Gender differences in job autonomy in Sweden and the United States

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Abstract
This paper examines gender differences in job autonomy in the United States and Sweden. It analyzes data from the 2005 Work Orientations III module of the International Social Survey Program, using multiple linear regression analysis. Women’s concentration in the public sector, as a form of occupational segregation, as well as gender differences in unionization are assessed as possible explanations. Since these two factors vary greatly between the US and Sweden, these two cases are used to test the suitability of the explanatory approaches.

While there are no gender differences in job autonomy in the US, Swedish women experience significantly lower job autonomy than Swedish men. These gender differences are primarily due to the fact that women in Sweden are concentrated in public sector employment, which offers lower autonomy. This supports occupational segregation as an explanation for gender differences in job autonomy. Meanwhile, the hypothesis that women’s higher degree of unionization in Sweden would lead to a smaller gender gap in autonomy does not receive support from the data.
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Introduction

Even though women’s participation in the labor force has risen steadily since the 1960s, men and women participate in the labor market on different conditions. With the pay gap seemingly being the most discussed aspect of gender inequality, neo-classical economic theory has argued that women’s lower wages are compensated for by comparably better working arrangements (see Kilbourne, Farkas, Beron, Weir & England 1994).

This argument, however, has been contradicted by numerous studies indicating that women’s work environment is not superior to men’s, regarding both ergonomic aspects such as strenuous positions and repetitive movements, and psychosocial aspects such as stress, harassment and the requirement to perform ‘emotional labor’ (Fagan & Burchell 2002; Lewis & Mathiassen 2013; Vänje 2013). Furthermore, women have been found to experience lower levels of job autonomy (Fagan & Burchell 2002; Sjögren & Kristenson 2006). Job autonomy is here defined as employees’ ability and freedom to influence aspects of their work process, such as the order of their tasks and their working time arrangements. Job autonomy will also be the focus of this paper. The reasons for my choice of subject are as follows:

Firstly, I would like to argue that job autonomy can be linked to power. Here, power does not necessarily mean occupying a position of authority over others, but rather being allowed some form of self-determination over one’s own existence in the workplace. Following this line of thought, let us examine two kinds of employees, whose positions are signified by low and high levels of job autonomy, respectively. On one extreme, there is the example of a heavily supervised manual laborer on the assembly line, the archetype of a disposable ‘cog in the machinery’, colloquially speaking. This worker is not required to have a deeper understanding of the process of which he or she is a small part. On the other extreme, you find a well-educated white-collar employee, who has specialist expertise exceeding that of his or her supervisors.

Concerning these differences, Goldthorpe (2007, 101-125) argues that the ‘asymmetry of information’ between employer and employee makes it harder to immediately supervise the performance of the ‘service class’, i.e. professionals and managers, allowing them greater levels of discretion. The absence of direct means of control (and the fact that specialized professionals are harder to replace than employees with only general knowledge) means that the power relations between employer and employees differ greatly between those types of
occupations. Thus, higher job autonomy generally correlates with a more advantaged position in the labor market.

Furthermore, job autonomy has been theorized to have a buffering effect on the consequences of high work demands on psychological well-being (Karasek 1979). In sum, job autonomy can be viewed as an indicator of employees’ relative power, as well as mediating the adverse health effects of demanding work. Consequently, the fact that women seem to experience systematically lower levels of job autonomy presents a significant inequality which deserves to be addressed. The way in which this inequality should best be addressed depends on its underlying cause, which is why will assess different possible explanations for the gender gap in job autonomy.

How then, can these differences in autonomy be explained? In previous research on the gender gap in job autonomy, the primary explanation has been occupational segregation. That is to say, women tend to work in professions which offer lower job autonomy (Fagan & Burchell 2002; Sjögren & Kristenson 2006). These gender-focused studies have either analyzed a sample from several countries as a whole or concentrated on a single country, but not compared gender differences in job autonomy between countries or taken institutional contexts into account.

Yet, the average levels of job autonomy also vary between countries. Cross-national comparisons have primarily examined class-, but not gender differences in autonomy between countries. Here, the main explanation has instead been one of country specific characteristics, e.g. differences in the role and strength of trade unions (Dobbin & Boychuk 1999; Edlund & Grönlund 2010). To my knowledge, no study focusing on job autonomy, has both applied a cross-national and a gender perspective.

The importance of unionization as a means of co-determination in the labor market can, however, be assumed to be different for men and women. Similarly, the extent of occupational segregation can be viewed as a national characteristic which varies between countries. I therefore combine the above mentioned approaches, comparing gender differences in job autonomy between countries.

As a means of testing the suitability of occupational segregation and degree of unionization as explanations, the comparison will be between the United States and Sweden. These two
countries, while both exhibiting relatively high levels of female labor force participation, differ greatly regarding both the strength of organized labor and occupational segregation.

Sweden features high levels of unionization for both genders, yet its labor market is highly segregated by gender, with men being concentrated in the private sector and women in the public. The United States, on the other hand, display low degrees of occupational segregation as well as low union density, but with greater gender differences in unionization. Consequently, we can expect to find different patterns of job autonomy for men and women in those two countries. I will here focus on women’s concentration in the public sector as one aspect of occupational segregation.

**Aim**

The aim of this paper is to test two factors’ capability of explaining gender differences in job autonomy: women’s concentration in the public sector, as one form of occupational segregation, and gender differences in the degree of unionization. The question to be answered is to what extent differences in these institutional contexts can explain national differences in the gender gap in job autonomy. To do this, I examine whether and how the gender gap in job autonomy, measured by the capability of employees to influence certain aspects of their work process, varies between the United States and Sweden.

