

**CHANGING ACADEMIC ROLES AND SHIFTING
GENDER INEQUALITIES: A CASE ANALYSIS OF THE
INFLUENCE OF THE TEACHING-RESEARCH NEXUS
ON THE ACADEMIC CAREER PROSPECTS OF
FEMALE ACADEMICS IN THE NETHERLANDS**

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ABSTRACT

The purpose of this study is to gain an understanding of the change in academic roles for female academics and the implications of this change for their career opportunities. In this article, we therefore aim to answer the following research questions: (1) How have the changes introduced by the new public management affected the division of academic labor in universities? (2) What academic role differentiation can be found in the Dutch higher education system? (3) How is the workload of female academics distributed in the managerial Dutch university? (4) How does this workload differentiation influence their career prospects? We investigate these questions by concentrating on the Dutch academic system in general and on one case-study university in particular. Our findings indicate that the teaching-research nexus is changing in the Netherlands in that new career paths with a focus on either teaching or research have already been integrated into the formal job classification regulations. Furthermore, we find that the changing nexus is likely to be negatively related to the career prospects of female academics, while this relationship is more pronounced for mid-career academics than others.

INTRODUCTION

European higher education institutions have undergone a significant transformation in the past two decades, partly due to the new public management inspired

reforms and the relatively strong convergence of European higher education systems due to the Bologna Process (Leisyte & Dee, 2012). Universities have been shifting their structures and processes, changing from “loosely coupled” institutions to “tightly coupled” organizations (De Boer, Enders, & Leisyte, 2007). As part of this process, a gradual shift away from the classical Humboldtian model of the unity of teaching and research within the professional role of an academic toward structurally differentiated academic roles has been observed (Leisyte & Dee, 2012).

We argue that the increasing division of academic labor may lead to the emergence of inequalities or the intensification of already existing inequalities. Gender inequality, for example, is highly likely to be fueled by this kind of development. Female academics already form a disadvantaged group in academia since they are underrepresented in senior academic positions (see, e.g., Eveline, 2005; Grummell, Devine, & Lynch, 2009; Van den Brink, 2010). The shifting teaching-research nexus is likely to introduce a constraint on career progression for female academics, as they tend to be more heavily involved in teaching than in research or leadership in comparison with their male counterparts (Barry, Berg, & Chandler, 2012; Berg, Barry, & Chandler, 2003). The disproportionate division between teaching and research roles in academia can produce a gendered segregation of academic roles and thus operate as a barrier to the career progression of female academics, as success in research remains one of the most important criteria required for promotion to higher-ranked academic positions. A large quantity of research outputs and grants awarded seems to conform better than teaching with contemporary notions of performance, while teaching has fewer measurable outputs (Blackmore & Sachs, 2007).

The purpose of this study is to achieve an understanding of the change in academic roles for female academics and the implications of this change for their career opportunities. In this article, we therefore aim to answer the following research questions:

1. How have the changes introduced by the new public management affected the division of academic labor in universities?
2. What academic role differentiation can be found in the Dutch higher education system?
3. How is the workload of female academics distributed in the managerial Dutch university?
4. How does this workload differentiation influence their career prospects?

We investigate these questions by concentrating on the Dutch academic system in general and on one case-study university in particular. We find the Dutch system especially relevant to an investigation of our research questions, as it is currently one of the lowest performers in Europe when it comes to female academic representation in professorial positions. The proportion of women in top academic positions in the Netherlands saw an incremental increase from just 8% in

2002 to 13% in 2010 (European Commission, 2012). Further, the Dutch higher education system has a relatively new system of job ranking, creating highly differentiated formal positions in which teaching and research tasks may be assigned in different proportions while the system sticks to the traditional Humboldtian model of the teaching-research nexus (De Weert, 2009).

Our data are composed of primary and secondary sources. The primary sources include a survey conducted among the female academic employees of the case-study university in 2012, complemented by a range of national and institutional documents. The secondary sources of data include a number of European, national, and institutional reports, relevant Web sites, and pertinent literature. Building on these sources, we address our research questions in three parts. In the first part, we map the changes in higher education policies in Europe with a specific focus on the Dutch higher education system. In the second part, we discuss the key issues related to the career development of female academic staff and explore the relation between the differentiation of academic roles and gender inequalities in career progression prospects. The third part focuses on the case-study analysis of the selected Dutch university. We investigate how the female academics we have studied view their work roles and discuss the implications of the differentiation in their activities for their career prospects. We conclude the article by providing an overall reflection on the changes in the teaching-research nexus and career prospects in the light of our findings.

NEW PUBLIC MANAGEMENT REFORMS AND THE DUTCH HIGHER EDUCATION SYSTEM

Managerial control within universities has been strengthened by new public management inspired governmental policies geared toward increasing the efficiency and effectiveness of universities in the 1990s, starting with the UK and gradually spreading through continental Europe (De Boer et al., 2007). Universities in Europe have become more autonomous and—at the same time—more accountable to the increasing variety of stakeholders. As part of these processes, universities have tried to modify their organizational structures and have increasingly become more “corporate” organizations (Leisyte & Dee, 2012). This has entailed a change in academic work conditions in terms of growing numbers of temporary, project-based contracts, the use of performance reviews in which research outputs are emphasized, and the division of labor among academics in terms of teaching, research, and administration. This last-mentioned development in particular resulted from the universities’ struggle to increase student numbers, from stronger accountability demands made of managers and external funders, and from the need to attract external grants. These organizational developments are believed to be leading to a gradual shift, in European universities, away from the classical Humboldtian model, which emphasizes the integration of teaching

and research within the professional role of an academic, toward structurally differentiated academic roles (Leisyte, Enders, & De Boer, 2009).

