions, as the coexistence of segregation and equity is more challenging at the top of the labor market hierarchy, where wages have no upper limit. Furthermore, segregation at the bottom, even if it is not accompanied by wage inequality, bears the risk of reinforcing gender stereotypes that fuel the segregation at the top, which does contribute to sustaining gender inequality (Charles 2011; Thébaud and Charles 2018).

Lastly, it is important to recall that our analysis is restricted to full-year employees and that we estimate the gender wage gap while controlling for working hours. We thereby compare male and female employees with an equivalent commitment to the labor market. In reality, gender inequality in the labor market is manifested in uneven opportunities for men and women to maintain full-time full-year employment, largely because of women’s greater commitment to care and housework. Our findings regarding the greater gender equality below the top should therefore be treated with caution, as they conceal the fact that women tend to have higher rates of part-time employment and career breaks that inhibit their ability to materialize their earnings potential.

Notes

1 Note, however, that in some respects there has been little change, as cultural norms and perceptions about gender have persisted, manifested in the continuous devaluation of characteristics and activities associated with women and femininity and in the persistence of the uneven distribution of unpaid housework (Bianchi et al. 2012; England 2010).

2 To protect respondents’ (with very high-income) confidentiality, the CPS data are top-coded. Thus, it is expected that the trends observed here reflect an under—rather than over—estimation of the magnitude of the gender pay gap. Detailed explanations of disclosure avoidance methods, topcodes, and replacement value and swap value thresholds are available at https://cps.ipums.org/cps/topcodes_tables.shtml.

3 The constant inequality condition was also attained by an alternative method: First, the ratios between the mean wage of each percentile and the median were calculated in the 1980 sample. Then, in each year, respondents of each percentile were assigned with a value that, relative to the median of that year, restored the ratio between the corresponding percentile and the median from 1980. The results when this method was used did not substantially differ from those presented here (data available upon request).
References


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