In the following sections, I describe the theoretical basis for my choice of explanatory approaches, as well as the circumstances regarding these two in Sweden and the US. This description of the theoretical background results in two hypotheses. After an account of the methods used to test these hypotheses, I present the results of my empirical analysis. Finally I discuss these results and possible interpretations.

**National and gender differences in job autonomy in theory and previous research**

**Occupational segregation and the gender gap in autonomy**

Occupational segregation provides one possible explanation for gender differences in job autonomy. As I will show shortly, the argument used in previous research has been that women’s lower autonomy levels are due to them being employed in professions which
inhertently offer lower job autonomy. Such professions include nursing, teaching and different service occupations.

An example of this is the study undertaken by Fagan and Burchell (2002), which finds that men in the European Union experience higher levels of job autonomy than women. The authors also observe gender differences in a number of other aspects of the work environment, including job autonomy. Women report lower autonomy within most of the broader occupational categories – “white-collar managerial”, “white-collar professional”, “white collar clerical and service”, “blue-collar craft and related manual” and “blue-collar operating and laboring manual jobs” – as well as on an overall level. One factor the authors identify as a possible explanation for this disparity is that women and men perform different jobs within the wider occupational categories, paired with the distinct characteristics of the care occupations in which women are overrepresented. For both men and women, autonomy levels are highest in managerial and professional occupations (ibid, 31-56).

Sjögren and Kristenson (2006) come to similar results, utilizing data from a Swedish public health survey. They find that women score lower on decision latitude, a measure similar to that of autonomy. However, when controlling for socio-economic class, divided into two categories, those gender differences are no longer significant. These findings seem to indicate that women’s lower decision latitude is due to them being concentrated in lower status occupations.

In sum, occupational segregation seems to provide at least a partial explanation of the gender gap in autonomy. The question as to why men and women tend to work in different occupations has received different answers. On one hand it has been argued that this divergence is primarily due to different preferences, that is to say, women choose positions which offer lower autonomy and wages as well as less room for promotion because these instead allow them to combine work and family. Against this stands the claim that women’s inferior labor market attainments are a result of gender discrimination, meaning that hiring and promotion practices in organizations are detrimental to women (Glass 1990; Stier & Yaish 2014).

Charles (2003) differentiates between two patterns of occupational segregation – horizontal and vertical – and argues that these have different underlying causes. Both of these processes are however based on institutionalized ideological conceptions about the nature and status of men and women. The first pattern, horizontal segregation, involves the divergence of men and
women into occupations with different characteristics, such as industrial and service professions. Charles points out gender essentialism, the notion that men and women possess fundamentally different characteristics, as the central ideology behind this form of segregation. For example, women are assumed to be more nurturing and friendly by nature, and consequently better suited for occupations that involve taking care of others or serving customers. Similarly, men’s greater physical strength is assumed to be intrinsic, and to allow them to succeed in strenuous professions (ibid).

Vertical segregation, on the other hand, involves men holding hierarchically higher positions than women within the same occupational areas. Here, the author identifies the doctrine of male primacy as a likely explanation. This cultural belief that men are both more suited for, and more deserving of, positions of status and authority due to their inherent superiority to women continues to be ingrained in the cultural norms of industrial societies. While vertical segregation is more likely to be recognized as a form of gender discrimination, horizontal segregation is less threatened by the expansion of a gender egalitarian ideology. This inconsistency is due to the fact that the liberal egalitarian values regarding men’s and women’s equal status only question the belief of male primacy, whereas gender essentialist ideologies remain intact (ibid; Charles & Grusky 2004, 3-31).

Further linking horizontal to vertical segregation, Yaish and Stier (2009) study the connection between women’s concentration in the public sector and their likelihood to hold a position of authority. They show that both being female, and working in the public sector decreases the prospects of supervising others. Moreover, women are less likely to hold a position of authority in countries with a higher concentration of women in the public sector. Thus, a greater degree of horizontal segregation between employment sectors leads to a greater degree of vertical segregation in the distribution of authority positions. The authors argue that the expansion of the public sector has contributed to increasing women’s labor market participation, since this sector is more likely to offer part-time employment and other measures that allow women to combine paid work with childcare, for instance. Yet, these working arrangements also risk attracting disproportionately many women with less career ambitions, leading to women being overrepresented in low paying jobs that allow for little advancement (ibid).

There is reason to believe that a similar relationship can be found between women’s concentration in the public sector and job autonomy. While horizontal segregation in itself
may lead to women being concentrated in occupations which offer low job autonomy, even vertical segregation would be expected to affect job autonomy. For one, positions of authority inherently offer higher autonomy. As discussed above, employees in authority positions cannot be subjected to the same employer supervision as lower level employees, thus giving them greater discretion and job autonomy (Goldthorpe 2007, 101-125). Secondly, the higher status which, according to Charles (2003), is given to men, might also lead to them being given positions that are more rewarding in other ways, such as autonomy. Therefore, the gender gap in job autonomy might be greater in countries with a greater concentration of women in the public sector.

**Occupational segregation in Sweden and the US**

How then does occupational segregation manifest itself in Sweden and the United States? Mósesdóttir (2001) suggests that women’s role in the labor market, including occupational segregation, is influenced by institutional arrangements and policies implemented by the state. These ‘regimes of gender relations’, as she calls them, can be regarded as indications of the prevalent gender norms in the particular countries.