Facing the challenge of growing performance and efficiency demands, universities in several countries have begun to introduce differentiated career paths in academia, especially in the form of research-only or teaching-only positions (see De Weert, 2009). Also, in contexts where these positions do not yet officially exist, academics report increased competition between teaching and research time, leading to intense conflicts in their work portfolios (Leisyte et al., 2009). At the same time and somewhat paradoxically, success in research remains one of the most important criteria required for promotion to higher-ranked academic positions. A large quantity of research outputs and grants seems to conform better than teaching with contemporary notions of performativity in academic leadership, while teaching has fewer measurable outputs (Blackmore & Sachs, 2007).

The Dutch government has traditionally played an important role in the coordination of the higher education system. In the Dutch context, the higher education reforms in the 1980s strengthened university autonomy and management (De Boer & Huisman, 1999). In 1985, the government introduced the concept of “steering from a distance,” under which the universities have been given institutional autonomy in hiring academic staff, raising funds, maintaining their own property, and engaging in entrepreneurial activities (Leisyte & Dee, 2012). The new public management–inspired reforms of the 1990s echoed this concept as they urged universities to become real corporate organizations that can speedily respond to the needs of the labor market and the overall economy (Leisyte, Enders, & De Boer, 2008).

The implications of the policy changes for Dutch universities have been widely discussed (De Boer et al., 2007). As studies have revealed, the managerial power located in the appointed executive boards and appointed deans as professional managers has led to enlarged administrative apparatuses and increased professionalization of the human resources departments in Dutch universities. Further, the growing audit logic in the form of output monitoring and increasing competition for resources has stressed the need to diversify income sources (De Boer et al., 2007). As a result, hiring and promotion criteria in universities have increasingly included the number of publications in high-ranking journals and performance in attracting external research funding (Leisyte, 2007; Leisyte et al., 2008). The yearly performance reviews of individual academic staff members, previously ad hoc and largely a formality, have increasingly become part of the obligatory organizational routine and have come to address the questions of what the individual needs to achieve in terms of research outputs for the next year, what funding the individual needs to bring in, and in general what contributions to the department the individual needs to make in order to achieve promotion (Leisyte & Dee, 2012). One explicit example of the changes has been the introduction of the tenure-track system, in which promising staff members are hired and their performance expectations are laid down in a time-limited contract. If their performance

is satisfactory, the candidates should be promoted to the associate professor and professor levels. If unsatisfactory, they leave the institution. The current recession has strengthened managerial leverage in Dutch universities toward stricter rule-following, more rigid budgeting, more frequent nonextension of temporary contracts, and hiring freezes. Thus, university human resource policies and procedures have been streamlined, with working conditions and requirements increasingly geared toward standardization and performance measurement.

THE TEACHING-RESEARCH NEXUS IN THE CLASSIFICATION SYSTEM FOR DUTCH ACADEMIC POSITIONS

The new public management inspired reforms in the Netherlands in the 1990s changed academic staff employment regulations, making academics no longer public servants but employees of universities. The new classification of academic positions (*Universitair Functieordenen*—UFO) was introduced in 2003. It is part of the “Collective Labor Agreement” of Dutch universities and features “diversified career patterns in which teaching and research tasks may occur in different proportions” (De Weert, 2009: 148), where the various roles, tasks, and responsibilities that have to be carried out to achieve specific results have been made explicit by formal criteria that apply to academic employment practices at Dutch universities. This agreement was negotiated between the Association of Universities in the Netherlands (VSNU), representing the 14 Dutch universities and three trade unions (Timmers, Willemsen, & Tijdens, 2010). It regulates academic as well as nonacademic job profiles and salary levels for all Dutch universities.

This new system shifted the focus from years of work experience and performance toward core activities and competencies. The UFO academic profiles are composed mainly of teaching, research, and administrative tasks. Depending on the weight of these tasks within the position, the following academic profiles are distinguished: lecturers, researchers, university lecturers (equivalent to assistant professors), senior university lecturers (equivalent to associate professors), and full professors. In addition, a common practice in Dutch universities is to employ doctoral candidates as “research assistant trainees” (*Assistenten in opleiding*—*AiO*—in Dutch) among the academic staff with employment contracts. This forms a distinct academic position, since it is primarily aimed at providing advanced training for doctoral candidates by actively involving them in university research, with less than 25% of their working time devoted to teaching and administrative duties (see De Weert & Boezeroy, 2007). Therefore, this group of academic employees will not be further considered in this study; instead, we focus on the five above-mentioned academic profiles that are subject to similar result-oriented evaluation and promotion conditions.

A specified mix of academic activities is envisaged for each of these profiles, which can be viewed in detail in Table 1. These positions are, furthermore, broken

Table 1. Distribution of Tasks among Academic Positions
According to the UFO Criteria

	Lecturer	Researcher	Assistant Professor	Associate Professor	Full Professor
Teaching					
Development	±		√	√	√
Execution	√		√	√	√
Examination	√		√	√	
Evaluation	±		√	√	
Coordination				√	
Supervising students	√	√	√	√	√
Attracting contracted teaching			±	√	√
Accounting for contracted teaching					√
Supervising PhD students			√	√	√
Total	91	14	54	53	40
Research					
Planning/development		√		√	√
Execution		√	√	√	√
Publication		√	√	√	
Coordination		±	√	√	
Accounting for contracted research		±			√
Supervising research-related personnel		√			
Attracting contracted research		±	±	√	√
Dissemination of findings to public			√	√	√
Total	—	79	38	40	33
Administration					
Participating in working groups and commissions	±	±	√	√	√
Administration of teaching and research					√
Administration of human resources					√
Determining long-term goals for chair					√
Total	9	7	8	7	27

Source: VSNU (the Association of Universities in The Netherlands).

