

CARE, TIME AND GENDER IN NEW MANAGERIAL SCIENCE AND ACADEMIA

From accelerated rhythms
to caring temporalities

**Ester Conesa
Carpintero**

DOCTORAL THESIS

Director: Ana M González Ramos

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Doctoral Program: Information and Knowledge Society

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Care, time and gender in new managerial science and academia. From accelerated rhythms to caring temporalities (2015 – 2022).

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Pels avantpassats,
en especial la meva àvia Victòria,
per a la Tanit,
i en general, per a les generacions
que venen i vindran

La paciència és la mare de la ciència

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Contents

I.	INTRODUCTION	17
0.	What is happening to us?	19
1.	Framing the research question	20
1.1.	Women in science	20
1.2.	The paradox of equality measures	23
1.3.	Hypothesis and initial questions. New managerialism, slow science and the need of a gender perspective	25
2.	Research question and objectives	28
3.	The contributions of this thesis	30
3.1.	Coherence between the contributions	30
3.2.	The chapters and its related publications	33
4.	Methods	37
5.	Gender and reflexivity	41
II.	THE THESIS CHAPERS/PUBLICATIONS	45
1.	“(No) time for care and responsibility. From neoliberal practices in academia to collective responsibility in times of crisis”	47
2.	“Neo-gerencialismo y austeridad en el contexto académico español y europeo. ¿dos caras de la misma moneda?” [“New managerialism and austerity in the spanish and european academic context. Two sides of the same coin?”]	71
3.	“Accelerated researchers: Psychosocial risks in gendered institutions in academia”	99
4.	“Subjectivation processes and gender in a neoliberal model of science in three Spanish research centres”	115
5.	“Care, time and gender in new managerial science and academia. Exploring a feminist care approach towards caring temporalities”	135

III. CONCLUSIONS	211
1. SUMMARY OF THE RESULTS: What is happening to us?	213
1.1. New managerialism in Spanish science and academia	213
1.2. <i>Embodied effects</i> or psychosocial risks	214
1.3. Subjectivation processes in neoliberal centres of research	215
1.4. Care and dominant temporalities in science and academia	217
2. DISCUSSION: Gender equality in new managerial science and academia	219
2.1. Gender equality in academia and science	219
2.2. Gender, excellence and critiques of public institutions vs. new research centres	221
2.3. Gendered institutions and men	223
2.4. Slow science or... and... care?	224
3. CONCLUSIONS: Care as an analytical, political and transformative tool	225
3.1. Politicization to create time for care	225
3.2. A feminist care framework	227
3.3. Towards caring temporalities	229
3.4. In conclusion	230
3.5. Limitations, recommendations and further research	232
IV. REFERENCES OF INTRODUCTION AND CONCLUSIONS	237
ANNEXES	249
ANNEX I: The Spanish Equality Law and the gender balance in the evaluation committees: An opportunity for women's promotion in higher education	251
ANNEX II: Academia acelerada, slow science y ética del cuidado	273
ANNEX III: Temporalities and care: Gendered tensions in scientific practices	309
ANNEX IV: El impacto de las prácticas neo-gerencialistas en las trayectorias científicas de hombres y mujeres en tiempos de crisis	331
ANNEX V: GENERA methodological documents	355

I. **INTRODUCTION**

0. What is happening to us?

Having begun this thesis within the framework of the GENERA project (FEM2013-48225-C3-1-R), which explores the gender biases along the careers of men and women in science, I come to perceive something that I had already observed some years ago among academics: even more so now than before, no one has time.

Academics do not have time to dedicate to their students; they talk fast; they eat fast; they work nights and at weekends; they run from one deadline to another, and, among much else, they are stressed and irritable. In informal conversations, people talk about the job insecurity present in some protests, competitive behaviour among colleagues, and more. In addition, it is possible to grasp that something has changed in the way science, knowledge and universities are understood. It would appear that this lack of time leads to a lack of care, either for oneself, for those around us, or for scientific practices themselves. This leads me to pose the question of what is going on in science and academia today: what is happening to us?

This work deals with the changes that have occurred in contemporary Spanish science and academia since the 2000s and their effects on academic staff from a gender perspective, including different insights, the most significant of which is a feminist care vision. These transformations have their particularities, but they can be grouped under the name of new managerialism; that is, the application of the values and techniques of the private sector to the public sector, a phenomenon identified in the literature in the English-speaking world. Some works have highlighted the effects of these changes on the well-being of academic staff (Morley, 2005; Gill, 2009; Sparkes, 2007). However, few studies have been dedicated to these impacts from a gender perspective (Acker and Armenti, 2004; Mountz et al., 2015), or have addressed them in a complex way, nor do we know if and how Spanish academics are affected, too. Only Mountz et al. (2015) have approached these *embodied effects* (how they term them) from a gender perspective that also considers time and care. A gender perspective is important given that statistical data still shows unequal figures in the representation of women in Spanish science and academia, and that many studies and efforts have been carried out in order to understand why and how to reverse this phenomenon.

This thesis comprises five chapters, this introduction and a conclusions section. I begin by undertaking an initial review of the literature on *embodied effects* and the consideration of the

care approach (chapter 1), and thereafter an examination and appraisal of our context – if and how new managerialism has been implemented in Spanish academic and scientific system (chapter 2) –, continuing with the examination of the existence of these *embodied effects*, from a gender perspective (chapter 3), and how these changes have been interiorised in the subjectivity of scientists and academics (chapter 4). I finish delving into a feminist care framework that addresses complex relationships of care, time, gender and productivity, to explore, understand and deepen our comprehension of these changes not only among academic and scientific staff, but also in scientific practices and in the direction that science is taking, in order to find ways to bring about change (chapter 5). Each chapter provides us with different yet complementary answers which will help understand what is happening to us.

In order to tackle these questions and with the aim to offer a complex understanding, this thesis is nourished by different academic traditions, among of which, Women and Science, Critical Management Studies, Gender and Organization Studies, Science and Technology Studies, Care Studies, or Social Studies of Time.

1. Framing the research question

1.1. Women in science

To date, statistics show that women have not yet achieved numerical parity, particularly in the highest positions of the scientific and academic¹ careers, despite the fact that they have long graduated in greater numbers than men, and obtain better grades in their studies (Unidad de Mujeres y Ciencia, [UMyC], 2011; Benschop and Brouns, 2003).

When this thesis was already well underway, the Women and Science Unit (Unidad de Mujeres y Ciencia), in its report “Científicas en Cifras, 2017”, published in 2018, highlighted this situation of the well-known scissors graph of the distribution of men and women in the academic ladder in Spain during the 2016-2017 academic year at public universities. Despite numerical parity at the doctoral stage, as progress is made to intermediate academic positions, the number of

¹ Throughout this thesis I will use the words 'science' and 'academia' (and their variants: scientific and academic system, scientists and academics, etc.) interchangeably, to cover people working in the different fields of knowledge and the organizational system, without going into what is considered science and what is not.

women starts to decrease and falls to 21% women and 79% men at the full university professorship level (UMyC, 2018, p. 66). These figures are similar in proportion to the European average (EU-28) which, in 2013, stood at 22% women and 78% men at full-professor positions, and 24% women and 76% men in 2016 (European Commission, 2019, p. 116)².

Vertical segregation is not the only ongoing issue; worrying disparities also remain between scientific-technological fields (so-called horizontal segregation). For example, of the total research staff of public universities, women made up 23% of the total in the field of engineering and technology in the academic year 2012-2013, and 24% in 2016-2017. In the area of natural sciences, they made up 34% of the total each year, from 2012-2013 to 2016-2017 (UMyC, 2018). Similarly, women's participation in universities' decision-making bodies is also low, notably so in terms of rectors, 15% of whom are women, and deans, 30% (UMyC, 2018, p. 72), thus not fulfilling the minimum objective of a 40%-60% balance set out in the Sciences Act 2011 (13th provision based on the Equality Act 2007; see González et al., 2018, in the Annex I).

Despite the fact that academia and science are historically masculine environments – which would explain the ageing and persistently majority-male staff profile – women began to occupy roles in universities from the end of the nineteenth century, and to be accepted in universities on equal terms with men starting with a ministerial order in 1910 (Guil and Flecha, 2015). As such, the explanation would not appear to lie in a merely quantitative effect related to age (Benschop and Brouns, 2003). In 1993, science historian Margaret W. Rossiter coined the term the Matilda effect³ to describe the silence, lack of recognition and visibility and omission due to the historical bias affecting women's contributions in science, in contrast to those of their fellow male scientists (Rossiter, 1993).

Different studies in recent decades have highlighted that, in hiring and appraisal processes, women are judged and evaluated more harshly and considered less competent, even when possessing the same curriculum or equivalent merits (Benschop and Brouns, 2003; Goldin and Rouse, 1997; Steinpreis, Anders, and Ritzke, 1999; Wennerås and Wold, 1997; Van den Brink and Benschop, 2012). Benschop and Brouns (2003) emphasize that, although some hiring processes are open or public, there are certain key factors that contain gender biases and are determined by informal practices based on contacts and networks. This is also shown in the Swedish study by Wennerås and Wold (1997), and the Spanish studies by Zinovyeva and Bagues

² To know more about the different grades and positions for both Spanish and European figures, read the methodological notes in their original sources, which have been simplified for comparative reasons in grade A, B, C and D.

³ In honour of the suffragette and advocate of the abolition of slavery Matilda Joslyn Gage, who wrote “Woman as Inventor” in 1870, published in 1883 in the North American Review.

(2010 and 2015). Men have greater access to these networks – as explained by the phenomenon of homosociability – which are made up mostly of white, middle-class men without functional diversity who identify strongly with each other (Bagilhole and Goode, 2001), in what is commonly known as *old boy's club* (Kanter, 1977). Other colleagues' references and recommendations impact decision-making, as this quote from a member of an evaluation committee shows in a Dutch study: “If I do not know them, they are not excellent” (Van den Brink and Benschop, 2012, p. 517). Thus, women benefit less from networks that “support each other, cite each other's work and keep each other informed” (Van den Brink and Benschop 2012, p. 517), and which, in a “patriarchal environment dominated by men”, already work in the latter's favour (Bagilhole and Goode, 2001, p. 171). Indeed, there are studies that confirm that men cite each other more (Knobloch-Westerwick and Glynn, 2011), and that they usually cite their own works more than women (King et al., 2017). Another body of research focuses on the varying levels of scientific productivity between men and women (Xie and Shauman, 1998; Van Arensbergen et al., 2012; Larivière et al., 2013; Van den Besselaar and Sandström, 2016). Although the same authors mention the limitations of these types of quantitative studies, Van den Besselaar and Sandström (2017), conclude that there may be a vicious circle that encourages lower productivity in women. Women usually occupy lower academic positions and less leadership roles in groups and networks (a result of gender bias and stereotypes in decisions), which has a negative effect on their productivity (insofar as it entails less funding). This in turn reinforces their lower status and position, and their lower profile and visibility, and would explain the persistence of the glass ceiling (Van den Besselaar and Sandström, 2017).