In Sweden for instance, the state provides services, such as public day cares, which allow women to combine paid employment and child rearing. Since child care professions are stereotypically viewed as feminine, these state measures also create jobs for women in the public sector\(^1\). The author further states that women nevertheless still perform the majority of unpaid domestic work, and the labor market is strongly divided along gender lines, with men in the private sector and women in the public. In the US on the other hand, the focus of the government’s employment policy is to enable the private sector to create jobs, with the effect that low-paying jobs, as well as income inequalities, are more prevalent than in Sweden. While the share of service occupations is considerably larger in the US, this area is more female-dominated in Sweden. This disparity can, at least in part, be explained by the greater size of the public sector, which provides a majority of the care services in Sweden. Mósesdóttir argues that this increased segregation leads to women becoming ‘ghettoized’ in care occupations. In the US meanwhile, those tasks are primarily performed outside of the formal labor market (ibid, 21-26, 153-155).

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\(^1\) While caring professions were located in the public sector in Sweden at the time of the survey in 2005, this situation has changed somewhat in recent years. Possible implications of these changes will be discussed in the last section of this paper.
National differences in job autonomy
The research investigating gender differences in job autonomy which has been presented above, has not included the perspective of a cross-national perspective. The studies focusing on national comparisons have, on the contrary, not differentiated between men’s and women’s levels of job autonomy. Concerning these national differences in job autonomy, the literature on the subject offers two different explanations.

On one hand, Dobbin and Boychuk (1999) argue that variations in autonomy are influenced by institutionalized employment systems. They suggest that there are fundamental differences in the logic underlying the institutional arrangements for unemployment, vocational training, management, and collective bargaining in Anglo-Saxon and Nordic countries. In the latter, institutional arrangements encourage worker participation in decision making, and employer’s investment in the skill development of their workforce. The underlying logic of employment systems in English speaking countries, on the contrary, emphasizes adherence to rules, clearly defined job boundaries and routines. In these arrangements, workers are to a greater extent viewed as disposable. The authors also present a competing hypothesis, which states that the different aims which organized labor has in different countries influences the effect of union membership on job autonomy. While this hypothesis is not supported by Dobbin and Boychuk’s data, it is discussed further in the interpretation of this paper’s results. The authors show instead that overall autonomy levels are highest in Nordic countries, supporting their own hypothesis regarding institutionalized employment systems (ibid).

Edlund and Grönlund (2010) on the other hand, find that national mean levels of autonomy correlate with the strength of organized labor. Their claim, based on power resource theory, is that worker autonomy is an important goal for labor unions and thus can be viewed as an expression of the relative strength of unions, compared to employer organizations. In support of this hypothesis, they show that where organized labor holds a stronger position, employees in all classes experience higher average levels of autonomy. With some exceptions, class differences in job autonomy are less pronounced in these countries.

On the premise that greater power of organized labor is associated with higher average levels of, and smaller class differences in autonomy, there might be a similar correlation between women’s relative position in organized labor and their autonomy levels, compared to men’s. This would mean that where women’s position within the labor movement is approximately equal to men’s, the gender gap in job autonomy can be expected to be smaller.
**Women’s position in organized labor in Sweden and the US**

The question that consequently arises is which role women, relative to men, play in organized labor in Sweden and the US. Mósesdóttir (2001) remarks that the integration of Swedish women into the labor force was incorporated into the class equality project of the social democratic government and the labor unions. Income differences between men and women were counteracted by the centralized wage bargaining system. Meanwhile in the US, women’s struggle for equal access to the labor market gained strength from the accomplishments of the civil rights movement and was thus also framed more explicitly in terms of non-discrimination, instead of a class perspective (ibid, 123 -159, 205-210).

Similarly, Tsarouhas (2011) notes that the demands of second wave feminism in the 1960s and 70s, forced the Swedish Trade Union Confederation, Landsorganisationen i Sverige (LO) to incorporate a gendered perspective into their traditionally class-based politics. The increase in female labor force participation, which accompanied the expansion of the public sector, led to the municipal workers union (Kommunal) overtaking the metal workers union (Metall) as LO’s biggest organization in the 1980s. This further strengthened women’s position in the Swedish labor movement.

The situation in the United States is somewhat different. Despite the prevalence of a masculine discourse in labor unions and a leadership which often gave ‘women’s issues’ little attention, women have been active in the American labor movement throughout its history. Still, they have always constituted a minority, both among union members, and especially in union leadership (Milkman 2007). Bronfenbrenner (2005) remarks that, while the gender gap in unionization is slowly narrowing, women are still underrepresented in union leadership. Furthermore, women’s participation in the labor movement varies between occupational areas. With the exception of public education, the majority of female-dominated industries have low union density (ibid). While unions in which women constitute a larger part of the membership, count gender equality in the labor market among their goals, male-dominated unions remain indifferent towards these issues (Milkman 2007).

