

The Academic Profession in Neoliberal Times: A Gendered View

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Abstract

While witnessing a feminization of its workforce, the academic profession has experienced a process of market-based regulation that has contributed to the precarization of early career phases and introduced a managerial culture based on competition, hyper-productivity, and entrepreneurship. This paper aims to investigate the implications of these changes for female academics. A mixed model research design was used based on administrative data on the Italian academic population and qualitative interviews with life scientists within a specific academic institution. Results show that the implications of university transformations in terms of gender heterogeneity are complex. On the one hand, the increased precarization of early career stages has increased gender inequalities by reducing female access to tenured positions. On the other, the adoption of performance-based practices has mixed consequences for women, entailing both risks and opportunities, including spaces of agency which may even disrupt male-dominated hierarchies.

Keywords

Gender, professions, neoliberal academia, scientific careers, inequalities.

Introduction

In recent years, the academic profession across the world has gone through a process of marketization, favouring cost-efficiency, accountability, and performance (Krüger, Parellada, Samoilovich & Sursock, 2018). These large-scale changes have occurred in parallel with the progressive differentiation of faculty members, their increasing precarization and their diversification, especially in terms of gender. Whether these transformations have increased heterogeneity in the profession, and more specifically gender-based inequalities, is the subject of this paper.

Historically rooted in institutions (universities) and organizations (departments), the academic profession has for a long time shared certain features with the traditional professionalism of the last century: high status, relatively good economic return, public engagement, freedom from market-based principles, and intellectual autonomy (Gorman & Sandefur, 2011). These characteristics have recently been challenged, however, by the cuts to public funding of higher education across many Western countries which have fostered a university model based on performance evaluation.

Italian academia has not been exempted from this global trend. While witnessing an increase in the academic population as a whole, and in its female component more specifically, the profession has gone through a process of market-based regulation led by at least four main drivers: the reshaping of the academic career ladder and more specifically the precarization of its early stages, the block on turnover within the tenured workforce, the adoption of evaluation systems for the productivity, and cuts to national, publicly financed research funds.

Given this framework, the purpose of this paper is to understand both the implications of these changes, at structural level (in the way they affect recruitment and contracts) and at cultural level (in the way they affect values and norms), and how these implications, by intersecting with the growing gender-based differentiation of the academic workforce, affect gender inequalities between men and women. A mixed-model research design—based on administrative data on the Italian academic population and on qualitative interviews with academic life scientists — has been undertaken to answer these questions.

Theoretical background

Professional work in public institutions, including academia, has recently experienced important changes fostered by the massification of higher education and the spread of new public management practices. In parallel with changes occurring in the wider public sector, universities have progressively shifted from the old liberal-humanist model towards a system based on market-based principles (Deem, 2009). Sometimes framed in terms of “academic capitalism” (Slaughter & Leslie 1999; Ferree & Zippel, 2015), some other in terms of “neoliberal turn” (Connell, 2015), this shift has fostered a culture of academic

managerialism based on performance evaluation. These changes have affected the work of academics and the way in which academics perceive themselves. The focus of this paper is to investigate these changes by taking inspiration from different strands of literature: the sociology of professions, critical university studies, and the study of gender inequalities in academia.

By elaborating on the notions of hybridization (Noordegraaf, 2007; 2015) and differentiation (Bellini & Maestriperi, 2018), the sociology of professions provides the conceptual tools through which to identify the features of the new academic. In this respect, scholars have investigated the way professionalism intersect with managerialism, while embracing an organizational logic (Blomgren & Waks, 2015), with some considering neoliberalism as one of the reasons behind the current crisis in professional work (Leicht, 2016), and others attempting to go beyond the dualism between professionalism and managerialism, trying to define what being a “hybrid professional” means today in terms of work processes, authority, and values (Noordegraaf, 2015). Alongside this interest in the hybridization of professional work, further researchers have shed light on the increasing differentiation of the professional workforce, including the growing (gender-based, ethnicity-based, etc.) diversification of its members (Boni-Le Goff & Le Feuvre, 2017) and their increasing precarization (Murgia, Maestriperi & Emiliana, 2016). By looking at the intersection of hybridization and differentiation, the work presented in this paper investigates how the two processes affect gender heterogeneity.

Of the critical university studies, this research shares the concern that these new managerial practices may exacerbate inequalities within organizations. According to many researchers, the emphasis on performance metrics is likely to reinforce existing hegemonic structures of power relations among academics (Deem, 2009; Connell, 2015), while increasing pressure on early-career researchers who are struggling to survive the academic pipeline face to increasing contract instability (Bozzon, Murgia & Villa, 2017). Within this debate, many feminist scholars have focused their attention on the gender practices (Poggio, 2006) at the base of the construction and evaluation of academic excellence, the ways in which they shape the concept of the “ideal academic” (Thornton, 2013) and how they intertwine with recruitment processes (Van den Brink & Benschop, 2011), thus systematically generating disadvantages for women. A few others are less clear-cut in their evaluations, recalling how the old university model included elites and “old boy networks” that prevented women’s advancement in academia (Ferree & Zippel, 2015). From this perspective, current transformations may even disrupt such dynamics and create new opportunities. Whether they do, on balance, reproduce or attenuate gender inequalities is the research question at the core of this work.

