


RESEARCH ARTICLE

Risks, possibilities, and social relations in the computerisation of Swedish university administration

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Abstract

This mixed methods case study discusses how the introduction of new technology changed the work of departmental administrators at a Swedish university, drawing on Cockburn's theories on gender and technology, viewing organisations as fields of contestation. This paper argues that jobs seem more fragmented with less discretion, as a result of computerisation. However, time saved by a new division of labour enabled by digitalisation has increased the possibilities for specialisation and job crafting. This new division of labour also led to increased tensions between academics, administrators and management. As the risks and possibilities connected to computerisation are matters of social relations, as much as being governed by technology, this paper adds to the debates on work and technology by exploring the complexity of social relations at work place level experienced by this overlooked group at the periphery of the managerial and academic power centres in academia.

KEYWORDS

academia, administrators, computerisation, digitalisation, gender, new technology, secretaries, social relations in organisations

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INTRODUCTION

As part of an ongoing computerisation agenda, the Swedish government suggested in 1987 that the computer skills of secretaries within the national public administration needed to be strengthened (Proposition, 1987/88:95). That created a crossroad of risk and possibilities (Wilhelmson, 1994) for the secretarial functions. If they failed to adapt to computerisation, they ran the long-term risk of being out of work, since more of the everyday administration was going to be handled by computers and jobs were being rationalised. However, if they did embrace the new technology, they could engage in job crafting and become more specialised administrators, conducting more qualified tasks. The new technology could, depending on how it was used and adjusted, either move them up or push them out (cf. also Hartmann et al., 1986).

Being an occupation dominated by women and surrounded by gendered expectations, secretaries are often overlooked in workplace studies (Karlsson, 2011; Truss, 1993; Truss et al., 2013). Some research in this area was conducted in the 1980s and 1990s related to the computerisation of office work, which is the point of reference for this study (e.g., see Hartmann et al., 1986; Wilhelmson, 1994). It then fell out of focus, to resurface again in the 2010s, connected to debates on increased administration in professional organisations (e.g., see Forssell & Westerberg, 2014; Hasenfeld, 2009). To answer the call for more qualitative data on the group (Truss et al., 2013, p. 361), this paper investigates some of the impacts of technological and organisational changes among administrative staff at a Swedish university. It is inspired by Hughes (1996, p. 228) urging ‘examining both the *direct* impact of new technologies, as well as the *indirect* consequences’. The paper builds on Cockburn’s (1989) work on gender and technology and Acker’s (1990) framework on gender in organisations, while also using Burawoy’s (1982) notion on lateral conflicts as a complementary perspective.

Academia as a gendered terrain is well discussed (by e.g., Clavero & Galligan, 2021; Eslen-Ziya & Yildirim, 2022) providing insights on how formal and informal arrangements reinforce gender patterns (Bird et al., 2004) not least regarding the allocation and organisation of work. While the studies of gender and academia are set in different contexts, the gender aspect of academia is almost exclusively explored from the standpoint of academics. Taking the experiences from this somewhat peripheral group as the point of departure provides insights otherwise missed (Smith, 2005), as changes in one occupation affects others.

While the governmental decision on changes in technology was taken some 30+ years ago, the division of labour regarding administrative tasks between academics and administrators sparked by computerisation remains a highly relevant and debated topic today (Agevall & Olofsson, 2020; Brante et al., 2015). Computerisation, in this case, the replacement of the typewriter with microprocessor-based computers and the physical filing cabinet with the digital hard drive, also enabled the development of further ICT technology and network solutions. This made way for the server-based on-line systems for management and administration, and with that, the increased control and self-administration that is now centre of debate.

With the background of a narrative of hope among the secretaries for computerisation to increase the skills and status of the occupation, this mixed methods case study of departmental administrators at a Swedish university sets out to explore how new technology, in this case computers, changed the job. The paper addresses the questions: what are the prominent effects of the introduction of the new technology? Was the hope of professional advancement of the occupation fulfilled? Are gendered expectations influencing the effects of computerisation?

By taking the everyday experiences of this group at the periphery of the managerial and academic power structure as point of departure (see Smith, 2005) this paper adds nuance to the debate on the effects of new technology on social relations at the work place level. As technology has created space for the development of administrative jobs, academics fear the job enlargement that comes from increased self-administration, and thus, in a way, act to hinder the advancement of the administrators. The departmental administrators in this study often become the mediators and interfaces of the new technology introduced to academics by management and face the academics' reactions. The introduction of new technology has, in that regard, reinforced tensions between occupational groups within the organisation.

First, the paper introduces a brief description of the general characteristics of secretarial jobs and a short history of the situation in Sweden and Swedish universities. Second, a discussion of methods is outlined and the context of this specific case. The results are presented under three themes: *Formal development and direct effect of technology; increased discretion; changed relations and lateral conflicts as indirect effects and the impact of local relations and traditions*. The paper then concludes in the final discussion, where the research questions and the main contribution of this paper are discussed.

FROM SECRETARIES TO ADMINISTRATORS

Today, the main characters in this study have slightly different titles within Swedish universities. Until about 20 years ago, they were called secretaries, with different prefixes such as departmental secretary, project secretary or course secretary. More recently, they have been called administrators (with different prefixes), such as course administrator, research administrator, student administrator and, as in this case, departmental administrator, as part of the process of changing the function and job content. In this paper, they are called departmental administrators, but for the sake of the historical context, it is relevant to note that this group, traditionally named secretaries, share the history of the secretarial occupation.