**Hypotheses**

In sum, women in Sweden are more concentrated in the public sector, yet they are also unionized to a greater degree. While this information suggests that the gender gap in job autonomy will vary between the two countries, the theoretical approaches indicate contradicting outcomes. If women’s relative job autonomy is primarily affected by their
influence within organized labor, the gender gap can be expected to be smaller in Sweden. If, on the contrary, occupational segregation between sectors is the main mechanism underlying differences in job autonomy, the gender gap in autonomy will be larger in Sweden. This leads to two contradictory hypotheses:

\[ H_1: \text{Due to women’s greater concentration in the public sector, the gender gap in autonomy will be larger in Sweden than in the US.} \]

\[ H_2: \text{Due to women’s greater relative unionization, the gender gap in autonomy will be smaller in Sweden than in the US.} \]

**Data and methods**

**Data**

To test the above hypotheses, I used data from the 2005 Work Orientations III module of the International Social Survey Program (ISSP) (ISSP Research Group 2013). Since 1984, the ISSP has conducted social science surveys in a large number of countries, with each annual survey covering a different theme. The surveys are translated to each of the participating nations’ native languages and administered to respondents via mail, telephone- or in-person interview. The selection of respondents is based on a simple random sample within each country.

I chose the 2005 module since it concerns the topic of work and therefore matches this paper’s subject. Apart from module-specific questions regarding the quality and subjective experience of one's job, employment structures and work-life balance etc., the survey also covers background variables such as age, family situation and socioeconomic background. The survey at hand was conducted in 32 countries, resulting in a total sample of 44365 individuals.

I have narrowed down this existing data set to only include respondents from the US and Sweden, and excluded all respondents that were not employed at the time of the survey. This resulted in a subsample of 1623 people, 845 from the US and 778 from Sweden. 789 of the respondents were men and 825 women.
Variables
The following section describes the operationalization of the theoretical concepts into the variables which were used in the comparison of means and subsequent regression analyses.

Dependent variable - Job autonomy
As the concept of job autonomy is fairly abstract and complex, there is no single question asking to what extent respondents experience autonomy in their job. The operationalization of the concept varies in previous research, no doubt partially due to the fact that different researchers have utilized different data sets and questionnaires.

For instance, Edlund and Grönlund (2010) use a measure based on three questions regarding the organization of daily work, policy decisions in the workplace and the pace of work. Dobbin and Boychuk’s (1999) measurement of autonomy employs more open ended questions that are subsequently coded into a scale. Fagan and Burchell (2002) differentiate between work autonomy and time autonomy. The measurement of work autonomy is based on four questions concerning the methods and speed of work, task order, and the timing of breaks. Time autonomy is measured by the respondents’ ability to decide when to take time off and to influence their working hours.

In all of previous research, Stier and Yaish’s (2014) study is, to my knowledge, the only one concerning autonomy which uses the same data set as this paper, i.e. the ISSP 2005 Work Orientations III module. Their measurement is based on three questions regarding respondents’ ability to decide starting and finishing time of work, to decide how daily work is organized and to take time off during work. The authors name their measurement ‘time autonomy’, yet I would argue that they in fact measure general job autonomy as well, since the question which concerns the organization of daily work is more closely related to the latter.

Thus, there seems to be some divergence regarding the exact definition of job autonomy as well as how to measure it. My own operationalization of the concept contains both time autonomy and more general job autonomy. As indicated earlier, the definition of autonomy which is central to this paper is that of employees’ freedom to shape some aspects of their work life. For those purposes, time autonomy presents an equally important dimension of self-determination in the workplace. I included four questions, regarding job and time autonomy in my operationalization. Three of these were used by Stier and Yaish (2014) to measure time autonomy, the fourth concerns the capacity to work independently. Those questions were:
1) For each of these statements about your (main) job, please tell me how much you agree or disagree with it as it applies to your job: I can work independently (1 - Strongly agree; 5 - strongly disagree)

2) Which of the following statements best describes how your working hours are decided? (By working hours we mean here the times you start and finish work, and not the total hours you work per week or month.) (1 - Starting and finishing times are decided by my employer and I cannot change them on my own; 3 - I am entirely free to decide when I start and finish work)

3) Which of the following statements best describes how your daily work is organized? (1 - I am free to decide how my daily work is organized; 3 - I am not free to decide how my daily work is organized)

4) How difficult would it be for you to take an hour or two off during working hours, to take care of personal or family matters? (1 - Not difficult at all; 4 - Very difficult)

To investigate whether these four manifest variables measure aspects of the same latent variable, job autonomy, I conducted an exploratory factor analysis (Barmark 2009, 69-87). This factor analysis resulted in one factor with an eigenvalue of 1.917 and which explained 47.9% of the variation in the manifest variables. While that number is somewhat low, being under 60%, I deemed it acceptable for the purposes at hand. All four manifest variables had a strong correlation with the factor.

Instead of using the resulting factor score, I constructed an additive index to make the results easier to interpret. This index ranges from 0 to 100, where a value of zero equals “no autonomy at all” and 100 “full autonomy”. Since the four variables included varied in both scale and direction, they first had to be recoded so that high values equal high autonomy. I then multiplied each with a certain factor, so that their values range between 0 and 25. Consequently, each of the four variables contributes with a fourth of the variation in the index.

**Main explanatory variables – gender, public sector employment and union membership**

As I described earlier, I identified two potential influences on the gender gap in job autonomy on a national level: occupational segregation and gender differences in the degree of unionization. I focus on public sector employment as one aspect of occupational segregation. One reason for doing so is that the measurement of more general forms of occupational
segregation, as conducted in previous research (Charles 2003; Mósesdóttir 2001, 131-134), involves complicated indicators, the application of which is beyond my level of skill. I therefore used the extent of women’s employment in the public sector, relative to men’s, as a simplified indicator of occupational segregation. Furthermore, this measurement has been used, and linked to vertical segregation, by Yaish and Stier (2009).