Other points of tension have to do with the fact that women tend to have more interruptions in their careers and more temporary and/or part-time contracts, since women are still understood as the ones most responsible for domestic and care work (Baker, 2010; Benschop and Brouns, 2003; Van den Brink and Benschop, 2012). This leads to unequal situations in terms of demonstrable merits. While men usually have partners in part-time or unpaid work, women working in science tend more towards having partners who hold higher, more stable and more valued positions (Baker, 2010; González and Vergés, 2013; González, 2014). International mobility can also be problematic where women take on responsibilities of dependent family members (Baker, 2010; Benschop and Brouns, 2003), requiring the planning of complex long-term strategies should they wish to remain in science (González and Vergés, 2013).

Gender biases and stereotypes continue to operate in favour of men's “innate talent” and “genius” in the face of women's “lack of skills”, which functions as “stereotype threat” and reduces self-confidence (Baker, 2010; Fotaki, 2013; Leslie et al., 2015). For example, in their

study, Van den Brink and Benschop (2012) saw that women of small stature or a friendly nature were judged as fragile or indecisive, in sharp contrast to ideals of male leadership. Although there are more and more self-assured women who make science their career, the results of Baker (2010) show that, contrary to what they found in men, many women openly doubted their intellectual abilities or did not apply for promotion on the assumption that they would not be in with a chance of succeeding. Other reasons were not having the time or energy to apply, or wanting a more balanced life (Baker, 2010) pointing to difficulties related to time and care.

1.2. The paradox of equality measures

Thanks to the efforts of many women, part of the literature on women in scientific careers has been promoted and distilled in reports and publications at European level, with the aim of establishing strategies and measures for the achievement of equality. Following the publication of the ETAN Report *Promoting Excellence Through Mainstreaming Gender Equality* (European Commission, 2000) in 2001 the European Commission's Directorate-General for Research produced some 20 key reports and publications over ten years, disseminating studies on the situation of women in science and examples of policies and good practices in operation, as well as proposals for measures to be implemented (UMyC, 2011). Among these publications are: *Waste of talents: turning private struggles into a public issue. Women and science in the ENWISE countries* (2004), *Mapping the maze. Getting more women to the top in research* (2008) or *The Gender Challenge in Research Funding* (2009).

Among other goals, quantitative and statistical studies were carried out every three years on the situation of women in science, technology, innovation and in the academic field of higher education (among others), under the banner *She Figures*. In 2010, the European Union's Competitiveness Council agreed to support women in science by promoting "structural change for the modernization of universities and research institutions, and to integrate gender issues into research as a resource to create new knowledge and stimulate innovation" (European Commission, 2012, p. 14, my emphasis). This agreement reflects and acknowledges the recommendations of the pioneering Helsinki Group, and commits to the preparation of a report, undertaken by an expert group and addressed to Member States (inspired by the ADVANCE programme of the National Science Foundation in the United States, launched in 2001), called *Structural change in research institutions: Enhancing excellence, gender equality and efficiency in research and innovation*, subsequently published by the European Commission in 2012. In

addition, a commitment was made to tender for projects to participate in this structural change as part of the Science in Society programme which, has grown over the years to be able to offer a significant volume of funding through the 7th Framework Programme and, subsequently, the Horizon 2020 programme. Thus, as a result of this new approach, “the focus moved [from *women scientists*] to the *institutions* that employ them in order to address gender management issues and work towards a better representation and retention of women at all levels of their scientific careers [in what] is known as structural change” (European Commission, 2012, p. 10), principally to incorporate gender perspectives in a transversal manner and in particular, in the management of human resources (UMyC, 2011).

As a Member State of the European Union, Spain joined discussions and participated in the agreements. Within the Ministry of Science and Innovation, the Women and Science Unit (UMyC) had already been founded in 2005 to implement *gender mainstreaming*. Furthermore, 2007 saw the passing of Organic Law 3/2007, of 22nd March, for the effective equality of women and men, which would subsequently drive the announcement of the Science Act in 2011 (see González et al., 2018, in the Annex I), promoting the presence of women in all areas of science, technology and innovation, the modernization of human resources management, the inclusion of the gender dimension in research, technology and innovation, and gender and women's studies (UMyC, 2011). Experts such as Inés Sánchez de Madariaga participated as authors in the preparation of these documents both in Spain – preparing the “Libro Blanco. Situación de las Mujeres en la Ciencia Española” [White Paper. Situation of Women in Spanish Science] in 2011 – and in Europe, heading the Group of Experts on Structural Change and its report published in 2012.

The Structural Change report (2012), translated into each of the languages of the Member States, justifies the importance of structural change in the following way: “European women’s increased social and intellectual capital, and higher career aspirations, would provide an important competitive advantage in international markets for innovation and technology” (European Commission, 2012, p. 16). It is stated thus that such a transformation will serve “to become a world leader in science and technology” (ibid, p. 17) and that diversity will improve production, through “the quality, objectivity and relevance of knowledge, technology and innovation for the benefit of all members of society” (p. 15), in addition to this being an “issue of justice” and contributing to social progress. The “cost of no action” is summarized in four ideas:

“1) Danger of flawed research or diminished relevance of results; 2) Missing innovation and market opportunities; 3) Unfulfilled use of human capital (women scientists) in a competitive global R&I [Research and Innovation] economy; and 4) Increased social distrust of, and reduced support for, science and its institutions” (p. 17).

As the report follows, “Failure to make full use of available trained talent (in particular that of women) is not sustainable in the long term and threatens Europe's global competitiveness” (p. 17-18). The report brings together different studies on gender bias in science, highlighting recommendations that research centres and universities can put into practice to improve the status of women in science.

However, despite these recommendations and steps for their implementation having been set out, the number of women in the highest positions in the scientific and technological career – as well as in positions of responsibility and decision-making – remains low. The situation of women, in general, has not changed greatly since these reports, studies and recommendations were undertaken.

As such, at the time of completion of this thesis, the latest figures published in 2021, which cover the 2018-19 academic year – reveal that the percentage of predoctoral positions held by women has decreased from 49.9% to 47.6%; the percentage of postdoctoral positions remains almost unchanged (49.9% to 50%); women's presence in intermediate positions has increased from 42.9% to 44.5%, as it has done in full-professor positions, growing from 21% to 24% (UMyC, 2021, p. 36). Although we can see an improvement, albeit small, in intermediate and higher positions, the lower percentage of female doctoral students suggests a trend that could be worrying, since during several years it stood at 49-50%. In addition, it should be noted that the increase in women in top positions has occurred in the Humanities, while in Engineering and Technology the percentage of women has decreased (UMyC, 2021, p. 38), therefore perpetuating horizontal segregation. Regarding universities' decision-making bodies, and compared to the report published in 2018, women rectors have increased from 15% to 23% and women deans from 30% to 35% (UMyC, 2021, p. 57).

1.3. Hypothesis and initial questions. New managerialism, slow science and the need of a gender perspective.

This drive for change is usually framed, as we have seen, within discourses of excellence, competitiveness and the loss of talent. Excellence is based on seemingly objective standards

(Van den Brink and Benschop, 2012) with the intention of offering equal treatment to all people, something which ought to facilitate the incorporation of women in the different strata of scientific and academic careers. But why, then, have there been no, or slow and unequal changes? We should ask ourselves, therefore, if there is something we are not taking into consideration.

This thesis takes these questions as a starting point within the research doctorate project⁴ “GENERA: Promoting a more inclusive and competitive knowledge economy” (FEM2013-48225-C3-1-R), directed by Ana M. González Ramos, which “aims at promoting excellence in science to stimulate a more inclusive and competitive knowledge economy” (González, 2013 p. 3-4) through the examination of the various personal and professional circumstances of men and women scientists, the analysis of the procedures for assessing merit (i.e. the composition of the evaluation committees) and “evaluating the scientific-technical practices and cultural mechanisms of the system of recruitment and promotion of research staff, identifying biases that detect or hinder the identification of excellence, [and] the promotion of talent and mentoring.” (González, 2013, p. 12)⁵

The first hypothesis that drives my work inside this project is as follows: gender equality measures and discourses of excellence, waste of talents and competitiveness contrast with the observation of a university and research staff experiencing a persistent lack of time, frequent exhaustion and job precariousness which may be related with the access and promotion of women in scientific and academic careers. Some of the questions that I ask myself are, on the one hand: Why is there so little time, and a perception of so much stress, pressure and malaise? What consequences does this lack of time have on academic staff and on science itself (and its excellence objectives)? And how does it affect women academics and scientists, considering that many of them still carry the burden of care? And, on the other hand, how do excellence, competitiveness and the market fit within the idea of public science and knowledge, all the more

⁴ Granted with a FPI scholarship, part of the State Programme for the Promotion of Talent and Employability in R+D+i, and the State Subprogramme for Training funded by the then-Ministry of Science, Competitiveness and Sports and the European Social Fund.

⁵ During the doctoral scholarship period, the doctoral student has participated in the obtention of each of the following objectives of the GENERA project by carrying out field work, research support tasks and administrative tasks: 1) Identify the values and practices underlying the decision-making of senior researchers to identify talent and scientific excellence; 2) Examine the biases related to the activity carried out by women in order to establish the extent to which these influence their academic career; 3) Compare gender biases in different work environments (scientific areas, sectors of activity) that affect the models of selection and development of men and women in science; 4) Evaluate strategic lines of action aimed at promoting scientific vocations and encouraging mentoring of research staff.

so in a context of precariousness? How might we view these phenomena from a gender and a feminist perspective? Does this situation have anything to do with the unequal status of women in science? Is there no time for care in science and academia? Could a feminist care approach shed light on these issues?

It is necessary, therefore, firstly to examine the nature of this scientific and academic system, whether the aforementioned situation of precariousness really exists – and, if so, how it manifests –, and if there are any studies concerning academic staff's lack of time and/or the consequences of this.

An initial overview of critical studies on management and academia points to changes in the management of the scientific and university system, especially in the English-speaking world, which arose in the late 1990s and early 2000s under the term new managerialism⁶ (Deem, 1998; Deem and Brehony, 2005) – others call it academic capitalism (Slaugther and Rhoades (2000) – and the negative consequences that these transformations cause to those working in science (Morley, 2005; Sparkes, 2007; Gill, 2009). However, no critical studies have been undertaken in the context of Spain, and there is a seeming lack of literature that addresses new managerialism and its effects from a gender perspective.