The changes in the general secretarial role throughout history (Evans, 1987) are reflected in the changes concerning this particular group (Nilsson, 2000). The secretarial occupation has been described as going from a skilled and qualified occupation in the 1950s, towards a traditional 'women's role', routinised with easily replaceable workers who were underappreciated and underutilised in terms of their potential (Bradley et al., 1984; Braverman, 1998). As a result of the increased and broadened use of the secretarial title during the 1970s (Bradley et al., 1984), arguably connected to the introduction of new technology to the offices (Braverman, 1998, p. 215f), secretaries became a catchall category of various support tasks (Hartmann et al., 1986, p. 33). The job is shaped by the expectations from the surroundings—expectations that are also gendered, meaning that in the secretarial job, 'gender and professional role are interwoven' (Bradley et al., 1984, p. 211). To put it another way, the job content and workplace relations of the secretaries were connected to the general construction of femininity (Truss, 1993). Personal relationships were crucial for success and progression in the job (Hartmann et al., 1986; Kanter, 1993; Truss, 1993), as there is often a lack of formal paths for advancement (Truss et al., 2013). While the centrality of informal relations and understandings of the job could create dead ends and role insecurity (Bakker & Demerouti, 2017), it could also facilitate discretion and job crafting (Wrzesniewski & Dutton, 2001).

Although it is argued that technological changes in the past have brought deskilling to secretarial jobs, the view that new technology is always introduced with deskilling intentions

might be problematic (Fearfull & Fearfull, 1992). In general, Swedish secretaries had a positive attitude towards the introduction of new technology, as a possibility to be liberated from certain duties (Bradley et al., 1984). The main aim with the computerisation of the Swedish public administration was said to be to guarantee efficiency and high quality of service to the public and to develop employee competence to match the rapid technological changes (Proposition, 1987/88:95, p. 1). Although they often had ambitions to advance, the strictly hierarchical and traditional organisations would not allow them to do that (Wilhelmson, 1994, p. 17).

Within universities, which in Sweden are generally part of the public sector, computerisation initially seems to have had a positive effect for the secretaries as their 'competence has been used better and we have got more responsibilities and more qualified tasks to do' (Skjöld, 1993, p. 148). The development of increased responsibilities for the secretaries, Hoffman predicted, would be beneficial to the academics as well: 'If the researcher, by an increase in responsibilities of the secretaries, has more time to spend on teaching and researching, the students will receive more of their time and the production of scientific publications will increase' (Hoffman, 1989, p. 43). While computerisation was meant to increase efficiency, a governmental report from 2016 suggests that it led instead to increased administration, stating that 'technology has increasingly made administration everybody's problem' (Statskontoret, 2016, p. 28).

Even though the secretarial functions in Swedish academia have changed regarding job title and required qualifications, a change of title does not automatically come with a change of content (Truss et al., 2013, p. 359). The secretary, now a departmental administrator, was in some workplaces transformed into an independent specialist with fewer but more qualified tasks (Nilsson, 2000), but still had the functions of a maid and provider of feminine care work, in others (Blomqvist, 1999). In addition, as is the case today, teachers and researchers do not seem to have more time to spend on teaching and research.

Over the last few decades, Swedish universities have undergone changes regarding management and governance in favour of a greater focus on customers and market logic (Allvin & Movitz, 2011; Friberg, 2015). In the early 1990s, cuts were made primarily in administrative functions. For universities, the impact of that was merging of departments into larger units and a reduction of staff in relation to student numbers, as growing student groups were not met with new employment, but with a heavier workload (Blomqvist, 1999; Zingmark, 1997). More of the everyday administrative tasks were transferred to people in the core business, resulting in a situation where everyone performed administrative tasks alongside their professional function and a deprofessionalisation in the sense that professionals had to spend time on duties not included in their expertise (Forssell & Westerberg, 2014). This development might also be connected to the changed gender composition among academic staff, affecting the division of labour within the organisation. In her study, Hughes (1996, p. 237) finds that 'It is noteworthy that the move to integrate parts of the professional and clerical labour processes has coincided with the increased presence of women in the occupation'. As for Swedish universities, there is 'a change towards gender balance' (Lindberg et al., 2011, p. 169) as the percentage share of women is increasing in all positions.

The changes to the role, the shifted title to *administrators, and the managerial and organisational changes regarding Swedish academia needs to be understood cohesively. The introduction of new technology, namely computerisation, was seen as both a threat and an opportunity for the occupation, as a facilitator of change. The previous research regarding administration in the Swedish public sector, presented above, indicates that some changes seem to have taken place, but perhaps not the ones predicted. The departmental administrators that

are the subjects in this study are 'professionalised' to a comparatively small extent and seldom heard from. Exploring how technological changes play into their job might also offer other insights regarding the inner workings of the organisation, as issues raised from the viewpoint of more marginal groups might make visible perspectives and events difficult to detect from the perspective of more dominant groups (Smith, 2005).

In terms of theory, this paper draws on Cockburn's (1985, p. 249) view of technology as a medium of power. While increased access to technology with the computerisation of offices could be seen as an increased access to power, Cockburn (1985, p. 226) argues that new technology tends to reconfirm rather than alter gender relations. Local gender regimes, that is 'interrelated practices, processes, actions and meanings' upholding patterns of inequality are seen as embedded in organisations (Acker, 1990, p. 442) and work in itself is considered a gendering process (Cockburn, 1985), where in this case the idea of the occupational role is interwoven with ideas of femininity. Men and women have different positions in relation to technology (Cockburn, 1985), as women historically have been 'excluded from technological knowledge, acted upon by technology and not interactive with it' (Cockburn, 1985, p. 9). Women tend to operate the machinery but are often denied insights in what is going on inside of them, while those who are designing technology are men (Cockburn, 1985).