These two indicators, women’s concentration in the public sector and relative unionization, are macro measurements on a national level. They were only used to provide descriptive background information and to confirm the assertions which previous research has made about women’s concentration in the public sector and women’s position in organized labor in the US and Sweden. In the regression analysis, the variables sector of employment and union membership, at an individual level, were included as explanatory variables instead; in addition to gender. If women’s lower job autonomy is, in fact, partially due to their greater participation in public sector employment, then the effect of gender on job autonomy would be expected to lessen – or even disappear – when controlling for the sector of employment. Similarly, if women’s lesser degree of unionization is one of the underlying reasons, the effect of gender would be expected to decrease when controlling for individual union membership.

**Other possible confounders – class and education**

In addition to the above, I also included educational level and class in the subsequent models. The reason for controlling for these variables is as follows: One of the important distinctions which Goldthorpe (2007) makes between manual laborers and the ‘service class’ is indeed the inherent differences in autonomy in those occupations. Furthermore, job autonomy is closely related to skill and knowledge. The specialist knowledge of professionals, exceeding that of their superiors, is what makes those groups harder to supervise and allows them greater autonomy (ibid, 101-125). Consequently, job autonomy can be assumed to vary greatly between different socio-economic classes and educational levels, and those variables could have a confounding effect of the relationship between gender and autonomy.

The variable for educational level originally had six categories, which I recoded into a three-category variable. In this new variable, respondents with none or only the lowest formal qualification were coded as having “low education”. Those which were above the lowest formal qualification or had completed higher secondary education were given the value “medium education”. Respondents which had an educational level above higher secondary education or had completed a university degree make up the category “high education”.

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The class variable which I used is based on a modified version of the European Socio-economic Classification (ESeC). It consists of six class categories: “Higher salariat”, ”lower salariat”, “routine non-manual”, “skilled workers”, “unskilled workers”, and “self-employed”. Since I had earlier excluded the self-employed from the sample, the last category was not used.

**Strategy of analysis – comparison of means and regression analyses**

The analysis of the data consisted of four steps. I started with testing previous research’s claims about women’s concentration in the public sector and women’s degree of unionization in the US and Sweden. These descriptive results also serve as an illustration of the actual circumstances concerning those relationships, which have been the basis for my hypotheses.

I then compared the means of the job autonomy index for the four different groups: American men and women, and Swedish men and women. As well as testing the scope and statistical significance of potential gender differences using two-sample t-tests, I visualized the means with confidence intervals (Moore 2010, 396-398, 420-424).

After comparing mean gender differences in autonomy in the US and Sweden, I tested if these differences persist when controlling for other employment characteristics, as is discussed above. For this, I used multiple linear regression analysis, since it allowed me to study the effect of one variable, e.g. gender, on job autonomy, while simultaneously controlling for others (ibid, 573-602, 610-615). First I performed a separate analysis for each country. Starting with gender and educational level as explanatory variables, I gradually added further variables, class, union membership and sector of employment, to the model. This resulted in a total of four models for each country. All explanatory variables were dummy variables.

Lastly, I performed one separate regression analysis for each gender and country, resulting in a total of four analyses. All of the explanatory variables included in the fourth model were also used in these analyses. In doing so, I was able to study these variables’ effect on job autonomy separately for each gender, for example the effect on autonomy which public sector employment has for women in Sweden, compared to the effect it has for men. All analyses were performed in IBM SPSS Statistics 22.
Ethical considerations
The Swedish Research Council (Vetenskapsrådet) specifies four requirements for ethical research in the humanities and social sciences: the requirement of information, consent, confidentiality and utilization. This means that those participating in a study have to be thoroughly informed about the study’s purpose and the utilization of results, and consent to participating. In addition, respondents’ personal information is to be handled with great care and confidentiality and the results of research concerning individual respondents are only to be used for scientific purposes (Vetenskapsrådet 2002).

I could not influence the application of the first two of these criteria myself, since I am using an existing dataset with information collected by others. However, all required information about the ISSP survey and its utilization was given to the respondents in a cover letter during the initial data collection. Thus, by voluntarily participating in the survey, respondents have also given their informed consent to the use of the results by third parties for scientific purposes. Furthermore, the dataset does not contain any personal information and it is impossible to deduce the identity of a person from variables in the dataset, meaning that all respondents are anonymous. The last requirement forbids the use of results which concern individual respondents, as well as personal information, for non-scientific purposes. This requirement is not applicable to this study, since the dataset at hand does not contain personal information. Additionally, all analyses are conducted at a group level, so that there are no results concerning individual respondents.

Results and analysis
Below is an account of men’s and women’s concentration in different occupational groups. It is followed by a presentation of the gender distributions in both occupational sectors and labor unions, as referred to in my hypotheses. Finally, the gender gap in job autonomy in both countries as well as the results of the regression analyses are examined in order to further assess possible explanations for the gender gap.

Different occupational categories in the US and Sweden
To give a descriptive introduction to gender differences in labor market positions, Figure 1 shows men’s and women’s employment in different professions in the US and Sweden. Since my measurement of occupational segregation only regards employment in the public or
private sector, this figure serves as a more general illustration of the occupational structure and its gender differences within the two countries.