The neoliberal turn in Italian academia

Since the mid-2000s, face to increasing financial cuts, Italian universities have progressively embraced the new public management paradigm by reducing costs and adopting productivity standards. This process has been characterized by at least four elements.

The first element relates to the reshaping of the academic career ladder through the most recent piece of university reform legislation, the so called “Gelmini reform” (act n. 240 of 2010 or «L.240/2010») which, inter alia, has replaced the former permanent contract of assistant professor (the so-called “Ricercatore Unico” or RU) with two new types of short-term contract: an A type (“RTDa) and a B type (“RTDb”). Of the two, only the B type can be considered the point of access to tenured positions, in that, once the contract is ended, and if the candidate has obtained the national scientific qualification necessary for becoming associate professor, it automatically turns into an associate professor position.

The second element concerns the block placed on the staff turnover. In force for the decade between 2007 and 2017, government-imposed limits on staff turnover have prevented universities from fully replacing retiring academics with an equal number of new, younger ones. As a result, stable contracts have decreased, while unstable ones have increased (Bozzon et al. 2017).

The third element relates to the increasing pressure to performance evaluation. The Gelmini reform has introduced a minimum standard quality requirement for the recruitment of associate and full professors: the “national scientific qualification” (“abilitazione scientifica nazionale”), which is granted by a national committee on the basis of the candidate’s CV. At the same time, quantitative-based performance evaluation systems have been introduced for departments and universities, with the intention of allocating part of governmental funding to the highest scorers. Examples include the VQR (“Research Quality Assessment”), taking place every four years, and the “Departments of Excellence”, which took place in 2017.

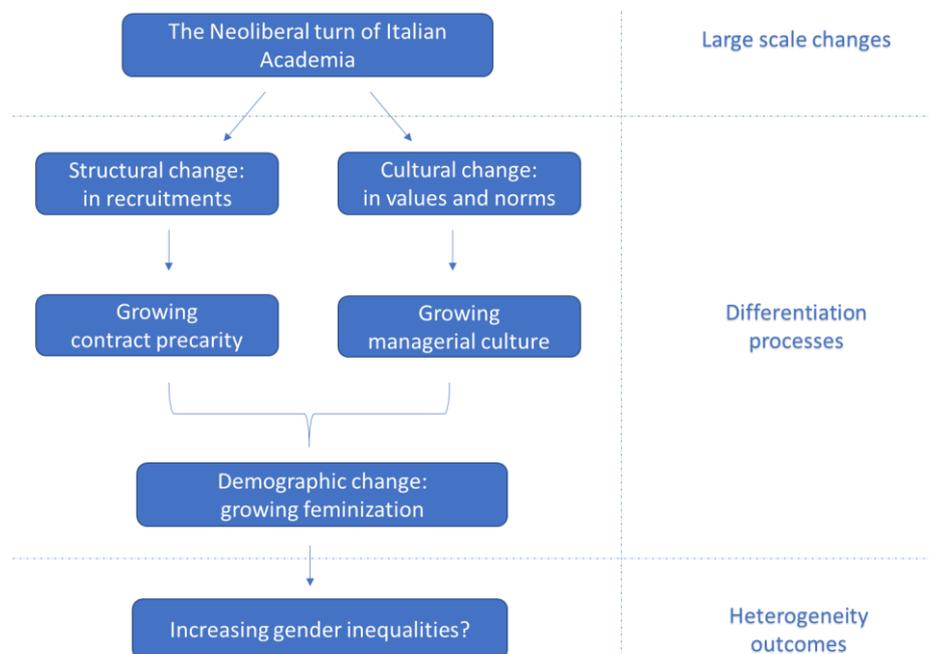
The fourth element concerns cuts to national, public-funded research grants provided by the MIUR (Ministry of Education, University and Research). These cuts have forced researchers to seek alternative sources of funding, from private and international public bodies such as the European Union. The capacity to attract external grants is essential, not only because external grants make it possible to fund research, but because they also make up part of the performance metrics of organizations.

The combination of these four elements has had profound effects on Italian academia. The first and second elements have fuelled the precarization of early career stages, while the third and fourth have pushed academics to adopt what could be described as a market culture of knowledge production based on hyper-productivity, competition and entrepreneurship.

Research questions, data, and methods

This research focuses on the gender heterogeneity of the academic work force, which I define here as gender-unequal opportunities that make it harder for women to climb the career ladder. In this respect, a two-steps investigation will be undertaken. First, the implications, in terms of *differentiation* processes, of *large scale, institutional, changes* will be considered. That is, to what extent neoliberal transformations are *differentiating* the professional workforce, both in terms of growing precarity (structural level) and in terms of new managerial values/norms (cultural level). The two differentiation processes run in parallel with a third process of differentiation: the feminization of the academic workforce. Second, this research aims to investigate the outcomes of these differentiation processes in terms of gender heterogeneity. While differentiation processes are neutral in their implications, heterogeneity is not, since it can entail differences in opportunity and status, and so of inequalities. By focusing on the gender dimension of heterogeneity, this paper looks at the way in which market-driven differentiation processes — contract precarity and managerial culture — intersect with the feminization of the academic population and affect gender-based inequalities. The link between large-scale changes, differentiation processes and heterogeneity outcomes are outlined in the table of analysis themes reported in Figure 1.