In this paper, organisations are seen as dynamic, acknowledging differences between the formal design of an organisation and the way in which work is practised (Eriksson-Zetterquist, 2009). Organisational relationships (Hartmann et al., 1986) and economic and political factors (Edwards & Ramirez, 2016) are considered important aspects on how new technology is developed, implemented and perceived at work. The view that the introduction of new technology has potentially unintended consequences (Reynolds, 2015) and indirect effects (Hughes, 1996) is relevant to this paper, as is the suggestion that changes in technology cause tension between various groups of professionals and other employees (Cockburn, 1985, p. 116). Contemporary debates on academia and the effects of new public management tends to put the tension between managers and professionals at the centre. Burawoy (1982), however, argues that management in organisations aim to redirect contestation and conflicts away from themselves, transforming disputes over managerial decisions to become conflicts between different groups of employees within organisations. To understand the tensions within this academic organisation, this paper also connects to Burawoy's notions of conflicts as mediated on an ideological terrain (Burawoy, 1982, p. 67) and the lateral redirection of conflicts as a complementary perspective. With that understanding of conflicts and tensions, this paper adds dimensions to our understanding of academia as a work place.

METHODS AND BACKGROUND

The paper is based on a case study conducted at a medium-sized Swedish university with approximately 10,000 students and about 1300 employees. The study has a predominantly inductive input and the data generation has been done in different stages. Initial explorative interviews were followed by a questionnaire, followed by workshops and another set of interviews. The study is built upon this integration of different methods to achieve depth and breadth (Mason, 2002, p. 33). The process of data generation and analysis is presented in Figure 1. While multiple sources of data have informed the study, the findings presented in this paper are foremost based on individual data from departmental administrators in the form of quotations from semi-structured interviews and free-text comments, and quantitative data

Schematics, data generation and analytical process

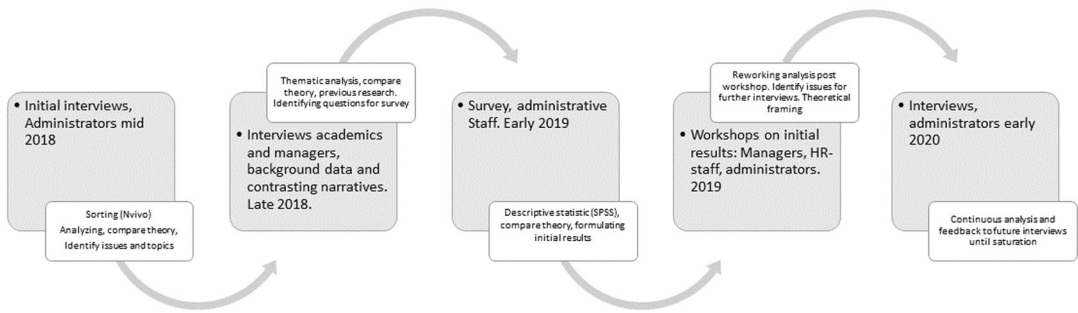


FIGURE 1 Schematics over data generation and analytical process

regarding experience of work from the survey, as the departmental administrators' experiences are the main focus of this paper. The quotes presented with pseudonyms are from the individual interviews with departmental administrators; when free-text comments from the survey are quoted this is stated in the paper.

The initial four semistructured interviews with departmental administrators lasted between 60 and 90 min. The respondents differ from each other in terms of employment time, location and background within the organisation, to provide a comprehensive picture of their activities. The interviews focused on the broad features of the work and revolved around everyday situations; tasks, expectations, priorities and relationships with colleagues. The questions were of an open nature to try to capture the respondents' experiences (Arvidson & Rosengren, 2002, p. 140).

After those initial interviews, there were two interviews with academics and two interviews with managerial staff at the same university to broaden the context and historical background to this study. The interviews with the departmental administrators, academic and managerial staff combined with documents regarding organisational structure, job descriptions and division of labour, were used to inform a questionnaire sent to all employees within the administrative departments at the university (a total of 397 people), with a response rate of 54%. In the survey, participants were encouraged to provide free-text comments in addition to their answers, a prompt which was largely fulfilled. For this paper, the respondents who fall outside the category of 'departmental administrators' have been isolated, leaving 101 people, who are all employees in that category at the university. Out of these, 57 people answered the survey, which makes the response rate among departmental administrators 57%. The questions in the survey mainly revolved around specific work tasks, job descriptions, use of communications and influence over job tasks.

The survey aimed to provide a broad picture of the job and social relations experienced at various locations as a part of the mapping of the social aspects of the organisation (Smith, 2005) and provide themes to follow up on in the final interviews.

To test and develop the interpretation of the survey, the results and initial analysis were discussed in workshops and focus groups with departmental administrators (eight groups consisting of five administrators each) as well as employees in managerial positions and HR representatives. The workshops and focus groups strengthened some early assumptions—such as the existence of conflicting expectations—and nuanced others, for example, adding positive aspects to the vague job descriptions. Field notes from the focus groups informed the follow-up

interviews and are used to support the analysis in this paper. The questionnaire and focus group sessions were followed up with nine additional hour-long semistructured interviews with departmental administrators. The respondents were strategically selected according to the same template as in the four initial interviews—a staff list was used to find and approach participants with varying experiences such as employment time and placement within different departments. The follow-up interviews were based on the patterns that emerged in the survey, from the quantitative data as well as themes in the free-text comments. The purpose was to make sure that the interviews would provide in-depth data on the relevant themes emerging to ensure that data saturation was reached. The material has been coded thematically (Braun & Clarke, 2006; Bryman, 2011), focusing on use of skills, technology and social relations.