There are some pronounced national differences regarding which occupations men and women are employed in. While men make up the majority of employees in the categories “Crafts and related workers” and “Plant & machine operators, assemblers” in both countries, women are overrepresented in different occupations. In the US, women work as “Technicians and associate professionals” and “Clerical support workers” to a greater extent than men, whereas women in Sweden are vastly overrepresented in “Sales and service occupations”. Men tend to be employed in managerial positions to a greater extent than women in Sweden. On the other end of the spectrum, American men are more likely to work in “Elementary occupations” than American women. The occupational categories “Armed forces” and “Skilled agricultural and fishery workers” are not shown here, since they included only a total of twelve respondents.

Figure 1. Occupational categories by country and gender, in absolute numbers
Women’s unionization and concentration in the public sector

The literature indicates that women are unionized to a greater extent in Sweden and that women are less concentrated in the public sector in the US. Since these assertions are the basis for my hypotheses, testing whether they are accurate for the sample at hand is important. Below is therefore an account of men’s and women’s union membership and employment by sector, respectively.

The size of the public sector, as well as its gender composition, varies greatly between the two countries. In the US, 19% of men and 27% of women are employed in the public sector, for Sweden those numbers are 29% and 63% (see Figure 2). This means that women are more concentrated in the public sector in Sweden, as was indicated by previous research. One plausible explanation for the magnitude of those differences is the different character of the public sector in those countries. In Sweden, stereotypically feminine occupations, which involve caring for others, are located in the public sector, which also has been the primary location for the increase in female employment. Those kinds of services are performed either in the private sector or outside of the formal labor market in the US (Mósesdóttir 2001, 150-158).

![Figure 2. Men's and women's employment in different sectors, in percent](image)

Furthermore, the degree of unionization varies vastly between Sweden and the US, as shown in Figure 3. In the US, 18% of men and 12% of women state that they currently are members
of a labor union. The correspondent numbers for Sweden are 73 % and 83 %. Men are unionized to a slightly greater extent than women in the US, whereas Swedish women are more likely to be union members than their male counterparts. This result as well is consistent with the literature’s suggestion that women are more strongly integrated into organized labor in Sweden.

Figure 3. Union membership, in percent

The gender gap in job autonomy
I have shown that women’s concentration in the public sector, as well as their degree of unionization, relative to men’s, is greater in Sweden than in the US. Thus, in accordance with H₁, the gender gap in autonomy would be expected to be greater in Sweden. However, following H₂ it would be expected to be greater in the US.

There are significant differences in the level of job autonomy between men and women in Sweden, but not in the US. Below are 95 % confidence intervals for the mean in job autonomy for the different groups (see Figure 4). The only mean which is significantly higher than the others is that of Swedish men.
The two sample t-tests for gender differences in job autonomy in each country further confirm this. Swedish men score on average 4.6 units higher on the autonomy index than Swedish women (t= 3.104), a result which is statistically significant (p= 0.002). This means that the chances that the observed difference is due to random variation are 0.2 percent. The difference in the US amounts to 0.4 units (t= 0.282) and is not significant (p=0.778). Furthermore, American men score significantly lower on the autonomy index than Swedish men. For women however, there are no significant national differences. This means that there is a significant gender gap in job autonomy in Sweden, but not in the US. These results are consistent with H₁, but contradict H₂. While the first hypothesis predicted greater gender differences in autonomy in Sweden, the fact that there are none at all in the US is still surprising. It should be noted however, that the autonomy levels of American men and women are at equally low levels – not equally high – compared to those of Swedish men.

The question which nevertheless remains is whether women’s lower job autonomy is in fact due to gender differences in other employment characteristics. To answer this, I now present the results of the multiple linear regression analyses.
Regression analyses
Below are the results of the regression analyses for the different models in each country (see Table 1). These results are discussed here only shortly; a more detailed analysis follows with the results of the separate regression analyses for gender.

Table 1. Unstandardized regression coefficients, by country (response = job autonomy)

<table>
<thead>
<tr>
<th>Model</th>
<th>USA</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Intercept</td>
<td>38.07*</td>
<td>33.75*</td>
</tr>
<tr>
<td>Gender (m)</td>
<td>-1.20</td>
<td>-0.50</td>
</tr>
<tr>
<td>Gender (f)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Educational</td>
<td></td>
<td></td>
</tr>
<tr>
<td>level (low)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>High</td>
<td>22.19*</td>
<td>14.33*</td>
</tr>
<tr>
<td>Medium</td>
<td>14.53*</td>
<td>11.27*</td>
</tr>
<tr>
<td>Class (low)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher salariat</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Skilled workers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Union membership</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector of employment</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

In models 1 through 3, the gender gap in autonomy persists in Sweden, even when controlling for education and class. Upon expanding the models with further variables, the most notable result which presents itself is that gender no longer has a statistically significant effect on job autonomy when controlling for occupational sector in model 4. Instead, being employed in the public sector influences job autonomy negatively in both countries. Some characteristic of public sector employment in Sweden seems to be related to lower job autonomy. This would explain the negative effect of gender on autonomy in Sweden in the previous analyses, since women are overrepresented in the Swedish public sector. This finding strongly supports the
first hypothesis that the gender gap in autonomy can, at least in part, be explained by women’s concentration in the public sector.