Note: √ denotes full execution of the described tasks, while ± indicates that the task is optional or might vary according to level within position. The total percentages were not specified in the UFO criteria but were calculated by the authors based on the list of tasks, where √ was given the weight 1 and ± took the weight 0.5.

down into levels that are distinguished according to the distribution of the academic activities and are central to the salary scales of VSNU.

Though being centrally regulated, the new system defines the distribution of tasks per profile as dependent on the purpose and tasks of a group. This means that despite the uniformity of the classification criteria, the distribution of the activities within a profile is determined by factors such as the organizational context within which the profile is embedded (that is, the specificity of the faculty or department) and the predicted contribution of this profile toward the organization. Individual development plans are used, in which different academic roles are acknowledged, including both vertical and horizontal mobility. Individual staff members can apply for specific roles on the basis of an assessment of their qualifications: for example, they can apply to be more involved in either teaching or research (De Weert, 2009). This can be done on a yearly basis in discussions with the direct superior (usually the professor in the group) (Leisyte & Dee, 2012).

Despite the formal division between teaching and research tasks in Dutch academia, a combination of teaching and research qualifications is needed for individual promotion toward the professoriate, which is close to the Humboldtian understanding of academic scholarship. For middle and senior level career profiles—that is, assistant, associate and full professors—the traditional Humboldtian teaching-research nexus appears to have been maintained. The combination of competencies in teaching and research is assessed more highly than competencies in either research or teaching alone. However, separate career tracks for academics have been introduced in the 1990s in addition to these positions that give formally equal value to teaching and research. As shown in Table 1, teaching-only (lecturer) and research-only (researcher, post-doc) positions are officially counted among the Dutch academic career trajectories. Furthermore, functional levels within these positions have been introduced as separate career tracks in the sense that teaching or research tasks can be carried out only for the duration of a previously arranged period. Accordingly, the majority of the academics appointed for these positions have temporary contracts (De Goede et al. 2013).

A closer look at Table 1 reveals that even in the positions at mid-career levels—assistant and associate professors—which entail a combination of research and teaching, it is hard to speak of a balance between these two tasks. More than 50% of the contract time of mid-career academics is allotted to teaching, while administrative tasks take up roughly another 10%, leaving no more than 40% of work time for research activities. This can constitute a hindrance to career advancement due to the particularities of the Dutch academic context. First of all, although assistant and associate professors generally hold permanent contracts, the number of fixed-term contracts given to assistant professors has been increasing in the past decade (Van den Brink, 2010). Second, promotion to a higher academic rank is highly dependent on the positions that are available, which is a unique characteristic of the Dutch academic system. There have been attempts to institutionalize the American tenure

track in the past years, yet most positions still become available through formal vacancies (Van den Brink, 2010). This means that even for an academic with a record of excellent performance, upward progress is not always an option.

It has been observed that competition at almost every academic career step is quite strong, and successful appointment to a higher position is highly dependent on exceptional performance, usually based on a strong research profile (mostly measured by publications in high-impact-factor journals and the acquisition of prestigious external research grants). Therefore the mid-career groups are under particular pressure due to the workload allocation described above, which works slightly to the disadvantage of research tasks. In the context of the rapidly increasing numbers of students since the introduction of the bachelors' and masters' degree system in 2002 in the Netherlands (De Weert & Boezeroy, 2007), the formal requirements of teaching for mid-career academics may easily be extended to higher than officially classified workloads to the detriment of research—and it is only in negotiations with the chairs of the groups that the balance between teaching and research can be maintained. In such a context, the issue of gender balance in the allocation of teaching and research tasks is highly relevant. In the following section we will discuss in more detail how the differentiation of academic roles and the career prospects of female academics relate to each other.

CAREER PROSPECTS OF FEMALE ACADEMICS

Despite the increasing number of women obtaining doctoral degrees, and despite the increasing emphasis on gender equality measures at universities, female academics remain a minority among academic staff—being severely underrepresented in senior academic positions (Benschop & Brouns, 2003; Osborn et al., 2000; Valian, 1998). Today in Europe, a leaky pipeline is a reality in academia, leading to “a profound gender imbalance in a vast majority of countries” (European Commission, 2012). The numbers of female scientists decline at every stage of the academic career path (Osborn et al., 2000; Rees, 2002). For example, in 2009, in the Dutch higher education system, the proportion of female PhD graduates amounted to 42%, whereas only 26% of researchers and 13% of professors were female (European Commission, 2012). According to pertinent literature, the reasons for the strong gender imbalance in academic career progression are complex and multifaceted. First of all, the set of institutional arrangements of academic careers shaped by the national reforms and the culturally determined stereotypes of gender roles are very strong determinants of inequalities in academic career progression (Van den Brink, 2010). Further, the preexisting hierarchical structure of an organization plays a crucial role in the likelihood of a starting employee reaching the top, which might eventually lead to the disadvantaging of certain groups. Universities and academia are renowned for their steep hierarchies. Finally, meritocracy as the key determinant for hiring and promotion—where peer-review is the key selection mechanism—has also been

shown to have specific disadvantages for underrepresented groups (Lamont, 2009). Especially in the absence of transparent recruitment, work organization, and promotion procedures, women are more likely to be hindered in their attempts to ascend to the top levels of academe due to unwritten norms and rules that are not necessarily accessible to female academics (Bain & Cummings, 2000; Probert, 2005; Timmers et al., 2010).