By carrying out the data generation in several steps with different methods, the credibility of the results can increase (Nowell et al., 2017). A prior understanding of the research topic can be a helpful guiding tool for what questions to ask and what to follow up on (Corbin & Strauss, 2008, p. 80), and in interactive data collection, such as interviews, the phase of analysing data is rarely entered without initial ideas (Nowell et al., 2017). The author's personal experience from his job role has been helpful in designing the study and the line of questions. However, that preunderstanding also increases the need for vigilance and transparency as well as manufactured distance and reflexivity on behalf of the researchers to limit the risk of bias. Having a more obvious risk of being affected by bias and blind spots forces the researcher to more actively engage with those risks—being more reflexive and critical about interpretations, making them consciously and making them transparent to the reader. By analysing the data during and after each step of the data generation and testing those analyses in dialogue with the participants in interviews, focus groups and workshops (see Figure 1), a reflexive approach has been built into the process of analysis, reducing the risk of bias and strengthening the internal validity.

There are always ethical issues to address when researching areas close to the researcher. In this case, perhaps even more so as the researcher has worked as both an administrator and academic. The confirmation of interpretations of data built into this research process is one way to do right by the participants, and the input from different groups of actors is one way of making more voices heard. As the research also concerns potentially sensitive topics such as tensions, conflicts and strained work place relations, it is important to stress the voluntariness in participation: the possibility to withdraw consent at any point in time and full anonymity being given. The research project has undergone ethical review and been approved by an ethics' committee at the university level. To make the setting visible and give the empirical data a context (Corbin & Strauss, 2008, p. 88), a description of the organisational context of the examined group now follows below.

Research context

All department-level administrators in this study are employed by an administrative department within one of the university's faculties and answer to their respective managers at faculty level, while their workplaces are located in different academic schools and disciplines. There are about 50 departmental administrators employed in each administrative unit, all sharing the same manager. They are organised at the same organisational level and there is no formal rank or hierarchy among them. The manager is somewhat removed from the departmental administrators, both physically and in terms of involvement in everyday

activities. Most of the departmental administrator's work is conducted in relation to the academics and students at the different schools and disciplines. Up until about 15–20 years ago, the departmental administrators were formally employed in the departments where they were placed and shared a manager with the academics in that department. As part of a major reorganisation of the university, the administrative staff became more centralised. Some administrative services, such as HR, communication, IT, and so on, were placed together as physical units, serving the university as a whole. The departmental administrators were partly centralised, serving each faculty, but remained physically located in various departments. The reorganisation seems to have brought a shift where, at least initially, the number of central administration staff has increased, while the number of administrators at a local department level has decreased. That reorganisation has most likely influenced the relations and tensions within the organisation, although it has not caused or fundamentally altered the long time effects of the introduction of new technology.

The departmental administrators in this study have various backgrounds and experiences. The age range is late 20s–60s. The group is heavily female-dominated, and more so in the department for social sciences (90+%) than within science and technology (70+%). The gender pattern is similar among the academic staff, with a female majority within the social sciences and a male majority in the science and technology departments. They have various backgrounds and experiences from outside the university, as well as from other positions within the university—see Table 1. Among the more recently employed administrators, it is more common to have at least a bachelor's degree in some discipline, although there are

TABLE 1 List of participating departmental administrators interviewed

Name	Located within	Employment time, years	Higher education (HE)	HE required for job when employed
Alex	SS	–5	Yes	Yes
Mia	SS	–5	Yes	Yes
Ann	SS	–5	Yes	Yes
Emma	ST	–5	Yes	Yes
Lisa	SS	5–10	Yes	Yes
Elisabeth	SS	5–10	Yes	Yes
Eva	ST	10–15	N/A	N/A
Kim	ST	15–20	N/A	No
Vendela	ST	10–15	No	No
Pia	SS	15–20	Yes	No
Ina	SS	20+	No	No
Erika	ST & SS	20+	No	No
Kristina	ST & SS	20+	No	No

Note: These are the participating from which the quotes presented in this paper originate (if not stated otherwise), displayed to provide additional information on relevant aspects of their work position and background. The classification of departments is analytical categories that do not fully match the actual departments.

Abbreviations: SS, social sciences; ST, science and technology.

examples among the more senior administrators too. A bachelor's degree or equivalent has also become a requirement when new positions are announced.

FINDINGS

As will be shown in the following sections, the introduction of new technology has had both direct and indirect effects on departmental administrators' jobs in terms of upskilling and deskilling. It has also increased tensions in the relation between administrators and academics. These relations seem to have a greater impact than the technology in itself over the development, or lack of development, of the departmental administrators' jobs.

The first section discusses the formal development of the role and how the introduction of new technology plays into the upskilling, deskilling and, at the same time, increased discretion of the departmental administrators. The second section discusses how this development, combined with changes to the role, is adding to tensions regarding the division of labour between administrators and academics. Finally, there follows discussion on how the local context and cultures impact the administrators' opportunities. The impact of gender and the 'traditional sex-type' of the occupation is discussed throughout each section.