The second hypothesis states that women’s relative autonomy levels would be increased by their stronger position within labor unions in Sweden. The presence of greater gender differences in autonomy in Sweden, as shown by the t-test and confidence intervals, speaks against this hypothesis. It is further contradicted by the fact that union membership influences autonomy negatively on an individual level. Although the hypothesis only concerns unionization rates on a national level, the negative effect on an individual level is still somewhat remarkable, since even individual union members could be expected to have greater leverage when negotiating aspects of their work environment. Yet, even when controlling for other employment characteristics, union members experience lower job autonomy than non-members.

Class, on the other hand, has a predictable positive effect on job autonomy. Those in higher categories of social class than the reference “unskilled workers” consistently report higher autonomy levels in both countries, the exception being “skilled workers” in Sweden, whose values are not significantly different from those of the reference. This means that job autonomy levels do not differ between skilled and unskilled workers in Sweden.

Similarly, respondents with higher educational levels, compared to the reference category “low education”, experience more autonomy in the United States. As previously discussed, autonomy is closely linked to both class and skill, which makes these results hardly surprising. In Sweden, a high educational level has a positive effect on job autonomy by itself, but a negative effect when controlling for class. While higher educational levels seem to correlate with higher class, as is indicated by the fact that their positive effect on autonomy disappears in subsequent models, within the class categories more educated employees experience less job autonomy in Sweden.

**Separate analyses for gender:**
So far, I have analyzed the effects of gender and a number of employment characteristics on job autonomy in Sweden and the US. To investigate whether gender interacts with the other variables’ effect on autonomy, this section studies the effect of these variables separately for gender and country. The results differ somewhat from those of the solely national comparison. The main exception here is the variable of class, which still has a positive effect on autonomy for all groups (see Table 2).
Table 2. Unstandardized regression coefficients, by country and gender (response = job autonomy)

<table>
<thead>
<tr>
<th></th>
<th>USA</th>
<th>Sweden</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Men</td>
<td>Women</td>
</tr>
<tr>
<td><strong>Intercept</strong></td>
<td>34.29*</td>
<td>33.69*</td>
</tr>
<tr>
<td><strong>Education</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(reference low)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High education</td>
<td>14.34*</td>
<td>15.88*</td>
</tr>
<tr>
<td>Medium education</td>
<td>11.31*</td>
<td>11.31*</td>
</tr>
<tr>
<td><strong>Class</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(ref. unskilled workers)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher salariat</td>
<td>19.92*</td>
<td>21.10*</td>
</tr>
<tr>
<td>Lower salariat</td>
<td>14.29*</td>
<td>10.85*</td>
</tr>
<tr>
<td>Skilled workers</td>
<td>9.76*</td>
<td>2.02</td>
</tr>
<tr>
<td><strong>Union membership</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(reference non-member)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sector of employment</td>
<td></td>
<td></td>
</tr>
<tr>
<td><em>(reference private)</em></td>
<td></td>
<td></td>
</tr>
<tr>
<td>( R^2 ) (adjusted)</td>
<td>14.9 %</td>
<td>14.4 %</td>
</tr>
<tr>
<td>( n )</td>
<td>406</td>
<td>399</td>
</tr>
</tbody>
</table>

* \( p<0.05 \)

While the negative effect of public sector employment persists for men and women in Sweden, a similar effect can also be found for American women. Fagan and Burchell (2002) mention the specific characteristics of the jobs held by female professionals as one of the explanation for their lower autonomy levels. According to the authors, these care professions offer inherently lower job autonomy than occupations dominated by men (ibid, 47-49). Since the tasks performed in care professions, such as nursing, are largely dependent on other people’s needs, it would seem reasonable that they are accompanied by lower autonomy. As stated above, these occupations are located within the public sector in Sweden, which presents a plausible explanation for the negative effect of public sector employment in Sweden. It does not, however, explain the negative effect it has for women – but not men – in the US. While American women are only slightly more likely to be employed in the public sector than men (see Figure 2), it could be the case that they occupy different positions and jobs within that sector.
Furthermore, even childcare professions require a university degree in Sweden. In the US meanwhile, the educational requirements are lower, especially in the largely unregulated private sector. This could provide a partial explanation as to why Swedish women report lower levels of autonomy at higher educational levels. In the United States, on the other hand, higher education levels do have a positive effect for both genders. The lower educational requirements for some care professions are one possible explanation for this effect; another one is the fact that both child- and elderly care is more often performed by family members in the US, so that a large number of people who care for others do not do so professionally (Mósesdóttir 2001, 153-155). This would mean that it is more likely that the jobs with the lowest autonomy – within the formal labor market – are in fact low-skill, manual and service occupations with low educational requirements in the US.

Unlike the other variables, union membership does not affect either men’s or women’s job autonomy in Sweden, but it does have a negative effect for American men. Dobbin and Boychuk (1999) discuss the possibility that differences in the main focus of organized labor in different countries affect union members’ job autonomy. That is, in Anglo-Saxon countries, labor unions have primarily worked towards exercising control over rules and boundaries of specific jobs. In the Nordic countries, on the contrary, the main focus has been on increasing workers’ influence over company policies. Thus, unionized workers in the US would be expected to have less autonomy than their non-unionized peers, while such an effect would not be expected in Sweden. While the authors’ results contradict it, this theory could explain why union membership only has a negative effect in the US. Yet it does not explain the gender differences of unionization’s effect in this country. A possible explanation could be that the labor unions’ ‘job control’ tactics have primarily been employed in industrial and crafts occupations, which traditionally are dominated by men.