Exploring further, and focusing on the effects of these changes in the experiences of time in the academic and scientific lives of women, there are a small number of studies undertaken in the United States that discuss the consequences of the lack of time and the increasing burdens and pressures placed on women: research by Acker and Armenti (2004) and a more recently-published autoethnographic analysis, collectively authored by members of the Great Lakes Feminist Geography Collective, Mountz et al. (2015), which explores the manifestation of these consequences as *embodied effects* within a framework of *ethics of care* (Mountz et al. 2015). Other studies on gender and academia in the literature point to some of these effects, albeit in a fleeting manner, as part of a critique of the supposedly gender-neutral meritocratic system (Bagilhole and Goode, 2001; Scully, 2002; Van den Brink and Benschop, 2012), without transversally addressing aspects related to lack of time and care.

⁶ Deem and Brehony (2005) widely discuss the differences of naming this process “new managerialism” or “new public management” (NPM) by different views and authors. “New managerialism” refers more to an ideological configuration, conceiving management as not only a technical but also a political activity, while those who use the “new public management” concept understand it as “a new international and technical administrative orthodoxy” (p. 220). See chapter 2 and note 3.

Another corpus of articles, manifestos and other publications can be found under the Slow Science epithet, placing the emphasis in the accelerating rhythm of work in the scientific disciplines, mostly published in recent years (i.e. The Slow Science Academy, 2010). However, as we will see in the thesis, few of them from a gender perspective, and with scant evidence for the phenomenon, insofar as they are self-reflexive or take the form of a manifesto. Only the aforementioned study by Mountz et al. (2015) investigates what they refer to as “slow scholarship” from a critical gender perspective, including, as detailed above, the concepts of time and care. Another body of literature concerning what is known as the “Accelerated Academy” began to develop concurrently with the initial period of this thesis, and is a milestone in the meaningful investigation of the phenomenon of lack of time in the academic and scientific world. Nevertheless, the few studies available (Müller, 2014; Vostal 2015; Ylijoki and Mäntylä, 2003) do not address the issue from a gender perspective, nor do they take into account the problems of women in science or the notion of care.

Given the above, and having detected the need to answer these questions and cover this lack of research, I have embarked on an investigative journey into new managerialism and precariousness in science, to address *embodied effects* and questions of time, care and gender in the context of Spanish academia and science.

2. Research question and objectives

As in any other study, the research question and objectives have evolved as the research has been carried out, where broader perspectives and emergent needs – especially those coming from the results of the fieldwork itself – have enriched the thesis.

The research question reads as follows:

- ❖ How have new managerialism and austerity politics affected scientists’ and academics’ lives – in terms of *embodied effects* (or psychosocial risks) and subjectivity – and scientific practices, from a gender perspective that addresses questions of care, time and gender, considering the already unequal situation of women in academia and science?

This entails broader and further questions: which bodies are able to pursue scientific careers? And, which model of science we are reproducing and normalising?

The objectives were firstly designed in order to obtain a more complete understanding of the implementation of new managerialism and austerity politics in the Spanish academic and scientific system (chapter 2, objective 2) to later explore psychosocial risks (or *embodied effects*) in academics' lives and careers from a gender perspective (chapter 3, objective 3), contemplating *care* (Pérez Orozco, 2014; Tronto, 1993) as a theoretical notion and possible approach to tackling the lack of time and care in science (chapters 1, 3 and 5, objective 1).

The results of the fieldwork showed the presence of neoliberal discourses in participants' interviews (chapter 4, objective 4) and confirmed productivist patterns seemingly bringing a neglect of care and time in academics' lives and also in their practices (chapter 5, objective 5). This enriched the research objectives and the overall commitment to expanding the analysis to subjectivities and scientific practices. The approach of feminist *care* and *care time* (chapter 5, objective 5) has ultimately proved to be a useful tool to explore, analyse and understand relationships of gender, time and care with productivism.

In the following list I show the objectives of this research with its correspondence to the chapter(s) of this thesis (in parenthesis). Further details of the contributions will be set out in the next section.

- 1- To explore the notion of care and its relationships with time in a seemingly accelerated and productivist academia and science (chapter 1 and 5).
- 2- To examine the application of new managerialism and austerity measures in the Spanish academic context, in order to see how this has affected working conditions of academic personnel (chapter 2).
- 3- To explore and analyse psychosocial effects and risks (*embodied effects*) to academics and scientists under new managerialism from a gender perspective (chapter 1 and 3).
- 4- To understand how neoliberal science discourses have been internalized, conforming scientific subjectivities, and possibilities for resistance among women scientists (chapter 4).

- 5- To develop a framework based on feminist care and care time as an approach to explore, analyse and transform new managerial accelerated and productivist science and academia (chapter 5).

All of these, especially objectives third, fourth and five and its related chapters seek to respond to the broader question of what bodies are able to pursue and remain in our contemporary academic and scientific system and which model of science we are reproducing and normalising.

3. The contributions of this thesis

3.1. Coherence between the contributions

This thesis is composed of five contributions (five chapters) which correspond to four published works (chapter 1 to 4) and one original non-published final chapter (chapter 5). Chapter 1 constitutes a first state of the art on the phenomena exposed and chapter 2 is a context chapter. Chapters 3 to 5 provide analysis of the fieldwork carried out within the GENERA project, mainly based on personal interviews and focus groups (see methods section).

- ❖ Chapter 1, **“(No) Time for Care and Responsibility. From neoliberal practices in academia to collective responsibility in times of crisis”** [published book chapter], constitutes a first state of the art on new managerialism and *embodied effects* in science and academia from a gender perspective, and acts as an initial exploration of the notion of care and ethics of care, following Fisher and Tronto (1991) and Tronto (1993).
- ❖ Chapter 2, **“Neo-gerencialismo y austeridad en el contexto académico español y europeo. ¿Dos caras de la misma moneda?” / “New managerialism and austerity in the Spanish and European academic context. Two sides of the same coin?”** [published article], functions as a context chapter exploring the implementation of new managerialism and austerity politics in Spanish (and European) science and academia, and the evolution of academic personnel in relation to their working conditions in Spanish universities.
- ❖ Chapter 3, **“Accelerated Researchers: Psychosocial Risks in Gendered Institutions in Academia”** [published article], examines *embodied effects* (Mountz et al., 2015) or psychosocial risks experienced by academics and scientists, provoked by accelerated productivist rhythms and precariousness of new managerialism from a gender

perspective, using a gendered institutions approach (Acker, 1992) and advocating for a culture of care.

- ❖ Chapter 4, **“Subjectivation processes and gender in a neoliberal model of science in three Spanish research centres” [published article]**, explores, from a gender perspective, neoliberal discourses of new managerialism found in discourses of researchers working in centres of excellence as a form of governmentality (Foucault, 1984/1994) that prevents resistances.
- ❖ Chapter 5, **“Care, time and gender in new managerialist science and academia: exploring a feminist care approach towards caring temporalities” [unpublished chapter]**, develops a feminist care and care time framework (in part I) to analyse, in an explorative way, the complex relationships of care, gender, time and productivity of new managerial and accelerated academia, in science discourses, funding, evaluation and knowledge practices and in academics’ relationships and personal lives (in part II).

As such, all five chapters explore new managerialism (chapter 1) in Spanish science and academia (chapters 2 to 5) and how it has affected academics’ lives, relationships (chapters 3 to 5), subjectivity (chapter 4) and practices (chapter 5), from a gender perspective that addresses questions of care, time and gender, and which seeks to understand gendered exclusions in science and academia.

With the aim of clarifying how this thesis is organised, in figure 1 I show the correspondence between chapters, objectives and contributions, adding the type of publication, type of author contribution and impact factors.

Chapter/ objective	Contribution (as in the references list)	Type of contribution	Author Contribution	Impact (to date)
1 / 1 and 3	Conesa, E. [Ester]. (2017). (No) time for care and responsibility: from neoliberal practices in academia to collective responsibility in times of crisis. In B. [Beatriz] Revelles & A. M. [Ana M] González, <i>Teaching Gender: Feminist Pedagogy and Responsibility in Times of Political Crisis</i> (pp. 42–63). Routledge. https://doi.org/10.4324/9781315204161	Published book chapter	Unique author	SPI (Overall Ranking. Foreign publishers): ICEE 1153, position 3/96 (Book Citation Index in Web of Science) Received citations: Scopus: 4 Gscholar cit: 17

2 / 2	Conesa, E. [Ester] & González, A. M. [Ana M]. (2018a). Neo-gerencialismo y austeridad en el contexto académico español y europeo. ¿Dos caras de la misma moneda? <i>Política y Sociedad</i> , 55, 257–282. https://doi.org/10.5209/POSO.55883	Published article	First author: concept, data gathering and analysis, drafts writing, successive revisions and final writing	Indexed in ESCI - POLITICAL SCIENCE SJR 2018: 0.139; Q4 Sociology and Political Science ⁷ Received citations: Scopus: 2 Gscholar cit: 10
3 / 3	Conesa, E. [Ester] & González, A. M. [Ana M]. (2018b). Accelerated Researchers: Psychosocial Risks in Gendered Institutions in Academia. <i>Frontiers in Psychology</i> , 9(1077), 1–13. https://www.doi.org/10.3389/fpsyg.2018.01077	Published article	First author: concept, fieldwork, data analysis, drafts writing, successive revisions and final writing	JIF 2018: 2.129; Q2 Multi-disciplinary Psychology, SSCI SJR 2018: 0,997 Q1 Psychology (miscellaneous) Received citations: WoS: 5 Scopus: 8 Gscholar cit: 20
4 / 4	Vayreda, A. [Agnès], Conesa, E. [Ester], Revelles-Benavente, B. [Beatriz] & González, A. M. [Ana M]. (2019). Subjectivation processes and gender in a neoliberal model of science in three Spanish research centres. <i>Gender, Work and Organization</i> , 26(4), 430-447. https://doi.org/10.1111/gwao.12360	Published article	Corresponding author: concept, theoretical framework, literature review, fieldwork, analysis and successive revisions	JIF 2019: 3,101 Q1 WOMEN STUDIES SJR 2019: 1,4 Q1 Organizational Behavior and Human Resource Management, Q1 Gender Studies Received citations: Wos: 8 Scopus: 7 Gscholar: 13
5 / 1 and 5	Conesa, E. [Ester]. (2022). “Care, time and gender in new managerial science and academia. Exploring a feminist care approach towards caring temporalities”	Original unpublished chapter	Unique author	Not applicable

Fig. 1: Table of correspondence between chapters, objectives and contributions with author contribution and impact.