Formal development and direct effect of technology

In terms of formal demands and qualifications, there has been an upskilling of the occupation. In terms of job title and formal qualifications required to apply for a position as departmental administrator, there has been a shift towards requirements for a higher level of education. This is viewed as something positive among the participants in this study and as a way to increase the status of the position. However, among the long-time employees, there is a sense that they probably would not qualify for their own jobs if they applied now, even though they have no difficulties performing their duties. Some of the more recently employed who have a university degree question if it is really necessary, as the actual tasks involved in the job do not really require that level of higher education. One of them reflects upon the discrepancy between the advert for the job they applied for and the actual job they are doing:

They tried to raise the status by hiring more competent staff but the tasks are the same. (...) They might need to follow it through, I think, with a bit of responsibility, a little more stimulating work or something. *Alex*

The higher qualifications demanded are said to be part of a managerial strategy to develop flexible and efficient administrative support for the academics. The job is 'upskilled' in terms of formal requirements and titles, but perhaps to a lesser degree regarding responsibilities and job content. The demand for higher qualifications is perhaps therefore not a response to a greater need for skill as an adjustment to new technology or changes to the job content, but rather connected to the ambition or the rhetoric of the managers to develop the administrative functions. Although some specialisation has taken place, there is still a lot of 'every day administration' going on in the job. Besides being the first line of contact for students and academics, the job consists of tasks such as providing updated information on student numbers

and admissions, producing internal newsletters, reporting data on student performance and prognosis upwards in the organisation and keeping the local files in order.

While Swedish secretaries had hopes that the new technology in the form of computerisation would increase the status and recognition of skills in the occupation (Bradley et al., 1984), the direct effects visible here rather indicates a development in line with Braverman's (1982) argument on new technologies' deskilling effect on secretarial jobs, and Cockburn's (1985) theory on technologies conserving effect on power relations. In terms of job content, the introduction of new technology has had both direct and indirect effects, where fragmentation and reduced control is a prominent direct effect. Within the organisation, there is an established expression—'system fatigue' (*systemtrötthet*)—to describe the effect of having to adapt to a flow of new systems and new iterations of existing systems that are introduced. There is constant pressure to adapt to new and changing digital systems used for communication, planning, reporting and so on. The influence over job tasks is narrowed, as the layout of the digital systems determines the order of information to be inserted in the systems, what to update first, the process of different matters and the deadlines within the systems. These changes reduced the departmental administrators' control over how the job is done and how time can be allocated, as the deadlines in the digital systems dictate the time frame of the job. It is not really possible to negotiate with the system—'if you are supposed to put a number in a box, your only option is to put that number in that box', as one interviewee describes it. There are, however, nuances once one gets to know the different systems. That is something that is learned over time:

You know that this system, I have to update it, otherwise it will explode. But that, over there, it may be a little less urgent. *Kim*

To get to know the different systems, keep up with changes in various systems, and know how they interconnect, or do not interconnect, seems to be a source of some frustration among the participants. Some systems need to be prioritised above others and some could be ignored; some undergo constant changes and some have bugs to get to know and work around; some are connected, others need to be operated individually in a specific order. A lot of that comes down to experience and getting to know the systems. Still, some employees, such as Kristina quoted below, might just give in and come to terms with not getting it:

I used to understand how it worked, today I do not understand anything. I've learned to press certain buttons, but I do not understand what and why. I used to understand that before. Then, I do not know if it's because I'm starting to get old but there are more people who say this, so it's not just me. *Kristina*

In that regard, the new technology is making the job increasingly obscure and creates a demand for constant adapting and adjustment to keep up with the new systems. Some of the interviewees describe how things that used to be easy—for example, to make arrangements for an examination—are now frustratingly complicated. A common remark is along the lines of 'We have managed to send people to the moon but seem unable to get two systems to work together'. The problems are not expressed as being embedded in the technology in itself, but rather in the control and decisions over the processes and design of the systems. The more specialised systems and software used in the organisation are developed or modified within the organisation or in cooperation with other universities using the same systems. That gives the organisation influence over the design and functionality of these systems and software. However, the ones that make the

decisions and specify the requirements for new digital systems—in this case the upper management alongside IT specialists—are rarely the ones that use them, and the ones actually designing them are often even further away from the daily activities of the organisation, out of reach even for management. The departmental administrators are occasionally involved in the design process at a rather late stage, and then given the opportunity to make suggestions rather than demands—suggestions that tend to be neglected or given low priority. As the managers are somewhat removed from the departmental administrators and thus lack detailed knowledge of the job process, influence is hard to achieve.

Your boss is so far away, and you may not be understood by your boss, about these everyday problems that are still my everyday life. Once when my boss happened to walk by in my corridor, I said come in and have a look here in the system. I have 150 courses here, the number grows each time I open it and it is not possible to sort them. 'This is not how it should be', says my boss. Then absolutely nothing happens. *Alex*

As the systems are designed by someone far away from them, the departmental administrators have little influence over the design and internal workings of the systems. That ties in with the traditional gendered relations to technology, where women tend to be operators dominated by technology while designing how the technology should operate is a job done by men (Cockburn, 1985). In this case, however, it seems to be a problem at organisational level rather than the division of labour in society at large, which is made visible by taking administrators' experience of every day work as grounds for exploration (Smith, 2005). Still, the opportunity to shape their own routines and workflows is reduced by the increased use of digital systems that standardise operations. In that sense, the new technology seems to have fragmented parts of the job and reduced the departmental administrators' control and influence over the conduct of work.