Taking this into account, the transformation of universities toward more tightly managed corporate organizations—although this initially seems to be “gender friendly” due to the fact that it makes the promotion criteria explicit and standardized—may potentially reinforce the gendered structure, culture, and practices at universities. As discussed earlier, the increase in workloads due to changes in student numbers and the pressures for performance and accountability stemming from increasing competition in the academic labor market are the most tangible side effects of the new public management inspired reforms. We have also shown that this increase in the amount of work may be accompanied by a changing balance between the roles and tasks of teaching, research, and administration. Coupled with the preexisting gendered practices in Dutch academe, these changes imply that the teaching-research nexus may be differently negotiated by men and women with their professorial chairs in the Dutch system. This can lead to the informal practice of discrimination in the allocation of academic workloads among male and female academics, discrimination that is based on already existing perceptions as well as practice of gender-differentiated roles. In the aftermath of World War II, a gendered academic workload division was already visible in U.S. colleges and universities, where women were excluded from research-intensive disciplines while they were overrepresented in teaching-focused liberal arts colleges (Bird, 2011; Rosenberg, 1988). A similar practice can result from the changing context of academic work in the Dutch context, with women being allocated more teaching and mentoring tasks than men, who may be more favored for research tasks. This development can lead toward a subtle gender divide in modes of employment and between academic roles and activities, which could hinder the career progression of female academics in many and various ways (see Barrett & Barrett, 2011; Le Feuvre, 2009).

The risks resulting from this unequal workload allocation may well be reinforced by the handing out of an increasing number of part-time contracts, which is again more widespread among female academics than among males (Barrett & Barrett, 2011; Le Feuvre, 2009). All this will result in a more pronounced tendency among female academics to have unbalanced work portfolios. These are hard to compensate for by devoting time to research after working hours, due to domestic responsibilities of parenting and care. The cumulative effect of these intertwined developments is that women will find themselves with less time for research activities, which may lead to fewer research outputs and therefore to possible disadvantages in their career development (Barrett & Barrett, 2011).

Recent findings suggest that female academics find themselves increasingly disadvantaged in terms of academic work as a consequence of institutional change at European universities. Generally, the new public management reforms are seen as “carriers of masculine discourses, emphasizing competition and instrumental reason that has not been to the benefit of women” (Barry et al., 2012: 54), and are found to have affected women academics more than men. For instance, Barry and colleagues (2012) have found that women are disproportionately concentrated in teaching roles and pastoral care for students, whereas men predominantly occupy research positions both in Sweden and the UK (both countries have undergone new public management reforms in higher education). Similarly, other studies have shown that female academics perform a disproportionate share of academic departments’ care work and emotional labor, such as pastoral care or mentoring (Barrett & Barrett, 2011; Probert, 2005), especially in higher education systems where transparency of information on workload allocation is low. It has been demonstrated that female academics spend more time on teaching (Bird, 2011), while male academics are more represented in research-only jobs or in positions where teaching and research are balanced (Barrett & Barrett, 2011). Thus, there is clear evidence of a skewed allocation of different academic tasks between male and female academics.

What does this unequal distribution of academic tasks mean for the career development of both gender groups? The three primary academic activities—teaching, research, and administration—are routinely acknowledged as being of equal importance for faculty excellence in university mission statements, and all three are, indeed, included in the promotion criteria of most universities. However, in practice these tasks are not valued to the same degree: achievements in research remain a dominant requirement in the criteria for promotion to higher academic levels and are also perceived by the staff as pivotal for promotion (Barrett & Barrett, 2011; Parker, 2008). Teaching, on the other hand, has fewer measurable outputs and remains less valued in faculty evaluation processes (Blackmore & Sachs, 2007). Gender inequalities in the teaching-research nexus can thus be of the utmost importance for the career progression prospects of female and male academics and can be considered essential to any explanation of the leaky pipeline syndrome. Especially for women at mid-career levels, such as those at the levels of assistant and associate professor, where the criteria for career progression are particularly demanding with respect to research outputs, the workload imbalance disadvantaging research may mean stagnation or disruption of an academic career path.

In the Netherlands, as in the other European countries discussed above, female academics are underrepresented in almost all academic positions, with the exception of undergraduate and PhD students (Timmers et al., 2010; Van den Brink, 2010; Van den Brink & Benschop, 2012). Despite policy measures set in place at national and European levels, the Netherlands still ranks very low in the percentage of female full professors compared to other European countries (European

Commission, 2012). The demand for accountability and performance in terms of research outputs, coupled with the increased competition for resources, has possibly led to changes in the teaching-research nexus and a disproportionate allocation of different tasks at different career levels for female academics. Given the evidence, earlier discussed, on the effects of new public management on universities, we may assume that the high percentage of dropouts among female academics at mid-career levels in the Netherlands (the leaky pipeline) is associated to a considerable extent with the changes in academic workload balance. Thus we formulate the following hypotheses:

H1: The teaching-research nexus for female academics in the Netherlands features more involvement in teaching than research.

H2: Female academics at mid-career levels (assistant and associate professors) in the Netherlands experience a stronger imbalance in the teaching-research nexus than female academics at other career levels.

H3: An imbalanced teaching-research nexus is negatively associated with the career prospects of female academics, especially at mid-career levels.

We will test our hypotheses by employing the case-study method, selecting a Dutch university that has a low proportion of women in senior academic positions. At the same time, typical Dutch employment procedures and role divisions can be found in this case. The following section is dedicated to the analysis of our case-study university. After briefly introducing our data sources, we will first provide a descriptive analysis of the state of the teaching-research nexus for female academics. We will also compare the results in terms of perceived workload balance as well as time spent on teaching and research across mid-career and other groups of female academics. In this way, we will test the first two hypotheses. The third hypothesis will be tested by analyzing the bivariate correlations between indicators of the teaching-research nexus and academic career progression prospects. We expect that positive prospects for the academic career progression of female faculty will correlate positively with a balanced workload and the time allocated to research activities, while they will be negatively associated with the time spent on teaching.