Figure 1. *Table of analysis themes*



To identify to what extent differentiation processes influence gender heterogeneity outcomes, a mixed-model research design (Tahakkori & Teddlie, 1998) has been used, based

on quantitative and qualitative data sources. The first part of this research uses quantitative data to identify the structural implications¹ of the precarization of early career stages. The second part is based on qualitative interviews, with the aim of grasping the implications of the new market-orientated culture of knowledge production.

First, repeated cross-sectional data on the Italian academic population have been examined with the aim of mapping its composition both in terms of gender and across time. Data include the number of academics working in both public and private universities in Italy on 31 December each year from 2000 to 2018, their respective rank, gender, and scientific area. Rank comprises six positions: postdoctoral researcher (“assegnista di ricerca” or “AR”), pre-reform assistant professor (“ricercatore unico” or “RU”), the A and B types of post-reform assistant professor (“ricercatore a tempo determinato A” or “RTDa” and “ricercatore a tempo determinato B” or “RTDb” respectively), associate professor (“professore associato” or “PA”) and full professor (“professore ordinario” or “PO”). The scientific areas correspond to the 14 areas identified by the National University Council (Consiglio Universitario Nazionale or “CUN”), according to which the public selection of researchers and professors is made. Data were examined using descriptive statistics, cross tables, percentage variation, and ratio analysis.

Second, a case study was conducted at the life sciences department of a large Italian university. The field of life sciences has been chosen for several reasons. First, it is the most feminized of the 14 MIUR-defined scientific areas in Italy, with women being 57% of academics in this field in 2018. Moreover, it strongly relies on generous funding to finance its research, which makes it interesting to study in times of financial constraint. Within the field of life sciences, this specific department has been chosen for two reasons. First, it has a good percentage of women in its workforce (55%), which reflects the recent feminization of the profession, and in its governing bodies. However, vertical segregation — consistent with national data on the life sciences — persists, with women being the majority of postdoctoral researchers, half of academics in the intermediate levels, and only a third of full professors. Second, the department is high performing, both in terms of productivity and external funding (which represents 90% of its budget), including five ERC (European Research Council) grants. In 2017, it was awarded “Department of Excellence” within the frame of the above-mentioned, homonymous, ranking. Furthermore, it had adopted an internal system to measure the productivity of its components in the early 2000s, even before the

¹ In its structuralist and post-structuralist definition, which I embrace, the term structure includes all factors transcending (but intertwined with) the subject (Foucault 1966) and so not only economic, social and institutional factors but also linguistic, cultural and normative ones. As Hays (1994) points out in her attempt to clarify the debate, the term structure is more often used by many sociologists to describe only some specific aspects of the structure, more specifically its economical, social and institutional, in a few words, “material” dimension. This specific use of the term structure—which may have been influenced by the Marxist tradition—is now widespread and it is often used in opposition to the term culture. It is with this meaning that I use the term structural, even though I am aware that it is a slight abuse of terminology.

introduction of nationwide performance indicators. For all these reasons, this department seemed to fit the “neoliberal turn” in Italian academia perfectly, in that it includes, and arguably takes to the extreme, many of the new public management principles: productivity, accountability, and entrepreneurship. From March 2018 to March 2019, 23 unstructured interviews were conducted with 14 women and nine men who work, or have worked, in the organization. Out of the 23 interviewees, five are full professors, four associate professors, eight assistant professors (two RU, three RTDb, three RTDa), three postdoctoral researchers and three former precarious researchers who have left academia altogether. Table 1 lists, following the timeline of the interviews, the basic information (gender, age, and position) of each interviewee. The interviews were analysed through qualitative content analysis (Strauss & Corbin, 1998) by using ATLAS.ti software.

Table 1. *List of interviewees: gender, age and rank*

Code	Gender	Age	Rank
I1	W	44	Associate professor
I2	W	37	Post-doc
I3	W	52	Associate professor
I4	M	30	Post-doc
I5	W	36	Post-reform assistant professor (RTDa)
I6	W	53	Full professor
I7	M	43	Associate professor
I8	W	39	Post-reform assistant professor (RTDa)
I9	M	58	Full professor
I10	W	58	Full professor
I11	W	42	Post-reform assistant professor (RTDb)
I12	M	67	Full professor
I13	M	45	Associate professor
I14	M	70	Full professor
I15	W	42	Post-reform assistant professor (RTDb)
I16	M	44	Former research fellow
I17	W	34	Post-doc
I18	W	41	Post-reform assistant professor (RTDb)
I19	W	55	Pre-reform assistant professor (RU)
I20	M	31	Post-reform assistant professor (RTDa)
I21	W	46	Pre-reform assistant professor (RU)
I22	M	35	Former research fellow
I23	W	46	Former research fellow

Neoliberal transformations and structural changes: reducing access to the tenured positions

Table 2 shows the number of academics, by rank, in 2000, 2008 and 2018 working in Italian universities. Percentage variations have been computed, for the period 2000-2018 and for

the two sub-periods 2000-2008 and 2009-2018. Results show that the number of academics in Italy has increased by 19.5% during the 19-year period considered. However, this increase has largely been driven by the stunning growth in postdoctoral researchers, a position that was introduced at the end of the 90's and which, in the period considered, have more than tripled (+154.5%). Without considering postdoctoral researchers, the increase in the number of professionals is much smaller (4.9%). By looking at the two sub-periods, it becomes apparent that this expansion occurred exclusively during the first sub-period: a 30.7% rise between 2000 and 2008. By contrast, during the second sub-period (2009-2018) the number of academics fell by 8.6% thus reflecting the 2007-2017 cuts of the turn-over. Considering only tenured positions, in other words excluding postdoctoral researchers and RTDa assistant professors, the decrease was double: 19.8%.