⁷ The year before the publication, 2017, (year of reference for the author) this journal received SJR 2017: 0.3; Q2 Sociology and Political Science.

3.2. The chapters and its related publications

Chapter 1, **“(No) Time for Care and Responsibility. From neoliberal practices in academia to collective responsibility in times of crisis”**, offers a first literary review and an overview of new managerialism and precariousness in scientific and academic systems, and how they have affected to the psychic and physic well-being of academics, laying the first foundations of these organizational changes. This review is completed with the few accounts that address women's discomforts and *embodied effects* (Mountz et al., 2015) in academic settings, offering first preliminary results of the fieldwork undertaken in the GENERA project, too. A problematization of women's malaises made invisible and depoliticized follows with an argumentation based on a gender perspective in health issues. I also provide an initial approximation to the concept of (feminist) care and care ethics (Fisher and Tronto, 1991; Tronto, 1993) and a critical review of the contributions made by Slow Science initiatives.

This initial work serves as a primary framework for the thesis taking the form of a chapter published in a book which deals with feminist responsibility and pedagogy in times of political crisis. As such, it aims to respond to the question of the responsibility of academics in times of crisis when there is no time for care, and puts forward ethics and the notion of care as a suitable framework through which to address this phenomenon within contemporary academia and science. It also presents care as a useful tool to politicise social malaises (usually understood as individual) in times of crisis and a declining politicization of the academic community.

Chapter 2, **“Neo-gerencialismo y austeridad en el contexto académico español y europeo. ¿Dos caras de la misma moneda?”**, explores new managerialism and precariousness in the context of Spain and Europe scientific and academic systems in greater depth, given that most of the literature found comes from English-speaking countries – fundamentally, the United Kingdom and the United States – where these changes began to occur earlier (Slaughter and Cantwell, 2012; Deem, 1998) and that few works address new managerialism and precariousness in the Spanish context (García Calavia, 2015; Castillo and More, 2016). It examines what is new managerialism and when and how it has been introduced in contemporary Spanish and European models of science. It also investigates austerity politics introduced in both academic systems in the time of the economic crisis in 2008, to understand the nature of the precariousness affecting academic staff around Europe and, above all, in Spain. It questions if austerity policies are a consequence of the crisis, or part of the same drive towards new

managerialism and how both dynamics have affected academic staff, their working conditions and workloads and their career development.

This work addresses a varied and international body of critical literature, and appraise documentation such as European and state reports, Spanish laws, and statistics concerning changes in academic staff in Spain over a 10 year period (from the academic year 2004-2005 to 2014-2015). It presents an analysis based on official data collected on the number of university personnel during these ten years, grouped according to their working conditions and their gender, with particular focus on the years of the economic crisis. This is followed by a discussion on the intersection of the discourses of new managerial and austerity politics shared focus on efficiency, competitiveness and excellence. This second publication functions as a context chapter within the thesis, and has been written in Spanish and published in a Spanish journal, taking into account the audience to which it is addressed.

Chapter 3, **“Accelerated Researchers: Psychosocial Risks in Gendered Institutions in Academia”**, explores the effects of new managerialism and precariousness in the well-being of academics and scientists related to time constraints, pressures and workloads, from a gender perspective, with a special focus on women *embodied effects* (Mountz et al., 2015) or psychosocial risks. As mentioned earlier, few studies have focused on these effects, and much less so from a gender perspective, with the exception of Acker and Armenti (2004) and Mountz et al. (2015), despite other works having touched on some of these effects while addressing other questions. Moreover, no studies of this type cover academia and science in Spain. This analysis is all the more relevant given the as-yet unequal distribution of care responsibilities and evidence of gender bias in science. In appraising new managerialism and precariousness, I incorporate recent literature concerning the evaluation of research in Science and Technology Studies (STS), as well as literature on the Accelerated Academy (a corpus of studies related to time and academia gathered at a biannual congress), expanding and enriching literature already examined.

This study analyses the field work carried out as part of the GENERA project with a qualitative methodology based on a content analysis of 36 semi-structured interviews of an equal number of academic and scientific men and women from five different knowledge areas from five universities and research centres (see methods section). It follows the *gendered institutions* approach developed by the sociologist Joan Acker (1992; 1990) which helps us see how organizations such as academia are not gender-neutral, through “processes, practices, images, and ideologies and distributions of power” (Acker, 1992, p. 567).

Thus, this work examines the psychosocial effects and risks affecting men and women which arise from the current precarious and new managerialist organization of science, from a gender perspective. The section concerning instability and job insecurity has been divided between universities on the one hand, and research centres on the other, on account of their specific characteristics, although similar outcomes cross-cut them. Discriminatory practices based on gender, present in academia but usually invisible, are also highlighted, these further increasing the psychosocial risks for academic women and the risk of self-exclusion and abandonment. It follows a discussion section with recommendations build upon arguments for the application of a feminist ethics of care (Tronto, 1993) in the academic world with a series of proposals for intervention, in addition to highlighting the importance of continuing to investigate the application of the feminist perspective of care. This third article is part of a research topic of the journal in which it is published on “Psychosocial Risks and Health at Work from a Gender Perspective” and contributes, with empirical evidence, to responding to the research question of this thesis.

Chapter 4, **“Subjectivation processes and gender in a neoliberal model of science in three Spanish research centres”**, explores processes of subjectivation conformed by neoliberal discourses of new managerialism found in researchers working in centres of excellence from a gender perspective. The results of the fieldwork showed the presence of neoliberal discourses, particularly in interviews with men and women working in “excellent” research centres. These are new centres, founded according to a public-private management model and with an orientation towards excellence, high competitiveness and international impact. Considering that new managerialism is defined as “the organizational arm of neoliberalism” (Lynch, 2014, p. 1) it is of the interest of this thesis to explore the way new managerial values are interiorised and reproduced, and what role gender plays in it. To this end, the study applies a Foucauldian and Butlerian framework for the study of subjectivity and governmentality.

Firstly, this study reviews the literature on science under neoliberalism and new managerialism and the literature on the processes of subjectivation in the academic world, in which few studies have taken gender into account. These and other studies show how neoliberal rationale is presented as neutral and without gender, even though the ideal of the neoliberal entrepreneur is based on a model of masculinity. Thereafter it follows a critical theoretical review on the possibilities of resistance within the processes of subjectivation and subjection (Butler, 1997), and review the literature on resistance and gender within this framework.

On this basis, 19 semi-structured interviews, conducted in three leading research centres (as part of the GENERA project, see methods section), are analysed using critical discourse analysis (CDA) (Chouliaraki and Fairclough, 1999) following the post-structuralist tradition, exploring the social discourses that make up the processes of subjectivation which constitute an appropriate scientific subjectivity. We ask how scientific subjectivity is shaped by neoliberal discourses in these centres, the role of gender therein, and whether resistance, understood in a transformative sense, is possible. After presenting three subjectivation processes found and the role of gender in them, it follows a discussion on two main discursive mechanisms detected that produce subjection to neoliberal governmentality in science – “the psychic life of power” (Butler, 1997; Scharff, 2016) – and on the possibilities of resistance for academic and scientific staff from a gender perspective. This fourth article, published in a key women’s studies journal, is a collective work to which I contributed throughout the whole process (see fig. 1), therefore becoming corresponding author, and provides empirical evidence to partially respond to the research question of this thesis.

Chapter 5, “**Care, time and gender in new managerialist science and academia: exploring a feminist care approach towards caring temporalities**”, explores the approach of time, care and care time, mainly inspired by Barbara Adam (2004), Joan Tronto (1993) and Maria Puig de la Bellacasa (2015), respectively, in order to develop a feminist care framework to analyse complex relationships of care, gender, time and productivity and its exclusionary effects in new managerial science and academia. It gathers the discussion and conclusions drawn in the first and third chapter, that a feminist perspective of care is an adequate framework for appraising contemporary science and academia, a tool for politicizing malaises detected among the academic community, and the need for more research using the feminist perspective of care in academic contexts, since, few studies incorporate a perspective of care in a transversal and analytical way into current science and academia – only Mountz et al. (2015) does so offering evidence through collective autoethnography, and Lynch (2014) in a reflexive-theoretical way.

As such, this work takes off from the idea that important aspects concerning care and the time necessary to sustain and maintain a healthy, rich and diverse academic life are neglected in contemporary scientific ethos, resulting in gender-based exclusion and *othering* effects. Firstly, it exposes a theoretical approach to the notion of time and its relation to science and productivity, and then reviews the literature on the acceleration of the academic rhythm and the consequences of this in the knowledge practices and lives of scientists.

After that it develops the theoretical framework based on feminist care and care time notions from Tronto (1993) and Puig de la Bellacasa (2011, 2015) to apply it and analyse, in an exploratory way different dimensions and aspects of the current organization model of science.

The field work comprises twenty-five semi-structured interviews and three focus groups with a total of 35 participants (part of the field work of the GENERA project, see methods section), observations from scientific institutions and secondary sources, and an informal focus group on maternity and academia. The results are systematized at six different dimensions: scientific discourses, funding practices, evaluative practices, knowledge practices, colleagues' relationships, and personal lives. The chapter finishes with a summary of the results, a discussion suggesting the idea of caring temporalities, and conclusions. This unpublished final chapter pretends to contribute to the analysis of contemporary academia and science, offering a feminist care framework in order to shed light on the complex relationships between care, gender, time and productivity, with the aim of developing a more inclusive and diverse science, and thus provides a theoretical framework and empirical evidence to respond to the research question of this thesis.

4. Methods

The different objectives of this thesis have required different methods. Each chapter contains its own section of methods, or methodology accordingly explained, except the first chapter, which is a literature review with only a few examples of preliminary results from the fieldwork.

The methodology has been mainly qualitative, based on fieldwork comprised of semi-structured biographical interviews and three focus groups with a complementary use of secondary sources such as institutional documentation, science reports, legislation, and additional complementary use of notes taken at institutional events and at a debate about academia and maternity (chapter 5), with the application of thematic analysis (chapter 3 and 5) and discourse analysis (chapter 4). In chapter 2, I have undertaken a quantitative methodology when analysing the changes in academic personnel based on figures obtained from official public databases, which complements the documental and literature analysis.