THE CASE-STUDY UNIVERSITY

In order to test the hypotheses formulated above, we will utilize individual-level data from an online survey conducted at the case-study university. The online survey was conducted in February-March 2012, when all female employees of the case-study university were approached by means of an email message requesting them to participate. A total of 129 employees from different career ranks and faculties returned the survey, which represents approximately 25% of the total female academic staff. However, as mentioned above, doctoral candidates will be excluded from the analyses, since their task allocation profile with respect to

teaching and research activities is distinct from the profiles of the other academic positions due to their specific status. The remaining 66 respondents consist of lecturers, researchers, assistant and associate professors, and full professors. Out of this group, 42 respondents are at mid-career levels.

We will first test hypotheses H1 and H2 by conducting descriptive analyses of the teaching-research nexus among female academics of different academic ranks. Then we will focus on H3 by analyzing the bivariate correlations between indicators of the teaching-research nexus and academic career prospects.

The Teaching-Research Nexus among Female Academics

We have demonstrated the formal requirements for different academic job groups in combining teaching, research, and administrative tasks. We will observe here how this formal workload allocation is translated into practice for female academics, and ascertain the extent to which they perceive this allocation as balanced. In particular, we focus on the dividing up of teaching and research tasks. The online survey contains questions on how much time is spent on average in a week on teaching, research, administrative, and other activities and thus enables the teaching-research nexus to be measured. The respondents were given the opportunity to react to these questions on a 5-point-scale consisting of the following categories: less than 20%, 20–40%, 40–60%, 60–80%, and over 80%. Furthermore, in a separate question, the respondents were asked to indicate how they perceive the workload balance between their teaching and research activities on a 5-point scale. In Table 2, we show how different activities and perceived workload relate to each other by presenting the statistical correlations between all variables, i.e., perceived workload balance and weekly time allotted to teaching, research, administration and other activities.

These preliminary analyses show that perceived workload balance and teaching and research activities are significantly related to each other. Time spent on research is positively correlated with perceived workload balance among female academics ($r = 0.601$), while there is a negative correlation between workload balance and the time spent on teaching ($r = -0.625$). This shows clearly that having less time for research than for teaching activities is likely to be regarded as an anomaly by female faculty and has consequences for their satisfaction with their workload balance. We also found a rather strong negative correlation between average weekly time spent on teaching and average weekly time spent on research ($r = -0.714$), indicating that the two activities are competing with each other rather than being complementary. The found strong correlation coefficients indicate that these three variables—workload balance, time spent on teaching and time spent on research—are conceptually related to each other. Therefore, we use these variables for our operationalization of the teaching-research nexus. Other tasks on which time is spent seem to be regarded as distinct activities, as these tasks correlate moderately and positively with each other, whereas they are hardly

Table 2. Correlation Matrix of Academic Activities and Workload Balance

	Perceived workload balance between teaching and research	Time spent on teaching per week	Time spent on research per week	Time spent on administration per week	Time spent on other work per week
Perceived workload balance between teaching and research	—				
Time spent on teaching per week	-.625*** (66)	—			
Time spent on research per week	.601*** (66)	-.714*** (66)	—		
Time spent on administration per week	-.197 (66)	.122 (66)	-.327** (66)	—	
Time spent on other work per week	.003 (66)	-.115 (66)	-.079 (66)	.449*** (66)	—

Significance levels: * $p < .05$; ** $p < .01$; *** $p < .001$.

Note: Entries are correlation coefficients (Pearson's r); number of respondents is displayed in parentheses.

related to the teaching and research variables. Only administrative work correlates significantly with research, but the relationship is not very strong ($r = -0.327$).

Having identified the indicators of the teaching-research nexus, we go on to analyze how the nexus is experienced by female academics. Table 3 gives an overview of the allocation of weekly work time among different activities and the perceived balance between teaching and research, in total and across different academic career levels.

As can be seen from the table, average weekly time spent on teaching and average weekly time spent on research activities differ very little from each other. Compared to these figures, respondents in the mid-career ranks—assistant and associate professors—appear to be investing slightly more time in teaching activities. Their weekly time allocated to research, however, is somewhat below the average. On the other hand, female academics in other positions—lecturers, researchers and full professors—appear to dedicate much less time to teaching and more to research. While 67% of females in these positions reported that more than 40% of their weekly time is available for research, only 43% of mid-career academics can invest that much time in research activities. In all, 45% of those in the mid-career groups also indicate their teaching load as taking up more than 40% of the week. Thus there seems to be a relatively heavy load of teaching for mid-career groups, which is reflected in their subjective evaluation of the balance between teaching and research activities. They perceive the workload division between teaching and research as less balanced (19% agree or strongly agree that their workload is balanced) when compared to the whole group (26% agree or strongly

Table 3. Descriptive Analyses of Academic Activities and the Teaching-Research Nexus

	Overall	Mid-career positions	Other positions
Perceived workload balance between research and teaching	2.74	2.55	3.08
Time spent on teaching per week	2.24	2.45	1.88
Time spent on research per week	2.64	2.31	3.21
Time spent on administrative work per week	1.42	1.45	1.38
Time spent on other work per week	1.24	1.33	1.08
<i>N</i>	66	42	24

Note: Entries are means. The response scales for all variables vary from 1 to 5, where the ranking is as follows. For perceived workload balance, 1 indicates no balance at all and 5 refers to full balance. For all variables on time spent in academic activities, 1 refers to less than 20% of weekly work time spent on activity and 5 refers to more than 80%.

agree that their workload is balanced). Our comparison shows that midcareer groups are worse off with respect to the teaching-research balance. They do more teaching and less research than the respondents at other academic levels. They are also slightly more loaded with administrative and other activities, although the difference is not very pronounced.