Increased discretion, changed relations and lateral conflicts as indirect effects

New technical systems seem to restrict the discretion over part of the administrators' jobs, reducing their control over tasks. However, computerisation and digitalisation were supposed to rationalise the routine tasks of departmental administrators and thus create openings for a more professionalised function. The findings in this study suggest that some routine tasks have indeed left the desk of the administrators after the introduction of new technology. Some of these tasks were automated while others landed on the desks of academics and students. As an indirect effect of technology, the increased self-administration among academics and students has reduced the workload for the administrators, creating opportunities to take on other tasks.

At the same time, there seems to be dissatisfaction among the academic staff with this development, arguably as they are left doing more of the administrative work themselves. The introduction of new technology combined with the ambition to reduce some of the routine tasks for the administrators creates a situation where administrators and academics sometimes struggle to get tasks off their respective desks, and onto the desk of the others.

As the academics resist taking on some of the administrative tasks, they sometimes hinder the advancement towards more developed administrative services. For the administrators, to

the extent that there is actually room to take on different tasks and get them accepted, varies within the organisation and partly comes down to the amount of resistance from teachers and researchers with regard to doing their own administration. It is not the new technology in itself that hinders the development of the administrators role, but other actors' resistance towards changes in their own role. This comes into play particularly with the introduction of new technology-based administrative systems:

Trying to get teachers to accept that there will be changes. I think that is mine, it is ours, we administrators, our biggest problem we have today. We as administrators, we know that there are always new systems. Our role as administrators is such that we must know these systems, otherwise we cannot work. Teachers do not have the same opinion. They think we should do this. (...) I can understand them in a way, but now it is decided that the teachers should be involved and do this thing. But they have a very hard time with that.... It's enough that we just say something at a department meeting and they shout. 'I'm not going to do that!' *Erika*

While it is not up to the departmental administrators to make the formal decisions regarding division of labour or usage of new technological systems within the organisation, they are often the ones who bring the news to the academics, introducing them to the systems and are supposed to function as frontline support towards teachers and researchers. While it is no longer the administrators' job to report grades into the systems (i.e., the job of the academics), the administrators have to support the academics in doing it as part of their job. While that could be seen as moving away from a more traditional feminine sex-typed reactive service function, to become more of a specialist whose expertise is recognised, it also puts the administrators in the middle between managerial decisions and academic reactions.

We are like in the middle. We have some higher power that has told us that we should do this, and then we have to get it over to the teachers. Because we are the ones who can do it. *Erika*

The departmental administrators are often the ones who get access to and information about the new systems first, thus gaining a knowledge advantage and the status of specialists. That gives them a gatekeeping function, in the sense that their skill and knowledge is required in order for the teachers and researchers to get their jobs done. But as the messengers of change, they also become the targets of frustration and protests from teachers and researchers who oppose the changes. While the administrators in general are sharing the frustration with ever new digital systems, their position as mediators is somewhat problematic, as they become the target of emotional outbursts and critical responses to managerial decisions. The academic responses to the organisational changes in the form of conflicts with management, is in practice redirected laterally to become conflicts with the departmental administrators.

The impact of local relations and traditions

The vague job descriptions and dependency of personal relations for today's departmental administrators links back to the earlier days of the secretarial occupation being guided by personal relations rather than bureaucratic control. As the job is vaguely defined and to some

extent at the departmental administrators' discretion, it leaves room for the individual departmental administrator to decide what to do and how to do it. In the survey 72% stated that it is up to them to decide the details if not the general frame of when, what and how to do their job. At the same time, with vague job descriptions beyond 'give support' the job is informed by expectations and requests from researchers, teachers and students.

I also think that it is very difficult to describe, we have no job descriptions in the way that this and that should be done or is included (...) I never say 'no, it's not my job', or 'you can do it yourself'. *Pia*

There is, at least in theory, the possibility for the administrators to initiate their own projects, take on new tasks and do what they think is interesting and of use for the department. This could be, for example, taking on tasks in research projects, setting up webpages, initiating strategic discussions regarding educational programmes, or developing routines for knowledge sharing.

It is easy to take on things that you think are fun to work with even though you are not expected to. One such thing is to work with the web, and it is very much appreciated that you can contribute in that way. I do not see it as an obstacle that it is not in the job description, if I have time I am happy to do it. *Mia*

Some of the participants are encouraged by the academics to take these kinds of initiative others are not. As is historically the case with secretarial work (Kanter, 1993; Truss et al., 2013; Truss, 1993), access to more challenging tasks or tasks that are perceived as interesting, is often connected to personal relations at the workplace, rather than explicitly stated in job descriptions. Room for professional development within the administrative job is, in that sense, arbitrary rather than systematic, as it depends on personal connections and local conditions at a departmental level. The dependency of personal relations to get access to rewarding tasks also comes with the risk of the job going away when there is a change of staff:

A lot depends on who you work with. The director of studies who was here before, she and I had this close collaboration. We met in the morning, and made an individual study plan for every single person who was lagging behind (...) and it was a lot of fun, that job! But it depends on who you work with. I mean, the current one and I click really well, but he wants to work by himself. So, yeah... *Ina*

Even though there are some attempts to formulate a uniform division of labour regarding administrative tasks within the organisation as the whole, the local setting plays a vital part in what the departmental administrator's job is understood to be, and it comes down to tradition within the discipline as well as skills and interests on behalf of the departmental administrator. There is a tendency that male academics and those in more senior positions expect the administrators to act more as 'traditional secretaries'; that is, as a reactive, supportive function rather than more independent proactive specialist, fuelling the aspect of feminine care work as part of the occupation (Blomqvist, 1999).