The interviews have followed a biographical method, with semi-structured interviews based on the script of the GENERA project. Objective 3 (see footnote 4) of the project's methodological strategy was to carry out 10 case studies based on biographical interviews, focus groups and

document analysis of recruitment policies and institutional web content, conducted in different academic units, such as university departments, research centres and research companies (see González, 2018, p. 29-30). In each case study, undertaken by different project partners, we interviewed 4 to 8 academics of each academic rank with numerical gender balance. In my case studies - one covering a STEM research centre, and of the other, a SSH university department - I undertook 16 interviews (8 in each case study). The script, also used by other project partners to undertake their case studies, addressed professional and personal history, relevant moments in their careers, presence or absence of mentoring and institutional support, their experience in hiring and promotion processes, scientific practices, future expectations and aspirations, and main obstacles experienced in their lives/careers among others (see Annex V). I have complemented these interviews with 9 additional semi-structured biographical interviews based on the same script, in order to provide greater variability, insofar as these cover more diverse fields of study (Social Sciences, Humanities, Life Sciences and Engineering), following a snow-ball strategy involving project partners and other colleagues. Participants came from both different regions in Spain and abroad, including European, Latin America, and other, mainly Western, countries. Their ages ranged from 28 to 67 years. Interviews were audio-recorded and transcribed with the consent of the participants and with a guarantee of anonymity, and lasted from 60 to 180 minutes.

For the first two focus groups, the GENERA project designed a strategy of simulating a selection process of two fictional curricula of a man and a woman in order to identify possible gender biases (objective 3 of the project) inspired in other studies that found biases in favour of men in assessment and selection procedures (Steinpreis et al., 1999; Wennerås and Wold, 1997; Van den Brink and Benschop, 2012; among others), see Annex V. This two focus groups corresponded to each case study in SSH university department and STEM research centre. The third focus group consisted in a discussion about 'identification of excellence and talent' (objective 4 of the project, see footnote 4) with senior academics, see Annex V. In this case, senior academics belonged to an interdisciplinary STEM research centre. The development of these focus groups is explained in more detail in chapter 5 of this thesis.

Data collection is explained more extensively in chapter 3 and chapter 5. In summary, the fieldwork developed by me is listed in the following table (fig. 2) with the addition of other data from the GENERA project used and analysed by PI, Ana M. González Ramos, and the project partners Agnès Vayreda, Beatriz Revelles and Nora Räthzel (in the last row of this table).

Type of data	Used in chapters
25 Biographical interviews:	
<ul style="list-style-type: none"> - 16 interviews: 8 in a SSH university department and 8 in a STEM research centre (4 women and 4 men of each rank in both) carried out in 2015 and 2016. - 9 interviews with women academics in different fields: Social Sciences, Humanities, Life Sciences and Engineering, carried out in 2016 and 2017. 	<ul style="list-style-type: none"> - Chapter 1, 3, 4 and 5 - Chapter 5
3 Focus Groups with a total of 10 participants developed during 2015 and 2016:	
<ul style="list-style-type: none"> - 2 focus groups on recruitment processes 'simulating a hiring process' in a SSH university department and in a STEM research centre. - 1 focus group on 'identification of excellence and talent' in an interdisciplinary STEM research centre (i-STEM). 	<ul style="list-style-type: none"> - Chapter 5
Secondary sources used and analysed during the entire thesis period:	
<ul style="list-style-type: none"> - Legislation from the Spanish Government concerning science and academia. - Statistics from the Spanish Government concerning science and academia (public official databases). - Statistics, recruitment policies, regulations and institutional web content from institutions where case studies were conducted. - Science reports, official documents and official websites of the European Commission and other research centres. 	<ul style="list-style-type: none"> - Chapter 2 and 5 - Chapter 2 - Chapter 3 and 4 - Chapter 2 and 5
Complementary sources developed during 2019:	
<ul style="list-style-type: none"> - Observations and notes taken at face-to-face institutional meetings of different scientific and academic centres and universities. - Notes taken at a debate on maternities and academia in a SSH university department in which 12 women participated as an informal focus group. 	<ul style="list-style-type: none"> - Chapter 5
Other data used and analysed in this thesis gathered by GENERA project partners between 2014 and 2016:	
<ul style="list-style-type: none"> - 19 interviews by Ana M González (16) and Nora Rätzzel (3) on STEM university departments and research centres. - 11 interviews by Agnès Vayreda (8) and Beatriz Revelles (3) on STEM research centres. 	<ul style="list-style-type: none"> - Chapter 3 - Chapter 4

Fig. 2: Types of data gathered and in which chapters of the thesis these were used.

In total, data from 65 participants (25 interviews, 10 participants of focus groups, from my fieldwork and 30 interviews from collaborators fieldwork) from different fields of knowledge (Humanities, Social Sciences, Architecture, Engineering, Telecommunications, Life Sciences, Biomedicine, Physics and Environmental Sciences) comprises the main fieldwork of this thesis, in addition to secondary and complementary sources. In chapter 5, and in order to anonymise the extensive fieldwork carried out in specific areas and institutions, these fields have been summarised as Social Sciences and Humanities (SSH), Science, Technology, Engineering and Mathematics (STEM) and interdisciplinary Science, Technology, Engineering and Mathematics (i-STEM).

Semi-structured interviews and focus groups based on an open script enabled the orientation of the interview around the topics that the GENERA project addressed, while at the same time giving space and freedom for both the interviewee to expand upon other issues, and the interviewer to improvise and ask for more detail around any given topic (Corbin and Strauss, 1990/2015). This helped me to delve into issues of care and time where these appeared spontaneously in the conversation, or where I introduced them. Both, biographical interviews and focus groups are a source of social knowledge. The biographical method allows the researcher to “to apprehend the prominent experiences from the life of a person and the definitions that person applies to that experiences” (Pujadas, 2000; Taylor and Bogdan, 1984/1992, p. 102). Similarly, focus groups provide information on attitudes and experiences of the participants but produced in interaction, which, as a group phenomenon, constitutes more than the sum of its parts (Morgan and Spanish, 1984; Íñiguez, 2008). However, the discourses analysed, whether coming from documents, interviews or focus groups, are not taken as a reflection of an individual nor of truth, but as available discourses of social life expressed from different enunciative positions by subjects that form part of a network of relations, and that reproduce normative as well as innovative meanings (Balasch and Montenegro, 2003; Sisto, 2015). This does not mean that they are less valuable or that the experiences of the participants are not taken as lived or real. In this sense, I engage with Haraway “commitment to faithful accounts of a 'real' world, one that can be partially shared” (1991, p. 187, her emphasis). In chapter 3 and 5 we use content or thematic analysis based on Corbin and Strauss (1990/2015) and Braun and Clarke (2006), respectively, as a “method for identifying, analysing and reporting patterns (themes) within data (...) and [which] interprets various aspects of the research topic” (Braun and Clarke, 2006, p. 79). In chapter 4, we use critical discourse analysis following the poststructuralist tradition (Chouliaraki and Fairclough, 1999) which considers discourses as situated and dynamic social practices that do not represent a pre-existing reality, but that

constitute actions relating to the world, extracting meanings that emanate from previous discourses.

5. Gender and reflexivity

Gender is still a contested concept, insofar as attempts to define it lead to philosophical, ontological, epistemological and political discussions. However, the majority of authors agree that gender is a constitutive element of social relations and social organization with its associated power relations (Scott, 1986; Stolcke, 2004). For this thesis, I draw on the work of different authors who differ in their theoretical background, but hold similar views around the social construction of sex and gender.

Following Judith Butler's work (1988; 1990), I consider gender as a social construction rooted in the binarism of the sex-gender system that categorizes our world as male/man and female/woman within hegemonic heterosexuality, generating a fiction of robustness and leaving dissident genders outside of the norm. Butler (1988; 1990; 1993), inspired by Simone De Beauvoir and drawing on authors such as Gayle Rubin, Monique Wittig and Michel Foucault, argues that "gender is in no way a stable identity or locus of agency from which various acts proceed" (1988, p. 519). Following the speech acts theory of John Austin (1962), Butler establishes the concept of performativity as "the discursive mode by which ontological effects are installed" (Butler, 1996, p. 112) holding that the stylized repetition of acts institutes the idea of a permanent identity, a permanent gendered self, that is tenuously constituted in time (1988).

Relying on poststructuralist accounts, for Butler, identity is not materially substantial. In a similar vein, she stands that "this repetition is not performed *by* a subject: this repetition is what enables a subject and constitutes the temporal condition for the subject" (her emphasis, 1993, p. 95). Discourses, such as that of the neoliberal rationality considered in chapter 4 of this thesis, conform subjects through subjectivation and subjection processes, and thus, resistance or transformation is difficult (Butler, 1997). However, the conditions of subordination "are not static structures but temporary, that is to say, active and productive" (1997, p. 27). The following citation summarises how Butler conceptualises the sex-gender construction: "The univocity of sex, the internal coherence of gender, and the binary framework for both sex and gender are considered throughout as regulatory fictions that consolidate and naturalize the convergent power regimes of masculine and heterosexist oppression." (1990, p. 33). As such, Butler's

concern is not so much about what it is *to be* a woman (or a man), but rather gender as an effect, delineating the political factors of its construction (1990).

From this and other considerations it follows that women are not merely the (only) subject of feminism – and even less so, white, middle-class, western women – and gender is not a simple category to describe women and men, but a wider analytical category for social life. The GENERA project, from which this thesis originates, aimed to examine men and women’s personal and academic career development and gender biases in recruitment and promotion processes, within the wider context of the difficulties faced by women in science. It thus focused on women and men academics, taking into account the difficulty of finding other gender positions or identities in the fieldwork, as confirmed by the participants interviewed. Indeed, it must be acknowledged, even if it would seem self-evident, that academia and science are still very normative spaces in which not only women but, even more so, other gender identities do not enjoy the same prominence proportionally nor symbolically. Likewise, women and men working in academia today in Spain are still mainly white, middle-class and born in Western countries. Furthermore, and with regards to the use of official figures (chapter 2 especially but also used in other chapters), we need to acknowledge too that Spanish and European databases do not distinguish among any identities other than “men” and “women”, thus failing to include, for example, the possibility of trans or non-binary people.

In any case, it is important not to analyse men and women as closed, static and essentialized categories, nor women as the only focus of the research. Gender discourses, fortunately, fluctuate and permeate individuals, due to discontinuities and breaking repetitions (Butler, 1988) and due to social changes (i.e. certain discourses are now attainable to some men where interpellation has been possible). It is interesting, for example, to find men adopting discourses that come closer to gender-equal practices or that adopt a similar subject position of that of a *woman* (in chapter 3 and 5) or women reproducing masculine entrepreneurial or productivist discourses (chapter 4 and 5).