We have predicted in our first hypothesis that the academic task distribution of female academics in the Netherlands will be characterized by more time allotted to teaching than to research. This hypothesis could not be corroborated by the statistical correlation analysis, since teaching and research tasks seem to take on average the same time among female faculty members in a week. However, this conclusion should be approached with caution due to the particularities of the survey data utilized for this study. One major drawback of the survey is that the response scale has been presented to respondents in the form of large-interval categories. It seems that teaching and research together take up 40–60% of the weekly time both of female faculty in general and also of mid-career female academics (corresponding to 16–24 hours a week), yet this is a large interval and the actual hours spent on each activity may vary strongly among the respondents who chose this category. This assumption is supported by the finding that mid-career female academics are only moderately satisfied with their workload balance (mean = 2.55 on a scale from 1 to 5). In case the weekly time they spend for both teaching and research activities were equally distributed, one could expect that they would experience more balance in their workload, but this does not seem to be the case. This suggests that the actual time spent on the two activities activity may indeed not be equal. With respect to hypothesis H2, our findings provide evidence that mid-career academics are more likely to be affected by the changing teaching-research nexus, in the sense that they are slightly more loaded with teaching duties. Thus, they come close to performing according to the formal description of their tasks in the UFO criteria (see Table 1), which supports our second hypothesis. However, the problem noted above with the response scale is also present here. Since it is not possible to tell precisely how much time they allocate to which activity, this finding also still needs to be verified.

Workload Allocation and Academic Career Prospects

In H3, we state that the changes in the teaching-research nexus are negatively associated with the career progression prospects of female academics, especially at mid-career levels. We turn now to the measurement of the rather complex variable, career prospects. Career prospects are related to practices at several different stages of academic employment, from recruitment to evaluation and promotion. Since the survey was designed to assess the career progression prospects of female faculty, it includes a variety of questions on evaluation and promotion criteria and how respondents think they are being affected by these criteria. We have identified three categories under which these criteria can be

grouped: clarity of evaluation and promotion criteria; recognition of efforts and guidance for promotion; and the notion of equal opportunities in career advancement. Table 4 shows that respondents are generally neutral on or rather satisfied with some of these aspects. The recognition of their academic performance and the level of guidance for promotion, however, seem to provide less satisfaction than the others.

Assistant and associate professors do not deviate from this pattern to a substantial extent; yet they differ from the female faculty as a whole in a few aspects. First of all, more mid-career academics reported that their last promotion took place recently: 62.9% indicated that their last promotion came within the last two years, whereas the rate is 56.9% for all respondents. Second, if given a positive

Table 4. Descriptive Analyses of Academic Career Progression Prospects

	Overall	Mid-career positions	Other positions
Clarity of Evaluation and Promotion Criteria			
Congruence between task description and evaluation indicators	2.33 (66)	2.36 (42)	3.33 (24)
Clear requirements for a positive job evaluation	2.21 (66)	2.17 (42)	3.42 (24)
Clear criteria for promotion	2.02 (66)	2.02 (42)	2.88 (24)
Recognition of Efforts and Guidance for Promotion			
Positive job evaluation leads to promotion	0.33 (66)	0.40 (42)	0.21 (24)
Years since last job promotion	1.73 (51)	1.60 (35)	3.00 (16)
Responsiveness of faculty to promotion needs	1.95 (66)	2.00 (42)	2.63 (24)
Sufficient guidance and feedback for promotion	1.79 (66)	1.71 (42)	2.83 (24)
Recognition of teaching and administrative work for promotion	1.74 (66)	1.71 (42)	2.54 (24)
Equal Opportunities			
Gender-balanced recruitment and promotion policies at university	2.14 (66)	2.19 (42)	3.17 (24)
Dedication to equal opportunities in department management	2.29 (66)	2.29 (42)	3.29 (24)

Note: Entries are means; number of respondents is displayed in parentheses. For the variable "positive job evaluation leads to promotion," the scale features only two points: 0 (yes) and 1 (no). For all other variables, the response scale varies from 1 (disagree) to 5 (agree). The only exception among these is the variable "years since last promotion," where 1 refers to less than one year and 5 refers to more than 6 years.

evaluation, members of the mid-career groups seem more likely to be promoted (40.5%) than other female academics (33.3%). Despite this relatively advantageous position, mid-career groups appear to be less satisfied than the academics in other positions in all other aspects of career progression regarding promotion. The academics at other ranks than the mid-career—lecturers, researchers and full professors—are more optimistic about guidance, transparency and equal treatment in promotion procedures, although their last promotion took place longer ago and the possibilities for promotion if given a positive evaluation are less certain. This finding suggests that the satisfaction with less formal aspects of promotion procedures is not directly related to the actual state of promotion for the respondents, and that other factors might be influential on the perception of being disadvantaged throughout the process of career progression. Therefore, we explore how the workload balance between teaching and research tasks is associated with the actual and perceived career prospects of female academics in the next step of our analyses. In H3, we propose that the shifting teaching-research nexus will be negatively related to the career prospects of female academics, while this relationship will be more pronounced for mid-career academics. Table 5 presents the results of our analyses of bivariate correlations between indicators of the teaching-research nexus and academic career progression prospects. This will not allow us to draw any conclusions on causality, but it will help us to determine whether there is a relationship between the teaching-research nexus and career prospects and the strength of this relationship.