There is a difference between the younger administrators and their older colleagues in how they experience being treated by male and female academics. The younger administrators reported that there is a difference between how they are treated by male and female academics, that their older colleagues do not experience to the same degree. Whether this is due to other

expectations from the younger administrators, or differences in how male and female academics approach younger administrators, cannot be determined here, but it is an indication of the ambiguities regarding the administrator's status and position that is apparent in the survey. The survey indicates that the administrators at the male-dominated science and technology departments experience to a much higher extent, a difference in how they were asked to provide support by academics with 'higher' titles, compared to the ones at the more female-dominated departments of the social sciences. The attitude displayed towards the administrative staff is further reflected in the expectations they have on the administrative role. There is a perceived difference in what kind of support they are asked to give, as a comment left in the survey indicates:

The groups that sometimes expect me to perform their duties are usually professors and senior lecturers. Assistant professors and doctoral students usually ask for help so that they can carry out their tasks themselves. *Comment from survey*

If that comes down to the formal position, age (senior academics tends to be older), or gender (senior academics in Sweden are more likely to be male (Lindberg et al., 2011)), it seems quite clear that formal positions, as well as power relations in various forms, come into play in shaping the job content of the departmental administrators. Even though the organisation aims to recruit highly educated staff, traditional gendered notions of the job of departmental administrators hinders the full utilisation of their skill sets.

We have an older professor. He is very good and I like him very much but he may have this slightly old school bully background. He asks if I can sit in on meetings and take notes. No one else thinks I need to do that (...). But it was like, even if everyone else said you do not have to do it, because you have a lot of other work to do, he was more like, yes you should do this, your place is to write, we need a secretary. But it was not ill-intentioned or anything. *Ann*

Besides the dependency on personal relations, there are structural hindrances built into the organisation. When the departmental administrators, with support from research and teaching colleagues, expand their tasks and take on additional responsibilities, these are not always recognised by the employer due to the formal division of labour. That creates a situation where the departmental administrators do the actual work, but do not receive the credit for the job done:

sometimes ... there are experienced administrators and new study directors and new heads of subjects (*ämnesföreträdare*) who actually do not have the faintest idea about some of the things. And then it is the administrator who actually makes the decisions (...) You cannot do someone else's job, or rather, you cannot be responsible for it! You can do it, but you cannot be responsible for it, haha. (...) I do the job in five minutes—the pay rise is theirs. *Alex*

In some cases, the academic colleagues do encourage the development of new skills and responsibilities—as noted often depending on personal relations—but the structural arrangements within the organisation, such as formal division of labour between academic and nonacademic staff and traditional notions of what is a suitable job for whom, constitute a

hindrance. Even though the qualification requirement has been increased and there might be an increased opportunity to develop the job content based on their own interests, the recognition of skills and merit is still tightly bound to traditional notions of titles and hierarchies:

In the same way, you may listen less to your faculty administrator than you listen to the accountant or a lawyer, despite the fact that the administrator works with certain issues regularly and has done so for 20 years. So, you listen to the title before the actual competence. *Eva*

Even though the long-term experiences of the departmental administrators are often relied upon and there are seemingly openings to develop new skills, the arbitrary nature of the opportunities to do so—as it often comes down to local circumstances and personal relations—and the volatility of those arrangements, makes it difficult to get the skills and merits formally recognised. That may be influenced by the gender of the groups, as skills carried by female occupations tend to be recognised less than male-typed skills (Cockburn, 1985).

In summary, the academic staff in the departmental administrators' proximity have influence over what the departmental administrators could and should do, or not do, which can enable or hinder the development of the responsibilities and content of their jobs. It is not necessarily based on a strict gendered 'traditional' view about what would be a suitable job for a departmental administrator. It could also be the unintended result of resistance from teachers and researchers towards the management—if they refuse the duties they do not think they should perform themselves, those duties fall on the departmental administrators. It could, of course, be a combination, based on the views of what a proper job for an academic and administrator might be. The relation between gender, expectations and technology must be understood against the background of local gender regimes but also in relation to the experiences and gendered expectations on other occupations in close proximity. It is, in this case, not just a question of the gendering process and altering position of the administrators but also the changed conditions and subsequent resistance from the academics.

DISCUSSION AND CONCLUSION

As there has been drastic technological development and increased debates on sex-typed jobs in Sweden during the 30 years that have passed since previous studies (Blomqvist, 1999; Bradley et al., 1984; Hoffman, 1989; Skjöld, 1993; Wilhelmson, 1994) were conducted, a reasonable prediction would be that the jobs of the departmental administrators would differ from those of their secretarial predecessors. However, this study argues that major characteristics regarding job function, control and gendered relations remain similar, furthering the argument that new technology tends to reconfirm rather than alter gender relations (Cockburn, 1985, p. 226), while some of the expression of those relations has been altered.