Furthermore, gender is present in all aspects of the social life, from scientific knowledge (and its historical androcentric bias) to social institutions like family, school or work, as well as the economy, politics, the state or academia (Acker, 1992). Organizations are spaces in which gender is reproduced, constructed, and also resisted (Thomas and Davies, 2002; Acker, 1990). In this sense, in chapter 3 I use the framework of *gendered institutions* developed by Joan Acker (1992, 1990), which refers to the “processes, practices, images and ideologies, and distributions of power in the various sectors of social life” (1992, p. 567), helping to shed light on what appears

as gender neutrality in organizations (1990). In her appraisal of inequality regimes, Acker (2006) also holds that work organizations are critical locations in the continuous creation of complex inequalities based on gender, class and/or race. Gendered processes are referred to by Acker (1992) more specifically as procedures that shape hierarchies, construct images and symbols, personal interactions based on *doing gender*, and construction of the gendered self through ongoing accomplishment or performance (see West and Zimmerman, 1987). Likewise, as we see in this thesis, universities and research centres are gendered institutions with a strong historical masculine tradition that continue to reproduce discourses, images and practices of power and inequality.

This approach, based on West and Zimmerman, is similar to Butler's development of the idea of gendered enactment (performativity/performance) and the rejection of the sex/gender distinction. However, it differs in important aspects related to theoretical genealogy (Brickell, 2003). Here, the idea of performance comes from Goffman's social interaction framework concerning the managing of impressions in social scenarios which presupposes actors performing a gender display based on gender stereotypes in a *stage*, which does not place the focus on discourses (Goffman, 1976). These enactments are not voluntary and are guided by frames of the social order, but presuppose actors that manage the situations and present themselves as gendered selves. In the *doing gender* concept, West and Zimmerman (1987) introduce the idea of micropolitics and the notion that gender is "carried out in the virtual or real presence of others who are presumed to be oriented to its production" (1987, p. 126), thus coming closer to Foucauldian and Butlerian ideas of self-regulation processes and discipline (Brickell, 2003). However, Butler's different account comes from the aforementioned idea that repetition is not performed by a subject, but is what enables and constitutes the subject, drawing on the Foucauldian notion of subjection as the process of becoming subordinated by power, as well as the process of becoming a subject (Butler, 1997, p. 2-3) that we use in chapter 4.

In any case, these are the main sources of the gender perspective which informs this thesis. This means that, when using words like male or man, female or woman, masculine or masculinity, feminine or femininity, I refer to their gendered social construction, and not to an essentialized vision, since they are complex and can be enacted by both men and women. I refer, too, to the set of features and power dispositions that are performatively embedded and operative in our social life, and which neglect certain aspects in favour of others, marginalize certain subjects, or produce exclusions.

With regards to positionality, I wish to make explicit my situated position as a doctoral student who has experienced a pressurised and sometimes hostile academic environment, embodying a (socially constructed) woman (if this is what I am) and as a person committed to tackling social inequalities and *neglected things* (Puig de la Bellacasa, 2015), but also as a privileged, white, able-bodied person, raised in the Western world. From this position, I engage critically with the analysis of constraining and normative modes to organize science. As Donna Haraway stands, knowledge claims from unlocatable and abstract positions are irresponsible since they are not able to be called into account, while at the same time, standpoints of the subjugated are neither innocent positions (Haraway, 1991). In this sense, I draw on partial objectivity and partial connections as “partial, locatable, critical knowledges sustaining the possibility of webs of connections called solidarity in politics and shared conversations in epistemology” (1991, p. 191).

II.

THE THESIS CHAPTERS/ PUBLICATIONS

**1. “(NO) TIME FOR CARE
AND RESPONSIBILITY.
FROM NEOLIBERAL
PRACTICES IN ACADEMIA
TO COLLECTIVE
RESPONSIBILITY IN
TIMES OF CRISIS”**

■
Conesa, E. [Ester]. (2017). **(No) Time for care and responsibility: from neoliberal practices in academia to collective responsibility in times of crisis**. In B. [Beatriz] Revelles & A. M. [Ana M] González, *Teaching gender: feminist pedagogy and responsibility in times of political crisis* (pp. 42–63). Routledge.

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Unique author

3

(NO) TIME FOR CARE AND RESPONSIBILITY

From neoliberal practices in academia to collective responsibility in times of crisis

Ester Conesa Carpintero

Introduction

In recent years, new managerial practices enacted jointly with cutbacks have affected the environment of collegiality, the well-being of academics, and their time and capacity to engage with social problems. Thus, it is important to pose the following question: Who is able to respond? Who is able to take on responsibility? The aim of this chapter is to delineate a possible answer to these questions by exploring the effects of the neoliberal academy from a gender perspective, and to delve into the ethics of care as a potential approach to analyse and find applications to address this phenomena.

Firstly, this will require us to discuss new managerial practices and the rise of austerity politics in Western countries, with specific attention to the Spanish context and to the effects of these political practices on the well-being of academics. Secondly, I reflect on the intersection of these practices and their effects with gender, talking then about gendered embodied effects, especially in relation to time and care issues. A parallel with women's health is made, reflecting on one common illness among women nowadays, fibromyalgia, helping us to connect the macro and the micro level and to promote politicization.

Afterwards, I expand on the questions raised about the politics of responsibility (who is able to be responsible) in the academic context, but also in a broader sense. To approach these questions I use Tronto's concept of an *ethics of care* (regarding *attentiveness*, *responsibility*, and *privileged irresponsibility*) to reflect on the delicate ethical position of academics around time, care, and availability to respond.

I finally end with a critical approach to the initiatives that aim to challenge the new managerialism in academia and its accelerated pace. The

Slow Science movement, “La Désexcellence”, the Accelerated Academy, and Feminist Slow Scholarship will be outlined as potential tools to approach the politics of responsibility, taking into account care and time. A summary and conclusions about the appropriation of the concept of care as a political notion are developed at the end of the chapter.

New managerialism and austerity in academia: effects on academics’ well-being

The introduction of the new managerialism in academic institutions has produced important changes affecting academic careers and experiences. Following Rosemary Deem, new managerialism “refers both to ideologies [sic] about the application of techniques, values and practices derived from the private sector of the economy to the management of organisations concerned with the provision of public services, and to the actual use [sic] of those techniques and practices in publicly funded organisations”.¹ In universities and other scientific institutions, new managerial practices were implemented in the mid-1990s, and became more widespread during the 2000s in Western countries, and have caused academics to place more focus on research (and output), high-impact publications, patents, more internationalization and transference, and providing and managing external funding.² The weight and responsibility in the provision of resources is more and more placed on individuals that have to manage their own revenue that, in turn, is directly related to their research output and publications. Another important feature of these practices is that academic outcomes are regulated by external measurement and evaluation through audits – agencies of quality assessment – that “may be largely finance-driven”.³ At the same time, this means “more subtle self- and peer-regulation” based on individual performance, as Deem notes.⁴

In parallel, or perhaps as part of the same neoliberal drift,⁵ austerity politics have affected universities and research centres in many countries through cutbacks in funding. For example, in the case of Spanish universities, the budget was reduced to 1.388 million euros from 2010 to 2013, which has meant a loss of 3,500 teachers.⁶ Universities have thus tended to have a greater teaching workload for fewer personnel, altering in turn the quality of the education received. This teaching load is often carried by people in lower positions with precarious contracts, and this might constitute “one source of gender inequality”, because in many cases these positions are more likely to be held by women. In Spanish public universities the percentage of women filling these lower positions during the 2013–14 course was 43 percent. However, the stable and more highly paid positions, which are held by civil servants, are 35.4 percent occupied by women. Regarding full-professor positions women comprise only 20.7 percent.⁷ Recently, what has constituted a major preoccupation for many Spanish academics is that no new stable vacancies are being opened due to crisis cutbacks and *rationalization*,⁸ creating a bottleneck

44 Conesa Carpintero

situation with many people waiting for an assignment. This context contributes to creating hostile academic environments characterized by competition and discomfort. Moreover, the precariousness of these lowest positions tends to hinder research development and promotion opportunities.

Thus, the shift on the demands of academic careers “in times of crisis” implies an intensification of the workload in a highly competitive environment while academics are also suffering the effects of precariousness. Social relations and individuals are being damaged by this climate and by the recurrent challenges of meeting intensified expectations of achievement, accompanied by losses such as the sense of collegiality and love for scholarship, as Morley or Baker highlight.⁹ The long-hours culture has been extended with academics experiencing a lack of time in their lives, as has been acknowledged by many researchers.¹⁰

Some of these studies point at the damage thus done to the well-being of academics, forming bodies in their psychic-physical dimension as bodies that experience anxiety, exhaustion, feelings of precariousness, guilt, obesity, or back problems, as Shahjahan and Walker both report in studies based in the United States.¹¹ Morley’s findings relate “numerous stories of occupational stress, illness, alienation, fear and resentment” under the audit culture in the English academy, and suggest that the distress, low morale, and fatigue she detected could be connected to what she calls the “micropolitics of quality”.¹² Andrew Sparkes’ paper gives a fictional autoethnographic account of how these embodied effects are generated through acts and thoughts that are part of daily academic life in the United Kingdom.¹³ His account gives consistency to the description of the health dangers that great numbers of academics face as a consequence of the scientific system embedded by the managerial model of the audit culture. Moreover, recent surveys in the United Kingdom report a high increase of mental health problems among members of the academic community, surveys with astonishing results that need to be carefully interpreted.¹⁴

Rosalind Gill and Maggie O’Neill talk about fast academia in relation to the increasing pace of academic life regarding the intensification of work and its relationship with measurement and *marketization*, also stressing the physical and psychic consequences.¹⁵ Following Hartmut Rosa’s framework of “social acceleration dynamics”,¹⁶ Filip Vostal highlights that the temporal tension between the increasing workloads of academics and the relatively constant amount of available time “might have particularly unfortunate implications – for social environment, human relations, mental health and well-being”.¹⁷ In the final section of this chapter I will elaborate a bit more on his account of the “accelerated academy” but, for the moment, what can we learn about these academic dynamics in the Western world by thinking them in terms of gender? The following section focuses on the intersections between these pressures and gender issues that lead to a discussion of gendered embodied effects, women’s health, and the problem of decontextualization.