We first focus on the perceptions of the respondents of their career prospects, and how they are related to the teaching-research nexus. All three categories under which career advancement prospects can be grouped (see above) seem to be significantly associated with perceived workload balance and time spent on teaching, although the direction of the correlation differs. The more respondents feel that there is a balance between their teaching and their research duties, the more positive they are on the career progression possibilities for female academics at their university. In particular, a balanced work profile seems to go hand in hand with perceived clarity of requirements for evaluation and promotion, felt guidance and feedback from supervisors in the course of the process leading to promotion, and commitment of the department head to ensuring gender equality in the work environment. On the contrary, the weekly teaching load is negatively associated with these items, suggesting that efforts made in teaching and related activities are not regarded by respondents as particularly useful for their career progression. These correlations are, as expected, stronger for the mid-career groups, which indicates that these career groups feel less satisfied with the circumstances for career progression—such as clarity of appraisal criteria, recognition of efforts, and guidance from superiors—than others due to the disruption of the balance between research and teaching tasks by a heavier teaching load.

With respect to the factual individual promotion history, our findings show that the weekly time spent on teaching correlates positively with the number of years

Table 5. Bivariate Correlations between Indicators of the Teaching-Research Nexus and Academic Career Prospects—Comparing Mid-Career Groups with All Respondents

	Workload balance		Time spent on teaching		Time spent on research	
	Overall	Mid-career	Overall	Mid-career	Overall	Mid-career
Clarity of Evaluation and Promotion Criteria						
Congruence between task description and evaluation indicators	.339** (66)	.359* (42)	-.309* (66)	-.369* (42)	.179 (66)	.109 (42)
Clear requirements for a positive job evaluation	.453*** (66)	.601*** (42)	-.372** (66)	.575*** (42)	.237 (66)	.325* (42)
Clear criteria for promotion	.321** (66)	.459** (42)	-.244* (66)	-.369* (42)	.225 (66)	.273 (42)
Recognition of Efforts and Guidance for Promotion						
Positive job evaluation leads to promotion	.259* (66)	.385* (42)	-.229 (66)	-.420** (42)	.182 (66)	.440** (42)
Years since last promotion	-.326* (51)	-.273 (35)	.383** (51)	.379* (35)	-.334* (51)	-.319 (35)
Responsiveness of faculty to promotion needs	.208 (66)	.218 (42)	-.118 (66)	-.132 (42)	.121 (66)	-.003 (42)
Sufficient guidance and feedback for promotion	.410*** (66)	.304* (42)	-.341** (66)	-.355* (42)	.310* (66)	.189 (42)
Recognition of teaching and administrative work for promotion	.306* (66)	.383* (42)	-.239 (66)	.374* (42)	.258* (66)	.349* (42)
Equal Opportunities						
Gender-balanced recruitment and promotion policies at university	.210 (66)	.161 (42)	-.213 (66)	-.337* (42)	.206 (66)	.301 (42)
Dedication to equal opportunities in department management	.397*** (66)	.444** (42)	-3.64** (66)	.554*** (42)	.240 (66)	.344* (42)

Significance levels: * $p < .05$; ** $p < .01$; *** $p < .001$.**Note:** Entries are correlation coefficients (Pearson's r); number of respondents is displayed in parentheses.

since the last promotion, which suggests that the time point of last promotion of respondents with higher teaching loads date back longer than those with less weekly hours spent on teaching. We have indicated above that teaching and research appear to be rather competing activities, meaning that more time spent on teaching would lead to less time available for research activities and vice versa. As research outputs are more decisive factors in the achievement of a positive evaluation and promotion, it follows logically that teaching overload goes along with slower career progression, which is supported by the empirical evidence provided by our analyses. The correlation coefficient turned out to be weaker for the mid-career group compared to the whole group of respondents, which is in line with the results of the descriptive analyses indicating that mid-career faculty have been promoted more recently than female academics at other ranks while being more overloaded with teaching at the same time (see tables 3 and 4). However, both teaching load and time since last promotion may vary within the group of mid-career academics. The presence of a relationship between them thus suggests that mid-career faculty with higher teaching loads than their colleagues at the same ranks are likely to progress more slowly in their career compared to them.

Furthermore, we find that the overall group of respondents who regard their workload as balanced seem to have been promoted more recently. This might imply that a workload balanced between teaching and research is a factor assisting career progression. An alternative conclusion is also possible: that those who have had a recent promotion might be more satisfied with their careers and thus experience their workload as more balanced. However, as the negative correlation between the time spent on research and the time point of last promotion indicates, female faculty who have more time available for their research activities have been promoted more recently. Thus, we can assume that there is a causal relationship here: The more time academics invest in research, and the more scientific outputs they produce, the more likely it is that this will speed up their career progression. However, we find no evidence that the mid-career level academics are particularly affected by this relationship since the correlation coefficients for both perceived workload balance and time spent on research turned out to be insignificant for this group of respondents. Moreover, the bivariate correlations inform us only on the strength of association, and thus it is not possible to draw conclusions on causality at this stage.

The findings of our correlation analysis can be summarized as follows: the greater the perceived balance between teaching and research duties, and the less time spent on teaching activities, the more positive are female academics about their career prospects at the university. The relationship between the balance of tasks and perceptions of career prospects is somewhat stronger for mid-career groups, indicating that female academics at these career levels feel more affected by the imbalance between teaching and research duties. The time point of the last promotion of mid-career groups does not correlate with the perceived workload balance nor with the time spent on research. Yet we found evidence that the teaching load is related to

the factual career progression also within the group of mid-career faculty. Thus, our third hypothesis is supported by these findings to a large extent.