In summary, the data suggest that, in the last two decades the number of academics has increased especially because of the growth in postdoctoral appointments and notwithstanding the decrease experienced in the second sub-period as a consequence in the 2007-2017 reduction of the turn-over.

Table 2. *Academics in Italy by rank and year*

	2000	2008	2018	$\Delta 00-08$	$\Delta 08-18$	$\Delta 00-18$
Post-doc (AR)	5549	12090	14105	+117.9%	+16.7%	+154.2%
Pre-reform assistant professor (RU)	19386	25263	12445	+30.3%	-20.5%*	+3.6%*
Post-reform assistant professor A (RTDa)			3993			
Post-reform assistant professor B (RTDb)			3643			
Associate professor (PA)	17081	18256	20784	+6.9%	+13.8%	+21.7%
Full professor (PO)	15026	18929	13185	+26%	-30.3%	-12.3%
Total	57042	74538	68155	+30.7%	-8.6%	+19.5%

Source: MIUR data on academics in Italian universities

* The 08-18 and 00-18 percentage variations of the number of assistant professors are computed by including, for the upper bound (2018), both the pre-reform (RU) and the post-reform (RTDa and RTDb) assistant professors, and for the lower bounds (2000 and 2008) the pre-reform (RU) assistant professor only.

The increase in the academic population between 2000 and 2018 ran in parallel with a growth in the female proportion: from 31% in 2000 to 41% in 2018. This growth is the result of the stunning increase in women in absolute terms — from around 18,000 in 2000 to around 28,000 in 2018 — and the very modest growth (approximately 1,300) in the male workforce over the same period (table available upon request). Distinguishing between two sub-periods (2000-2008 and 2009-2018), it is apparent that the growth in both the male and female workforce is concentrated in the first nine years surveyed. During the second decade, the number of female academics has remained quite constant, while around 7,000 male academics were lost. In other words, the increase in the female proportion during the second sub-period — the period witnessing the block on turnover — is not due to an increase in the number of women in absolute terms, but rather to a decrease in the number of men. More in-depth analysis on the rate of recruitment shows that this is mainly due to

men's greater concentration in the older cohorts exiting the active population (Gaiaschi & Musumeci, 2020).

With the aim of investigating the implications of the reduction in the turn-over, the 2008-2018 period only is now taken in consideration. Table 3 shows the ratio — for men (M), women (W), and both (MW) — between the number of individuals in a given rank (r) and the number of individuals in the previous rank ($r - 1$), by comparing the year 2008 with the year 2018. The rank of assistant professor includes pre-reform assistant professors (RU) in 2008 and post-reform assistant professors (RTDa and RTDb) in 2018. The ratio is constructed as follows:

$$\text{ratio} = \frac{n(r)}{n(r-1)}$$

This is not to be confused with the promotion rate, which would require following a cohort of individuals for a certain number of years and then estimating the proportion that has progressed through to the following rank, but it is nonetheless useful for understanding where obstacles in career progression concentrate. A ratio equal to 1 means the number of individuals in rank r is equal to the number of individuals in rank $r - 1$. A ratio higher or lower than 1 means the number of individuals in rank r is higher or lower, respectively, than the number of individuals in rank $r - 1$.

Results in Table 3 show that, in 2008, taking men and women together, assistant professors were twice as many as postdoctoral researchers (at a ratio of 2.09), and full professors were roughly the same number as associate professors (at a ratio of 1.04). Only the transition from assistant to associate professor reports a "loss" of academics (at a ratio of 0.72), suggesting that the major obstacles to career progression in 2008 were concentrated in that specific step. Ten years later, the situation is different. With the ratio now at 1.04, transition from assistant to associate professor has ameliorated and this step now appears to be the least problematic. By contrast, the ratio for the two remaining steps has worsened. More specifically, change seems to be greatest in the transition from postdoctoral researcher to assistant professor, where the ratio has gone from 2.09 in 2008 to 0.54 ten years later. This means that assistant professors have gone from being twice as many as postdoctoral researchers in 2008 to around half their number in 2018.

Table 3: *Ratios by year and gender*

	2008			2018		
	M	W	MW	M	W	MW
Assistant/postdoc	2,31	1,87	2,09	0,62	0,46	0,54
Associate/assistant	0,88	0,54	0,72	1,21	0,84	1,04
Full/associate	1,27	0,58	1,04	0,79	0,39	0,63