Gendered embodied effects, women's health and depoliticization

Mountz et al. (2015) stress that “the effects of the neoliberal university are written on the body” – calling them embodied effects – and that they “are felt more by some bodies than others” following gendered, classed, raced, and other axes such as the ability-disability paradigm.¹⁸ Women, for instance, show harmful embodied effects such as exhaustion and stress, as well as shame, guilt, and paralysis or mental health problems such as depression, anxiety, or isolation.¹⁹ In their paper “Sleepless in Academia”, Acker and Armenti focus on detrimental embodied effects mainly in those who were experiencing motherhood, but also in women experiencing other situations.²⁰ They note that these pressures and the concomitant deterioration of research trajectories lead women to experience internalized feelings of never being “good enough” or smart enough, accompanied by a stronger internalized need to follow the rules “because they have to prove themselves worthy”.²¹ Important factors such as care and time are gendered,²² so women are forced to deal with clashing roles, having to juggle and to make hard decisions about social relations, care, and work in ways that often result in tension or guilt, as Ana M. González Ramos and Núria Vergès (2013) state.²³ Following Schulte, Mountz et al. (2015) say that “Globally, women are more likely than men to report chronic stress and the feeling that life is out of control because their time is “contaminated” by multiple and conflicting responsibilities”.²⁴ From their own experiences – Mountz et al. (2015, p 1245) use as empirical data their own quotes in their paper – an interesting issue emerges: “it is partly my own fault for not learning the art of saying no”,²⁵ which suggests an exploration of gendered issues around difficulties establishing limits and being always ready to give support, of caring for others, together with the so-called “stereotype threat”.²⁶

Academics tend to say that academic work is a “passion”, but more women tend to talk about sacrifices and suffering regarding the impossible equilibrium in their work-life balance due to gendered roles, as Susana Vázquez and Mary Ann Elston's study points out. Vázquez and Elston give a stark demonstration of this idea in the words of a woman researcher who states “my life is gone”, talking about the sacrifices she has made in order to pursue her successful career.²⁷ In a project with which I am connected, GENERA,²⁸ a woman who had to work very hard over two years said “I can erase those years”, because during that time she had had no time for herself. She had to achieve more than men in similar circumstances, without credited authority in her leadership position until she achieved “objective” merit. Another woman, currently in her second postdoc position, said that her life is “an excel sheet” with respect to the difficulties of planning her life, conjugating the end of one grant and the beginning of another, the age of pregnancy, maternity leave, and the elaboration of publications. She also

46 Conesa Carpintero

reported the increase of these difficulties when having to coincide with her partner's next career step – her partner is also a scientist – and her own future in science, which lacks continuity due to the scarcity of positions in the next tier – a tier that she considers is only reserved for “top researchers” – so she is now planning to abandon her research career. Other women in our study highlight the importance of holding stable positions so they are able to have external help such as paid care services, which are less affordable for those in lower positions. They also stress the importance and good fortune of having family support because they do not live far from their relatives and these relatives are available to help them; this begs the question of how women (and men) in lower positions and/or lacking family support are able to remain in academia, and it also raises this question: is “success” in one's academic work a question of individual merit? In a survey conducted by Heather Menzies and Janice Newson about time and stress in academia, the authors report higher rates in women than in men of “practically all the indicators of stress” (sleep deprivation, new allergies or food sensitivities, short-term memory loss, problems concentrating, stress in personal relationships, and isolation).²⁹

We can find some connections between the damage that the neoliberal academy does to female academics and one of the most prevalent illnesses among women nowadays, fibromyalgia, which affects women disproportionately: 75 percent to 90 percent of fibromyalgia sufferers in Western countries are women.³⁰ This so-called “invisible illness” has created controversy in the medical community and has been redefined multiple times during the last century, but there is a general agreement around the symptomatology.³¹ In a study where women with fibromyalgia were asked about the symptoms they experienced, they reported pain and fatigue (in 98 percent of the cases) and, among other symptoms, difficulty concentrating, loss of strength, and memory problems (from 92 to 90 percent of the cases), and feeling anxious and depression (87–86 percent).³² While these are some of the most common symptoms of fibromyalgia, what is most significant, perhaps, is that when they were asked about the most important causes they believed produced the illness, they identified as the first three stress or worry (74 percent), overwork (55 percent), and accident or injury (55 percent).³³

While we cannot display these connections without further research, we can be aware of and alert about them, especially taking into account the tendency to explicate these kinds of symptoms through essentializing explanations such as “these are women's issues”. As Pujal and Mora (2015) say, there is an “epistemological concealment of the feminization of malaises”³⁴ and they consider that “The effect is that the labour malaises constructed as feminine diseases, finish to be considered, from the androcentric hegemonic perspective that assess the labour health, as an illegitimate malaises, dubious, alien”, and which entails the pathologization and the medicalization of femininity.³⁵ Pujal and Mora also underline the importance of taking into

account the role of broader social contexts such as “crisis” and the neoliberal drift in the health system, which have to be considered in an analysis of academic labour practices.

Nevertheless, these harmful effects on the well-being of both men and women are not problematized nor explained in relation to their context: they are neither related to new neoliberal organizational and economic approaches, nor are they related to gendered power relations;³⁶ instead they are depoliticized and individualized. As Gill (2009) and Sparkes (2007) say, academics tend to mask these harmful effects or think they are their own fault,³⁷ while scientific policies and institutions are not taking action, continuing to expect from individual academics a greater output with fewer resources.

Additionally, when it comes to mental health problems such as depression, anxiety, or other symptoms that make everyday life hard to handle, the stigma operates for both men and women but, again, these problems are more often considered to be “feminine” based on gender stereotypes.³⁸ For example, in men these embodied effects are often hidden due to the expectations of their gender role – in this case, not showing vulnerability – as the study carried out by Rosaleen O’Brien and her colleagues shows (2007).³⁹ Thus, not only do gendered power relations make it more difficult for women academics to do their work, but gender roles also essentialize and depoliticize their suffering. Moreover, these kinds of illness are mainly treated with antidepressants and anxiolytics that can create addictions and have side effects,⁴⁰ instead of being addressed as broader social problems. It seems that there is not a serious concern about the effects of the neoliberal academy, either in relation to gender, class, social status, or race.⁴¹

All in all, this might stir us up to think about the relationships among academics’ work overload and work environment together with their bodily well-being, and their connections with health and gender, as well as the intersection of other inequalities. We would say that such an entanglement⁴² suggests interdisciplinary connections between fields of knowledge. A wider and contextualizing “biopsychosocial” approach for the health-care system has been championed, at least since the Beijing Conference in 1995, as shown by this powerful definition of women’s health: “Women’s health involves their emotional, social and physical well-being and is determined by the social, political and economic context of their lives, as well as by biology”.⁴³ This definition and point of departure provides a gender-sensitive and non-medicalizing perspective that challenges the bio-psycho-medical paradigm that pathologizes, psychologizes, and individualizes people, especially women.⁴⁴

These harmful effects might imply exclusions in academia raising two specific questions: which bodies are able to pursue scientific careers? And regarding science policies and institutional practices: who cares? The next section will be focused on the care and responsibility that academia and academics are facing in this context.

Time, care, availability, and responsibility

With the managerial demands and austerity politics resulting in sickness and exclusion, we have no time to care for ourselves, to care for others (meaningful persons that already sustain us in a wider notion) and to care for the world. The responsibility to engage with a myriad of phenomena needs to be acquired by all members of society. But how can we be involved in social change if our lives are characterized by the fight against time, by our trying to improve our productivity in order not to be fired or by our trying to care for our closest meaningful persons or even for ourselves? How can we get involved in a devastating number of urgent issues, such as the refugee crisis or the infertility of the soil, with no *care time*?⁴⁵ With no stable positions, with the pressure not to be forgotten in the scientific universe, how can feminist politics engage with responsibility? As O'Neill (2014) points out, neoliberal changes in academia “reduce the possibilities for critical analysis amidst growing bureaucratisation and measurement”, since time is what is most needed to create spaces for interpretation, reflection, and dialogue.⁴⁶ She emphasizes as well that these pressures interfere with the need to create mental space and symbolic abstract thought to confront the situation. Menzies and Newson (2008) also reflect on the time needed to think and for deep, reflective reading and in-depth conversations.⁴⁷ So, the time needed to care for the students, to engage with them in social issues, in and outside the classroom, or to transform the class into an *act of resistance*, as Beatriz Revelles (2015) notes,⁴⁸ is delicately pushed to its limit.

Responses to these questions might entail working with the concepts of *care*, *attentiveness*, *responsibility*, and *privileged irresponsibility* from the framework that Joan Tronto developed in 1993. In 1990, Berenice Fisher and Joan Tronto defined care in a very meaningful way:

On the most general level, we suggest that caring be viewed as a species activity that includes everything that we do to maintain, continue, and repair our “world” so that we can live in it as well as possible [sic]. That world includes our bodies, our selves, and our environment, all of which we seek to interweave in a complex, life-sustaining web.⁴⁹

Afterwards, Tronto (1993) elaborated an “ethic of care” that recognizes care as an integral concept that destabilizes the idea of autonomy (the self-made man) in order to better support ideas of interdependency and vulnerability, and that claims to displace care from the periphery (or private space) to the “centre of human life”.⁵⁰ She displays care widely to operate with the concept analytically⁵¹ and then develops an “ethic of care” in order to include it as a political and philosophical notion. For Tronto, this entails ethical elements⁵² on which I focus.

The notion of *attentiveness* implies the recognition of a need to be cared about, and therefore, the recognition of others. Ignorance can be unintentional, but for Tronto, it might also be inattentiveness. Without falling into a normative vision of an ethic (or a morality),⁵³ what is interesting in Tronto's reflection is the idea of ignorance as a built-in social structure and as the attitude of being "not willing to listen": "That caring has been so obscured in our current accounts of society helps to explain how the process of inattentiveness operates", so we need caring to be more central in social and political life.⁵⁴ Regarding *responsibility*, Tronto (1993) explains that responsibility requires constant evaluation, and differs from *obligation* because the former is embedded in a set of implicit cultural practices that can become political and a matter of public debate, rather than formal rules or promises related to duties of the latter. Responsibility to care is "something that we did or did not do [that] has contributed to need for care, so we must care".⁵⁵ However, she argues for a "flexible notion of responsibility" taking into account its different meaning "depending upon one's perceived gender roles, and issues that arise out of class, family status, and culture, including cultural differences based on racial groupings".⁵⁶ As *privileged irresponsibility* Tronto understands that the privileged can "ignore hardships they do not face dividing up responsibilities";⁵⁷ she also explains this notion as the caring needs of some being "more valued" and being met more completely than those of others in relation to the distribution of power in society; this dynamic being how privilege works.⁵⁸ Care is socially constituted as the work of the least well members of a society, work done by groups traditionally excluded from the centres of power.