Time spent on research activities seems to be only one of the factors that are relevant to the attitudes of female academics toward career advancement possibilities. What count most here are the indicators on promotion prospects. Respondents who indicate that they spend more time on research are more likely to get support for career advancement with a concrete plan for promotion and steps taken toward it, whereas for respondents with higher teaching loads, exactly the opposite seems to be the case. This again indicates clearly that research activity is more relevant to academic career advancement and promotion to higher ranks.

CONCLUSIONS AND DISCUSSION

The traditional linkages between teaching and research have been challenged by the new governance arrangements in European higher education systems. Studies have indicated that the teaching-research nexus is being reshaped by the changes in the institutional environment, which include growing student numbers, financial pressures, shifts in evaluation and rewarding criteria for faculty, and the expectations of external sponsors of research (Leisyte et al., 2009; Leisyte & Dee, 2012). This changed nexus implies that teaching time and research time in academics' work portfolios increasingly compete with each other, which alters the nature of academic work and career paths at European universities.

The first objective of this article was to investigate the extent to which new public management inspired reforms are changing academic work in universities in general and in Dutch universities in particular. A comprehensive review of the pertinent literature has shown that these reforms, as expressed through the increasing quantification of research outputs and increasing student numbers, are moving the teaching-research nexus toward a post-Humboldtian pattern, which is characterized by "a differentiation of roles and/or organizations and/or resources for teaching and research" (Schimank & Winnes, 2000: 398). In order to be able to cope with the growing demands on performance and efficiency, universities in various countries have introduced a differentiation of career paths in terms of teaching-only and research-only positions (De Weert, 2009). Although this differentiation is not yet as pronounced in the Netherlands as it is in other countries (see Leisyte, 2007; Leisyte & Dee, 2012), there are reasons to expect a change in the nexus toward the separation of the two activities. This is illustrated by the formal regulations on academic task division at different career levels. Lecturer and researcher positions with an emphasis on one of the two tasks (80–90% of contract time devoted to either teaching or research) are already included in the Collective Labor Agreement of Dutch universities. Despite the challenge of higher teaching loads for mid-career academics, the establishment of these differentiated career paths is already perceived as a rational solution for enabling intraorganizational efficiency, effectiveness, and professionalization (De Weert, 2009).

The problem, however, lies in the fact that university career advancement relies on a tight Humboldtian teaching-research nexus; thus, academics are expected to perform both in teaching and research, with research given more weight than teaching in the evaluation of academic work. The constraints on research time introduced by the changing teaching-research nexus can constrain the career development possibilities for academics in general; yet it can be argued that this will have a stronger impact on female academics than on their male counterparts. Women are traditionally disadvantaged in academic jobs; especially in the Netherlands, the proportion of female academics in senior positions is dramatically low. Furthermore, our review of the literature on the academic career progression prospects of women has revealed that there is a subtle gender differentiation in the division of teaching and research roles (Barrett & Barrett, 2011; Bird, 2011). These factors are likely to inhibit the research performance of female academics, particularly of those at the mid-career stages, where research outputs are crucial for career development.

Further, we explored the distribution of the workload among Dutch female academics and the consequences for their career progression (research questions 3 and 4). First, we tested the hypothesis that women faculty experience a highly imbalanced teaching-research nexus in the sense that their workload allocation features more teaching than research. As our finding was that, in general, teaching and research take the same amount of time among female academics, this hypothesis could not be corroborated. Yet since the answers were measured on a scale that features large-interval categories for working hours in both teaching and research, we need to approach this finding with caution. Turning to our second hypothesis, we found that female academics at Dutch universities at mid-career levels (assistant and associate professors) are slightly more overloaded with teaching tasks and have less time for research than others. Further, they experience less balance in their academic workload than do female academics at other career levels. Our second hypothesis was thus supported. Finally, with respect to the relationship between workload division and career prospects, we hypothesized that these two will be negatively associated with each other. Our findings support this expectation as well. Perceived workload imbalance and teaching overload are both negatively related to the career prospects of female academics, while this relationship is more pronounced for mid-career academics than others.

These findings show that the preconditions for a change in the teaching-research nexus and the development of new academic career paths with a focus on either research or teaching are in existence in the Netherlands. Teaching-only and research-only positions are already included in the formal job classification regulations. Moreover, as indicated by the survey analysis, these two tasks are perceived as competing rather than complementary, and a heavy teaching load is regarded as a burden in terms of academic work. However, more data sources are needed to test whether or not the new public management is gender neutral in its effects, and whether the disruption of the Humboldtian model leads toward social

differentiation in academe. In this study, we utilized data from a survey that was conducted among female academics at a particular university, and in this way we shed light on the state of the teaching-research nexus and its consequences for female faculty in one organizational setting. However, the following questions still need to be addressed: is the changing teaching-research nexus leading female academics to higher teaching workloads and less time for research than is the case for male academics? To what extent can we speak of gendered academic career progression prospects? Specifically, is there a difference between men and women academics with respect to the relationship between career advancement and the changing balance of academic work? To answer these questions, it is necessary to compare the allocation of teaching and research duties as well as research productivity and career prospects among male and female academics. Case studies and cross-national studies in this direction are available (see, e.g., Bentley, 2011; Bentley & Kyvik, 2012), but the Dutch case remains to be explored. Comparing different universities with different new public management practices would also develop our understanding of how organizational context matters in shaping gendered academic careers across Dutch universities. Therefore, more research in this direction is necessary.

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