Source: MIUR data on academics in Italian universities

Reducing access to the tenured positions: the gender implications

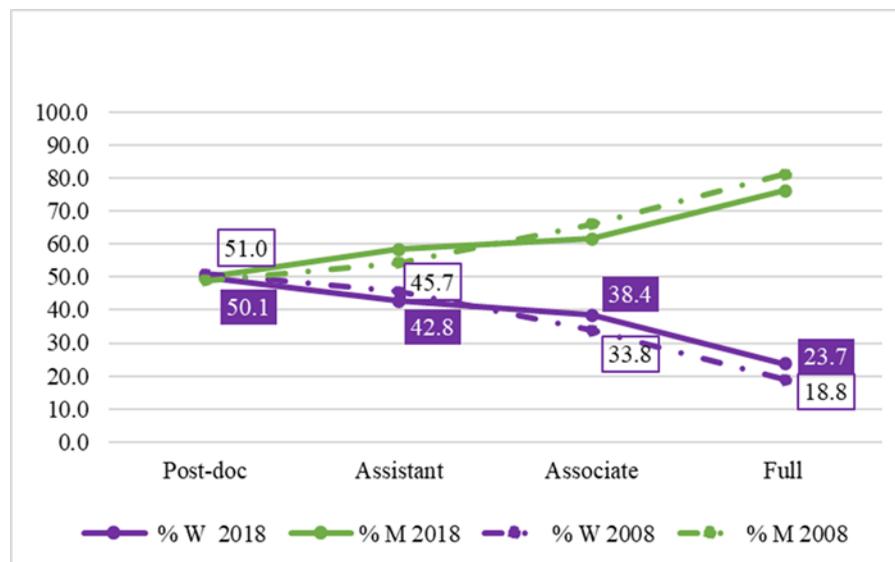
So far, analysis suggests that, while going through a process of feminization, the academic profession has witnessed a change in the position of the “bottleneck” in the career ladder. More precisely, the bottleneck seems to have moved from the transition to associate professor — where it occurred ten years ago — to the transition to assistant professor, where it occurs today. The decrease in recruitment at assistant professor level, together with the increase in postdoctoral contracts, has had the effect of reducing access to tenured positions: while the number of academics who would like to enter the profession has increased, the number of available places has decreased.

This reduction in access to tenured positions has different implications for men and women. Table 3 shows that, in 2008, both men and women experienced the highest loss in the transition from assistant to associate professor. However, the loss was higher for women (0.54 against men’s 0.88). Moreover, while men experienced an advantage in the transition from associate to full professor (at a ratio of 1.27), women experienced a disadvantage, transitioning at a ratio of 0.58. The easiest step — for both genders — was the transition from postdoctoral researcher to assistant professor, at a ratio of 2.31 for men and 1.87 for women. Ten years later, the same ratio has decreased to 0.62 for men and 0.46 for women. The transition from assistant to associate professor seems to have become somewhat smoother, albeit to a greater degree for men. On the other hand, women’s most critical step appears to be the transition to full professor even though the worsening in time is rather small, changing from a ratio of 0.58 in 2008 to 0.39 in 2018.

The gendered consequences of these changes are represented in Figure 2, which reports the distribution of men and women by rank in the years 2008 and 2018. During the period considered, the female percentage of postdoctoral researchers seems stable, while increasing at associate and full professor level but decreasing among assistant professors. To understand the changes before and after the passing of the 2010 university reform law, the figure compares the female percentage of pre-reform assistant professors (RU) in 2008 with that of post-reform assistant professors in 2018 (RTDa and RTDb). Over these ten years, the female percentage at this level of the career ladder has decreased from 45.7%

almost as far as 42.8%. If only RTDb assistant professors are considered, the female percentage decreases to a further 41.5%, suggesting a four percentage point deterioration.

Figure 2: *The scissor diagram: Academics by gender, rank and year*



Source: MIUR data on academics in Italian universities

Note: the category assistant include pre-reform assistant professors (RU) in 2008 and post-reform assistant professors (RTDa and RTDb) in 2018.

In summary, the female proportion of assistant professors has deteriorated, and this deterioration is stronger among RTDb assistant professors, who are considered to hold a quasi-tenured position, than among the RTDa, who hold the more precarious contracts. These findings suggest that the reduction in access to tenured positions and the parallel restructuring of early career stages have had the overall effect of “anticipating” the adverse selection of women along the career ladder: from the transition to associate professor level—where it occurred in 2008 - to the transition to assistant professor level — where it occurs now. Out of the two short-term assistant professor positions, the A and B types—the B type automatically turns into an associate professor. This means that the selection for future associate professors occurs now—*de facto*—at the previous level, that of assistant professor. The “anticipation” of the selection process along the career ladder, coupled with the reduction in access to stable positions, explains why the transition from post-doc to assistant professor has now become the most challenging for women. When the overall situation becomes difficult, it seems, obstacles to female advancement become even more pronounced.

Neoliberal transformations and cultural changes: academic managerialism

The first part of this research has shed light on the structural implications of the precarization of early career stages, fostered by the 2010 university reform law and the block on academic turnover. The aim of this second part is to investigate the cultural changes driven by the introduction of productivity metrics and increasing reliance on external grants.

The new professional culture of “managerialism” has reinforced the already present idea — criticized by many — that scientific success is based on individual merit and not on the scientist’s personal characteristics, such as gender (Deem, 2009; Zippel, 2017). Taking inspiration from previous work on the “ideal” academic (Thornton, 2013), as well as the construction of “academic excellence” (Van den Brink & Benschop, 2011), this section attempts to capture the professional and organizational culture by examining the formal and informal criteria usually considered during the selection processes taking place in the department. The operationalization of the academic culture into a list of criteria has made it possible to identify what the supposedly the good academic or, more precisely, the good bio-scientist working in academia, looks like.

Content analysis of the interviews has brought to light five recurring themes on this subject: 1) scientific productivity; 2) attracting funds (especially, but not only, in the case of associate and full professors²); 3) being an independent researcher (especially in the case of postdoctoral researchers and assistant professors); 4) being part of a wider scientific, most likely international, network; 5) teamworking (within the research group as well as within the department in general).