Returning to the theoretical framing, Wilhelmson's (1984) idea that technology would liberate and advance office jobs could be connected to Cockburn's (1985) perception of access to technology as access to power, suggesting that increased use of technology in the job would have an empowering effect. However, while the increased formal requirements and discretion in the departmental administrator's job indicates an advancement of the job, a more direct effect of the introduced technology is the current situation where administrators (and others)

are being increasingly dominated by technology in the form of, for example, digital administrative systems. Cockburn's (1985) theory that female-dominated groups tend to be dominated by, rather than in control of, new work place technology is developed in this study, providing insights on the indirect effects the introduction of new technology might have. However, while the subordinated position in relation to technology is partly due to not being involved in the process of designing the systems, the lack of involvement, in this case, seems to be an organisational matter, which fuels the tensions in the organisation.

Drawing on Acker's (1990, p. 443) concept of local gender regimes as 'interrelated practices, processes, actions and meanings (...) within particular organizations' and Cockburn's (1985) view of work as a gendering process, this paper highlights what might be seen as a contradictory development. While the increased access and use of technology are altering some aspects and expressions of the hierarchical and gendered relations by changing parts of the jobs and divisions of labour within the organisation, these changes are not altering the balance of the existing power relations. The local gender regimes and gendered aspects of the job have been partially reconfigured as new tasks connected to the new technology that has occurred in the organisation and modified established praxis. However, gender relations are fundamentally unaltered as the new aspects of the administrative role are configured to play in to ideas of caretaking femininity (Blomqvist, 1999) and reactive support. The job is interpreted differently and contains different aspects on different sites in the organisation where local gender regimes (Acker, 1990) and traditions come in to play, together with the personal and organisational relationships (Hartmann et al., 1986) that dictates the hindrance and opportunities to develop the job content. This paper develops Hughes' (1996) and Reynolds (2015) argument that the introduction of new technology might have unintended consequences and indirect effects, by adding that it is not just the introduction of technology, but also the different reactions of acceptance or resistance among different actors that cause effects for other groups in the organisation.

This paper argues that gender remains an important factor in what role and function of the departmental administrators are understood to have, as gendered assumptions are embedded in organisations (Acker, 1990) and the occupation (Bradley et al., 1984). As demonstrated in this study, local ideas of what should be the administrator's role play a significant part in shaping the content of their job. There is a difference in perceived approaches between the female-dominated and male-dominated departments, and a tendency that male academics, and those in more senior positions, are expecting the administrators to act more as 'traditional secretaries', fuelling the idea of feminine care work as part of the occupation (Blomqvist, 1999). This might also have an age dimension, as the experiences vary between younger and older administrators, and the intersection of age and gender in administrative services would be a relevant topic for further studies.

Cockburn's (1985) suggests that changes in technology cause tensions between groups of professionals and other employees. It is important to understand the different reactions, as the reactions might be understood as being fuelled by the recomposition of skills and a changed division of labour that might interrupt the existing gender and status hierarchies connected to certain tasks (1985, p. 116). The findings in this study suggest variations in the perception of the administrators' role and division of labour, depending on local context. It is useful to add further insights to that argument, as these conflicts are not always uniform between the opposing wills or occupational groups, but are more complex and indirect. The benefits the departmental administrators might get in terms of time saved by the introduction of digital systems collides with the academics resistance to the (actual or perceived) job enlargement;

moreover, the departmental administrators' part in implementing and introducing the academics to new digital systems makes them a target for expressions of dissatisfaction from teachers and researchers.

While drawing on Cockburn (1985), this paper adds further insights to how those tensions are distributed over several points of conflicts and redirected laterally (Burawoy, 1982). In that regard, the introduction of new technology such as digital systems for administration and supervision, has not only increased and redirected tensions in the organisation, they have also made the usage of managerial power more invisible, altering form and expression, but not the fundamentals of the existing power relations. What may be intended as acts of resistance by the academics in response to the introduction of new technology are misdirected in terms of power relations as they are not directed towards management, but in practice towards the administrators. The departmental administrators' positions in the organisation as mediators between management and academics might be understood as a way for university management to direct any contestation away from themselves (Burawoy, 1982): the conflicts are lateral rather than directed upwards in the organisation.

There is another gender dimension to the increased tension connected to the technology of self-administration, based on Hughes' (1996) suggestion that the increased self-administration seems to be gendered. The changes in division of administrative work in this study could be argued as displaying a change in gendered patterns in academia and different expectations on the job of the administrators, or it might be seen as part of the transition from a role and expectations connected to traditional male-dominated academic hierarchies and the female-dominated traditional secretary jobs. The different experiences from administrators within male- respectively female-dominated departments might indicate that the traditional notions are less intense where the gender pattern is weaker or less male-dominated. The way in which new technology is implemented and used in this case adds to our understanding of work in itself as a gendering process, not just regarding the departmental administrators, but also the academic profession. This paper contributes to ongoing debates about academia as a workplace by adding nuances to the dynamics of tensions within organisations, that could also be generalised to other settings. By focusing on a group in the periphery of the struggle between professions and management within academia, it goes beyond that binary set up and illustrates how multiple aspects come into play in the status and potential advancements of the departmental administrators' positions.

This study strengthens the impression that digital shifts are to be understood as occurring on fields of contestation (Burawoy, 1982). The positions of different actors within the organisation are connected. Resistance in one place, by the teachers and researchers, occasionally creates hindrance in other places, for the departmental administrators in this case, increasing the lateral conflicts. Those conflicts as well as gendered patterns and perceptions of gender enable or hinder changes in various groups. As the risks and possibilities connected to computerisation are matters of social relations as much as being governed by technology, this paper adds to the debates on work and technology by exploring the social relations at work place level experienced by an often overlooked group of the periphery of the power centres of academics and managers in academia.

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DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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