**Discussion**

**Conclusions**

Finally, this section discusses the results which are presented above from different perspectives, as well as the limitations of this study. The aim of this paper was to examine the gender gap in job autonomy in Sweden and the United States, as well as to assess the capacity of women’s concentration in the public sector and gender differences in unionization, as possible explanations.
There are no significant gender differences in job autonomy in the US. However, the autonomy levels of both men and women in the US are lower than those of Swedish men. My explanation of this result is arguably speculative. Persson (1990) proposes that, since wage differentials between genders are relatively small in Sweden, women have fewer incentives to work in stereotypically male occupations, thus contributing to the continued existence of strong occupational segregation. This would in turn mean that the existence of a larger gender pay gap in the US presents an incentive for women to enter predominantly male areas of employment which provide greater financial rewards, but also autonomy. Mósesdóttir (2001) also argues that, while non-discrimination policies have enabled higher educated women to compete with men for high status jobs in the US, unskilled women are nevertheless forced to work in jobs which offer low rewards in terms of wages and working conditions (ibid, 25). This, combined with the strong positive effect of social class and the singular effect of education levels shown in the regression analyses, could mean that in the American labor market, job autonomy levels differ more along the lines of class and skill than along gender lines.

I have further shown that the gender gap in job autonomy, which is present in Sweden, disappears when controlling for public sector employment. This effect, and the fact that public sector employment has a negative effect for both genders, supports the hypothesis that women's lower job autonomy is in fact partially due to their greater concentration in the public sector. The opposing hypothesis, that women's comparably strong position within organized labor in Sweden would lead to smaller gender differences in autonomy in this country, was not supported by the data.

The findings supporting women's concentration in the public sector, as one form of occupational segregation, as an explanatory mechanism are, to some extent, consistent with previous research. While Sjögren and Kristenson’s (2006) study finds that gender differences in autonomy disappear when controlling for class, my own analysis showed no such effect. That is, even when controlling for class, women experience less job autonomy than men. Similarly, Fagan and Burchell (2002) report that gender differences in autonomy persist within broader occupational categories. According to my analysis, public sector employment could explain the gender differences in autonomy in Sweden. Consequently, while those in higher class categories do experience more autonomy, even within these class categories employees in the female-dominated Swedish public sector experience less job autonomy.
We have thus seen that Swedish women, compared to Swedish men, experience less job autonomy on average, seemingly because so many of them work in the public sector. I have further theorized that the reason for lower job autonomy in the Swedish public sector is the fact that the tasks in nursing, teaching and similar occupations are determined by other peoples’ needs. However, using a different theoretical approach than the ones initially presented might lead to different conclusions. Primarily in the context of wage differentials, supporters of the devaluation theory have contended that the lower wages which are characteristic for female-dominated occupations are due to women’s work being valued less than men’s. The devaluation of jobs which are considered feminine leads to those professions being paid less than male-dominated professions which require similar skill and educational levels. In this argument, women do not earn less because they work worse-paying jobs, but rather, their jobs pay less because they are performed by women (Kilbourne et al. 1994).

Following this line of thought, the lower job autonomy offered by public sector employment in Sweden might instead be partially due to women’s concentration in that sector. That is, the work environment of the men and women in the public sector is worse, at least regarding job autonomy, because public employment is viewed as feminine and thus improving its conditions is not seen as important. Should this be the case, men’s influx into nursing professions, for example, might lead to an increase in autonomy within these occupations. There has been a slight trend in this direction in Sweden as the proportion of men employed in nursing professions has increased somewhat in recent years, from 12% in 2005 to 17.4% in 2013 (Statistics Sweden 2007, 2013). Whether or not this has had any effect on job autonomy in public sector employment is yet to be seen.

Apart from the above, there has been another, more drastic change regarding care occupations in Sweden. At the time of the survey in 2005, nursing and caring professions were almost exclusively located in the public sector in Sweden. The partial privatization of health- and care services initiated by the liberal government after their election in 2006 has changed this situation somewhat. It would therefore be interesting to study whether these changes have had any effects on the gender gap in autonomy, and in which direction. As stated, my interpretation has been that the lower autonomy in the public sector is due to the nature of the caring professions which are located in this sector. It is possible however, that there is another, unidentified, characteristic of public sector employment which explains the lower job autonomy levels in this sector. Thus, analyzing newer data covering health services
employees in both sectors, would allow us to answer these questions in a more satisfying and comprehensive manner.

**Limitations**

In my own judgment there are two primary limitations in this study. Firstly, while I believe my choice of countries to be well-motivated by the theoretical approaches, a comparison of only two countries does not allow for larger generalizations. A multi-level approach comparing a larger number of countries would thus have given more representative and generalizable results. Such an analysis would provide a feasible subject for further research.

The second limitation concerns the general validity of survey responses regarding subjective experiences. The questions used in the operationalization of job autonomy, as well as their response options, could be interpreted differently by different respondents. Consequently, two people who would seem to have the same amount of job autonomy to an objective observer could score slightly differently on the index. Nonetheless, this is a problem shared by any research method based on introspective reports and I would not expect this impreciseness to affect the general direction of the measure. This means that, respondents with low job autonomy would still be expected to place themselves on the lower end of the scale, and vice versa. As a consequence, one should not attach too much weight to the exact values of for example the regression coefficients. Instead, the focus should be on the more general relationships and the directions of effects.
References:


OCCUPATIONAL CHARACTERISTICS ON THE WAGES OF WHITE WOMEN AND MEN. *American Journal Of Sociology*, 100, 689-719.