It is appropriate here to explore these five criteria in greater depth. First, a good academic should be productive, in other words “publishing a lot and well”. This definition of productivity, however, is not shared by everyone, and many interviewees adopted a critical stance towards it, either by pointing out the “exaggerate tendency to necessarily always be in the first quartiles” or by making it clear that productivity depends on many other (external) factors, first and foremost the size of the research group. Nonetheless, regardless of how productivity is defined, it is perceived as being the key basic requirement that a good scientist should fulfil.

Second, a good academic should “bring home the money” and act like an entrepreneur. Faced with increasing financial constraints and the cuts in national, publicly financed research funds, the importance of attracting funding has now become “absolute” or “fundamental” since “without funds you don’t survive”:

² Post-reform (short-term) assistant professors – and even more so postdoctoral researchers – have fewer grant opportunities, since most of the time funders require the recipient to have continuity of contract within their organization.

You can't expect money from the department, nor from the Italian government. You must bring home money by yourself, so you must choose the right line of research, one that will attract funding (full professor, female, 58 years old).

Funding for single research groups, for working, buying reagents, paying postdoctoral researchers, etc., comes from the European Union and private foundations (...), most funding is external. When I first arrived here, the ministerial situation was quite prosperous: you had the PRIN³, you had the FIRB⁴. Now...nothing...there is nothing left (full professor, male, 67 years old).

For the youngest researchers, the capacity of attracting funding is strictly related to the third characteristic of the good academic: that of being an autonomous scientist. In other words, to be able to work independently from the principal investigator of the research group. Speaking about receiving her ERC starting grant, one interviewee claims that one of the reasons behind her success was, in her opinion, the fact that “[she] made herself autonomous from [her] PhD tutor”. She further argues that, for the ERC evaluation committee, it “is important that you break away from your tutor” by not having “all the publication with him/her”. A lack of independence, she adds, is usual in the Italian academic system, and something of which the European Commission is well aware.

Fourth, the good academic should be part of a wider scientific network which, according to the great majority of interviewees, should be an international network, since, as one interviewee explains, “research is being conducted worldwide, and we need to compete with the rest of Europe, and the US”. The belief is that these networks provide possibilities for increasing collaborations and co-authorships, and therefore this factor is taken into great consideration. Speaking of the attributes that an associate professor should have, a full professor responds:

Is he member of an international scientific community that will enable him to develop or participate in further research collaborations, and thereby increase his publications? Or is he totally isolated? You can be a very good scientist, but if you work by yourself...you are not useful, you are not useful (full professor, male, 58 years old).

The inclusion within a (international) network responds to the need to avoid isolation, since isolated researchers tend to be less productive. This consideration sheds light on the collective dimension of knowledge production and the importance of collaboration not only with colleagues of the same scientific community but also inside the organization. Hence, the

³ *Progetti di ricerca di interesse nazionale* (Research Projects of National Interest).

⁴ *Fondo per gli investimenti della ricerca di base* (Basic Research Investment Fund).

fifth and last characteristic that a good academic should have is “the capacity for teamwork”: mostly cited when talking about the criteria for internal career progression, the theme of “teamwork” refers to two different organizational dimensions, depending on the seniority of the candidate. When referring to early-career researchers — mostly postdoctoral researchers — it concerns loyalty to the research group or laboratory⁵. For senior positions, it acquires a higher organizational dimension, namely the organisation and management of the department itself. “Being available for the department” is a crucial and frequently advocated principle defining the concept of the good life scientist in academia. Speaking of the characteristics that a full professor should have, one interviewee poses the question, “Is he or she willing to put him or herself at the disposal of the community?”

The good academic should contribute to the good functioning of the organization and show “abnegation” to the “the public good”. This entails two activities that have traditionally been considered low(er) in value compared with research work: service work and teaching. Service work includes several administrative and managerial tasks, for instance being part of one of the commissions of the department, coordinating a degree programme, representing the department inside university committees (such as animal welfare, or management of the botanic garden), as well as helping to “prepare the documents that form the basis for the department’s local, national and international evaluation”. According to many, these activities are highly valued in the department.

One associate professor speaks of a recent visit, to the department, of the CEV (“Commissione di esperti di valutazione” or “Committee of Experts in Evaluation”), a recently created body at the national level to evaluate university performance, including research outputs and the range and quality of courses. Through the CEV, universities are accredited to provide their courses and classes:

Take, for example, the CEV visit. It does not bring any advantage to me as single researcher, but, when the department is positively assessed, it means an advantage for everybody. If more funds come our way, there can be more recruitments... So, get involved, work as a team, be united (associate professor, male, 43 years old).

While demonstrating commitment to—and diligence in—service tasks, the ideal academic should also possess good teaching skills. However, most interviewees mentioned teaching skills in ancillary terms vis-à-vis research (“a good researcher is also a good teacher”) or—at the most—as useful for the good functioning of the department as long as it makes up part

⁵ Early-career researchers are the ones who “live in the lab” the most, actually performing the experiments, while associate and full professors end up coordinating the team and dedicating a large part of their time to managerial tasks.

of the manifold activities within the organization: if you can't be a good researcher, at least be a good teacher.

In summary, the ideal academic possesses a mixture of characteristics, reflecting the multiple tasks required within the profession, including ensuring the “good functioning of the department”. The increasing emphasis within academia on departmental performance—fostered by the recent university transformations - means that this conception of the good academic is embedded in organizational dynamics.

Academic managerialism and gender inequalities

According to most interviewees, the criteria used to assess candidates for recruitment and promotion are gender-neutral, since these standards are based on “merit” and are therefore objectively measurable. The “gender-neutrality” of the professional characteristics of the good academic match the “gender-neutrality” of the organization. Many respondents voiced the opinion that they work in a fair department vis-à-vis women. At the same time, many of them would agree that maternity entails a disadvantage for women—in terms of scientific production and therefore of career progression, thus confirming the “over-visibility” of the maternity penalty in relation to other, perhaps less obvious, gender-related obstacles (Zippel, 2017).

Is this the case? Is the conception of “the good academic” gender-neutral? The aim of this section is to investigate how the new managerial culture in academia — entailing the redefinition of the ideal scientist — intersects with existing gender inequality practices, for instance, whether it is reinforcing heterogeneity based on gender by producing new forms of gender-based exclusion, or whether it is actually opening up new spaces of agency for women.

The mantra of productivity comes with two features that are important for this discussion. They are different, but nonetheless interrelated. The first feature concerns a tendency among academics to overlook the factors that influence how individual “merit” is constructed and scientific excellence evaluated. For instance, only few interviewees acknowledge the fact that productivity (also) depends on resources—in terms of time, funding, networking, etc.—which are differently distributed, and even fewer (more specifically, one woman), demonstrate awareness that this distribution can be gendered. And yet, a wide range of literature has contributed to casting a light behind the curtain, as it were, regarding the gender difference in scientific productivity, by showing how productivity relies on funding, time, networking, and allocation of tasks, which are unequally allocated between men and women (Ceci & Williams, 2011). The second feature concerns a reliance on objective criteria of measurement of individual performance. Such emphasis clashes with the persistence of unconscious gender biases within selection processes (Moss-Racusin, Dovidio, Brescoll, Graham & Handelsman,

2012), as well as with the true nature of the processes themselves, which very often lack standardization (Van den Brink & Benschop, 2012). As such, they are not immune to gender-based exclusion practices. A consequence of this is that, if naively adopted, this emphasis on excellence may not only reproduce gender inequalities, but probably even make them harder to detect. At the same time, this same emphasis has certainly contributed, to some extent, to helping overcome the old hierarchical mechanisms based on affiliation and seniority. For example, when asked to assess how meritocratic the department is, a female full professor says:

So, it is a little bit more meritocratic now because...goats⁶ are not automatically upgraded anymore...in the sense that simply being here for a long time is no longer enough of a reason to promote someone... X (name of a colleague) is evidence of this change" (full professor, female, 58 years old).

The person to whom she is referring (X) is a (male) researcher working in the same scientific sub-field. At a certain point, the issue of his career progression was debated in the department. The interviewee strongly opposed and, in the end, prevented him from advancing to the next step. According to her, he was not productive enough and he "didn't grown up his own research group". This could perhaps have been enough in the past, but today it is no longer acceptable. In summary, while the new emphasis on productivity may be contributing to widening gender disparities in some ways, it may at the same time be breaking down old hierarchical mechanisms and thereby helping to create fairer opportunities for both men and women.

Likewise, attracting funding may open up possibilities for career progression as well. Grants are essential for making research activities possible. In this sense, they can be an instrument, for women, to acquire prestige within the organization and climb the career ladder. The following interviewee, a woman, explains how obtaining an ERC starting grant made it possible for her to become associate professor. According to her, this is evidence of how meritocratic her organization is:

The department has strongly supported me, because it is true that I have brought a lot of money with me. But sometimes you have departments where money does not count as much and where it is more important to have a good mentor protecting you. My department is much "cleaner", here they recognize merit (associate professor, female, 44 years old).

The interviewee also recognizes that she has always been "a strong candidate" because of her ERC funding: for academics, bringing in money entails the possibility of being seen as more

⁶ *Capre*. In informal Italian, "goats" is a term given to people who are thought not to be particularly intelligent.

attractive — or even as a precious asset — by the relevant organization(s). In this vein, the ERC probably represents an extreme case, but it is highly indicative — in its engendering competition among universities trying to catch fresh ERC grant recipients with the most attractive offer — how individual financial research resources have become an instrument for bargaining. From this perspective, it could be argued that the new reliance on external funding might be helping to break existing gender dynamics and open up spaces of opportunities.

On the other hand, attracting funds is not always enough. The ability to bring in money is not immune to being belittled when it comes to women. One female full professor explains how uneasy she felt around her male peers after winning her ERC Consolidator grant:

They stopped saying good morning to me for a while... X (name), but also Y (name), he couldn't look me in the eye... I think they thought, 'If she's obtained an ERC then anybody can'. I have a Spanish friend, a woman, who won an ERC, and the dean told her, quite plainly, 'Well, Z (name), if you can get it then everybody can (full professor, female, 58 years old).

When speaking about herself, she downsizes her success by recalling how European grants respond not only to excellence criteria but also to diversity issues, such as gender and geographic origin. And yet, when asked whom they considered to be “excellent” within the department, the great majority of interviewees named precisely this professor.

The loss in prestige of the most competitive—but increasingly “feminized” (European Commission, 2019)—European Union grant potentially reminds of the loss in status (and pay) witnessed in traditionally male professions and occupations once women began to enter their workforce on a large scale (Glover, 2005; Wright & Jacobs, 1994). If women can compete successfully in the most prestigious arenas, such as funding by the ERC, it may mean that these arenas come to be regarded as not quite so prestigious after all. Ultimately, the definition of excellence varies according to existing power relations based on gender.

Finally, mixed implications for women also stem from the growing emphasis on teamwork. The importance of the “good functioning” of the department entails the reconsideration of non-research activities such as service and teaching, two activities to which women, according to much of the literature on this subject, dedicate a large proportion of their time, but which count less than research when it comes to career progression (Winslow, 2010).

Everything is important... I mean, if there is a colleague who is very involved in teaching and performing service tasks for the department, but he or she is not

very good at attracting funding...this is fine. If there is somebody who is great at attracting funding but who is less available for helping within the department... I wouldn't be able to say categorically what is more important, because I think it depends on the person, we look at the person, at his or her CV (associate professor, male, 43 years old).

The emphasis on teamwork has forced departments to reconsider the value of traditionally female-dominated tasks, such as service work and teaching. One consequence of this may be new opportunities opening up for women. At the same time, however, service work and teaching continue to be considered ancillary to the "core" activities of the good academic, namely research and fundraising. Moreover, a process of re-segregation (Reskin & Ross, 1990) along gendered lines may be occurring in relation to non-research tasks. The re-emergence of a hierarchy could be taking place, in which some activities (coordinating departmental committees; writing project presentations for the "Departments of Excellence" ranking), which are likely to be male-dominated, are seen as more prestigious and are more useful in terms of career progression, while others (coordinating degree courses), which are likely to be female-dominated, are both less advantageous in terms of prestige or career advancement, and more time consuming. For example, according to some interviewees, women devote more time than men to tasks that are practical and often invisible, but nonetheless necessary, such as cleaning the lab, keeping the cupboards tidy, calibrating instruments and taking charge of the lab's stock purchasing (such as reagents, solvents, and gloves). The last task — given the manifold rules related to being a public institution — is a particularly time consuming activity, but poorly appreciated when it comes to career advancement.

Conclusion

This research has shown that the academic profession has recently witnessed multiple processes of differentiation. An increase in the number of professionals working in academia, as well as its diversification in terms of gender, have occurred in parallel with recent market-based transformations. These transformations have precarized the academic profession and introduced a managerial culture based on performance and entrepreneurship. The implications of such changes in terms of gender heterogeneity are complex.

The precarization of early career stages has "anticipated" the female adverse selection along the career ladder: from the transition to associate professor level where it occurred in 2008 to the transition to assistant professor level, where it occurs now. Once gender equal, the assistant professor position has since witnessed a decrease in its female component. Results suggest a backlash effect, in terms of gender distribution, in the early stages of the academic career ladder. From this point of view, neoliberal changes have increased gender-based heterogeneity, in that they have increased the obstacles to access the profession for

those at the margins of the professional field, namely women. As such, it has enhanced its gender inequalities.

The change in professional culture looks more complex from the perspective of gender. To break this issue down, three aspects should be taken into consideration. First, the emphasis on scientific excellence may actually be helping to mask both the conditions on which it depends (the different allocations of opportunities and resources) and the threats to its measurability (the biases in evaluation), none of which are gender neutral. From this perspective, it is likely that this change in culture is making gender inequalities less visible. On the other hand, this emphasis may also be disrupting old hierarchical mechanisms that themselves are gendered and preventing women from advancing in their careers. Second, the increased importance of attracting grant money has enabled women to acquire prestige and resources while progressing in their career, thereby disrupting the traditional, male-dominated hierarchy. On the other hand, not even the most prestigious grants are immune to being devalued once they feminize. Third, the emphasis on the good functioning of the department—which has been fostered by the introduction of new evaluation systems—has forced the reconsideration of traditionally female-dominated tasks, such as teaching and service work, which may be opening up new opportunities for women. On the other hand, teaching and service work remain ancillary to research, while entailing a risk of gender re-segregation within the different departmental activities. Considering these three elements, it seems that the new managerial culture does not, per se, exacerbate gender inequalities in Italian academia, since gender inequalities and sexist practices precede—and eventually may even thrive in—such a culture. A more pressing concern, however, is that this new culture may actually be making existing gender inequalities less visible—even less so than they already are—certainly as long as it reinforces the idea that scientific success depends on individual merit alone, without consideration of the wider context, including the structure of opportunities and the organizational culture, which are both gendered (Acker, 1990).

This study has some limitations, more specifically the fact that the interview participants come from a single department in the field of life sciences with a particularly excellent track record. Considering this, the findings of the qualitative field should not be regarded as indicative of the whole of Italian academia, only of similar contexts. On the other hand, the use of a mixed-model approach has made it possible to shed light on the complexity of the relationship between the recent neoliberal university transformations and gender inequalities, by considering both the structural and cultural dimensions of these changes. In summary, while these neoliberal transformations have reduced access to the stable positions and enhanced the adverse selection of women at assistant professor level, the case study shows they have also fostered a new professional culture with less clear-cut consequences for women, including increased space of agency which may actually disrupt old, entrenched elitist systems and male-dominated hierarchies.

Article history

Received: 03 Jun 2020

Accepted: 15 Mar 2021

Published: 20 Apr 2021

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