In the case we are concerned about, we might say that academics as agents are in a complex position, having no time and suffering the effects of institutional pressures on their bodies. This means that the ability to respond and to be responsible is limited. Those who implement managerial and austerity politics have remained *inattentive* when faced with the need for care. These politics, forged in global scientific competitiveness, do not recognize *others* (in this case academics) and their needs (their well-being). We can distinguish here two moments: first, the moment when these policies are going to be implemented (*to care about* the consequences of an action), and afterwards, the moment in which there should be an *assessment of its functioning*. Therefore, we could say that those in power positions lack *attentiveness* about their *responsibilities*, responsibilities that need to be in *constant evaluation*. They have remained *ignorant* (ignorance as "not willing to listen") of the critiques of the damages produced in the well-being of academics, as well as of the quality of research and teaching itself; not being *responsible* has become a matter of public debate, as we will see in the next section. Care as a political notion is defined culturally, but those who implement these policies are not outside the social problematic they have created; perhaps it is more precise to say that they are embedded in and

50 Conesa Carpintero

reproduce neoliberal individualism that reinforces care as something private that is gendered, classed, and raced. Thus, being in a position of power, they perform *privileged irresponsibility*.

As Clarke and Knights (2015) point out, academics, in turn, also have to engage themselves with ethical subjectivities to counteract and resist individualist career strategies and to deal with the duplicity of their roles.⁵⁹ This point is also made by Menzies and Newson (2008) who note that, on the one hand, academics are bringing these changes on themselves without awareness and under the effects of stress, but, on the other hand, academics also embrace a “series of seemingly innocuous individualized ad hoc survival strategies”.⁶⁰

Nevertheless, these claims can reinforce some harmful embodied effects by adding more pressures, creating guilt, discordant feelings, and other tensions that might lead to mental health problems. Moreover, the situation differs for those who are in lower, precarious positions marked by a lack of stability from the situation of those who work in stable positions, though every position suffers different kinds of pressures. This problematic might be better approached by raising a strong corpus of forces against this neoliberal drift, such as more research about it, but also more affective and political networks and better interpersonal support among academics. More awareness of the problems associated with neoliberal drift and coordinated action for solving them is also necessary. This is what *to care for* and *being cared for* might mean for *all* academics: to create space and time for care to foster the *availability of the processes of response and responsibility*. This can lead us to understand that care requires application in a broader and more emphatically political sense.

Thus, to care and to create spaces for responsibility is a shared matter. At this point, if those who design, implement, and assess these managerial policies do not respond and do not take on responsibilities, academics need to stop and ask what allows for the availability to respond, and question what the availability of a process of care and responsibility, intertwined with power relations, actually means. Having to respond and be responsible for *feminist politics in times of crisis* means to stop for a moment, think critically and create spaces of availability to engage with the problems that affect us as a community, as well as broader ones, acknowledging that some positions *can respond* more than others. Creating spaces of availability means to create time to organize and sustain life collectively in a broader sense – students, colleagues, vice-chancellors, policy-makers, citizens – and perhaps this is our greatest responsibility as academics in our different positions. Our sense of precariousness can make us turn to individualism to survive in this hostile environment, or it can lead us to collectively engage in order to create better scientific institutions, to care broadly in responsibility with other axes of exclusion, and to create time for care.

Suggested assignment

- In groups, think about and discuss the concept of responsibility, regarding power relations and the distribution of privilege in connection to local and to broader social issues (look for examples where you can find yourself involved). After that, think about and discuss the role of the notion of care in these examples.

Time to think and time for care: “slow science”, or repoliticizing exclusionary practices of the neoliberal academy

The concept of “slow science” began with an essay written by Eugene Garfield in 1990 called “Fast science vs. slow science, or slow and steady wins the race”.⁶¹ This text draws on a claim for time and resources needed for science and its discoveries, as well as for the relationships and pressures of the media, public opinion, and the political, thus challenging ideas of the genius and of serendipity. Interestingly, Garfield was one of the founders of the Institute for Scientific Information, the Science Citation Index, and the Journal Citation Reports, among other citation databases.⁶² The topic of slow science is revitalized by Lisa Alleva in 2006, who published a letter in *Nature*, basing her claims on the slow food movement and arguing that scholars need to “savour the rewards of slow science”.⁶³ Alleva also argues for a “slow science” in order to address what she believes is damaging the basis of scientific enquiry, and in doing so she is perhaps the first to acknowledge the damages instability wreaks on the self of academics: “I may not be here in six months, twelve months, two years, but I am not going to work 100 hours a week to try to attain the elusive goals of my own grant, my own lab, perhaps even tenure”.⁶⁴ A famous manifesto, published by German scientists in 2010 and called the Slow Science Manifesto, argued that science needs time to think, to read, and to fail.⁶⁵ However, the Slow Science Academy still argues in favour of the “ivory tower” model for “selected brains” and is thus situated in a disembodied and depoliticized account of the problem at hand.⁶⁶

In 2011, Olivier P. Gosselain took the critiques related to the slow science concept and linked them with the notion of excellence, publishing an article in *Uzance* called “Slow science. La désexcellence”.⁶⁷ He emphasizes the importance of community-building to create an honest science based on quality, one that challenges the discomfort brought by the politics of competition, productivity, and accountability, inspired by the free software movement. The same year, Isabelle Stengers gave an inaugural lecture at the Université Libre de Bruxelles, called “Another science is possible! A plea for slow science”,⁶⁸ wherein she reflected on the responsibility of the roles of academics and referees, making a hard critique of the conditions of knowledge production nowadays and of the interconnections

52 Conesa Carpintero

between knowledge itself and unsustainable progress.⁶⁹ Jean-François Lutz published a paper in *Nature* in 2012 that, in turn, claims that the quality of scientific research is deteriorating due to “duplicate publication, plagiarism, irreproducible results and fraud”.⁷⁰ Scientists have no time to read the quantity of literature published in their field; on the contrary, more mature and slower writing would improve the advancement of knowledge. In the publish-or-perish culture, Lutz defends young researchers who have fewer opportunities to be considered and face greater pressure and competition than ever before.

Nevertheless, many authors have raised criticisms of the concept of slow science. Luke Martell suggests that slow science can be transformed into something somehow related to the middle class, and that it is important to look for the economic and social processes behind speediness, processes such as autonomy and power.⁷¹ In his work on the “acceleration of the academy”, Vostal recognizes that “academics are worn out, stressed and satisfactionless victims lacking temporal agency”,⁷² although he notes that “slowness is barely recognised as an all-purpose principle”.⁷³ He distinguishes between “constraining acceleration” as the negative effects of acceleration on “mental health and family” and “energizing acceleration” as a positive term integral to academic work-life. Thus, he concludes by arguing in favour of “unhasty time, which is not a slow time” and in favour of a politicization of time.⁷⁴ Mark Carrigan, together with Vostal, understands slow science as an initiative more related to those who can slow down the pace of their academic activity without acknowledging power relations and thus as drawing more on an individualistic drift. In contrast, they defend a position that focuses more on hierarchical and on power relations in the academy as they are related to “relevant variables such as age, gender, academic status, discipline, family situation, psychological disposition”.⁷⁵ They are engaged with the Accelerated Academy initiative.⁷⁶

However, a paper by some members of the Great Lakes Feminist Geography Collective, called “For slow scholarship: A feminist politics of resistance through collective action in the neoliberal university”, offers an account of what slow scholarship might mean if informed by a feminist approach.⁷⁷ Their work, already cited in the second section of this chapter, is a condensed analysis – grounded in a collective autoethnography – of gendered and colonized time and care refracted through managerial orientations. Mountz et al. (2015) draw on the negative embodied effects on the health of (women) academics and claim for a feminist ethics of care, in order “to radically transform social reproduction” and centre it socially.⁷⁸ The authors acknowledge questions of privilege in the neoliberal academy for those who are not there “due to gendered, racialized, classed, heteronormative, and ableist structures and daily practices” in order to challenge elitist exclusions.⁷⁹ In sum, they argue in favour of encouraging scholars to fight collectively for a good (slow) model of scholarship by using a feminist

politics of resistance, which would have the effect of improving the quality of research and teaching while disrupting the uneven power relations of academic life.

“The slow science”, “la désexcellence”, “accelerated academy”, or “feminist slow scholarship” accounts differ from each other in their local context and approach. However, all might have the potential to engage with the connections between the exclusionary neoliberal scientific model and the well-being of academics and science itself, promoting the necessary debate around time and care to create resistance and space that sustain life collectively in the local and broader sense.⁸⁰

Suggested assignment

- Try to imagine the creation of a slow science movement (or similar) in your university that takes into account the feminist notions of care and time. Work in groups to discuss what this would look like and ask yourselves which already existing groups would be stakeholders (e.g. associations of workers, associations to defend the public university, unions, professors, other universities, etc.).

Conclusions: repoliticizing the damages of the neoliberal academy

In this chapter I have outlined how neoliberal or “accelerated” managerial practices affect academics and their work, creating pressures and fostering more competition at an international level, promoting a long-hours culture and devaluing teaching, among other effects. Together with the austerity crisis context they also create precariousness, especially in the lowest positions of academic employment, and they reduce the possibility of advancement in a given career trajectory. The embodied effects of these managerial practices on academics have been pointed out regarding physical-psychological damages such as stress, exhaustion, eating disorders, back problems, or mental illness.

I have combined an analysis of these embodied effects with a focus on their intersection with gender. Gender operates as an aggravation, since time and care are gendered and affect specifically those (women) who have to manage conflicting roles that create tensions and suffering in their bodies, and this acts together with biased gender practice and discrimination well documented in research trajectories. Those gendered embodied effects, then, have been connected to some parallels with women’s health, as it is socially shaped, and concretely with the example of fibromyalgia, a socially gendered illness. Connections with broad social and political measures have been outlined to link the macro level with the micro and thus to foster contextualization.

54 Conesa Carpintero

I then delved into Tronto's ethics of care, especially regarding her concepts of *attentiveness*, *responsibility*, and *privileged irresponsibility* in order to apply them to the problem of new managerial practices and their embodied effects. This has allowed me to note the potentially positive effects of including a feminist ethics of care in the analysis of and intervention in questions of responsibility.

I have also presented a critical review of the slow science initiatives – including “la désexcellence”, the accelerated academy and slow feminist scholarship – as examples of what has been done to approach and intervene in the complex challenge posed by neoliberal drift in academia. The engagement in a feminist politics of resistance developed by the Great Lakes Feminist Geography Collective, drawing on ideas of collective responsibility and placing care in the centre of social life, becomes a very nuanced framework with which to continue working on this problematic.

Using the notion of care not as an idealized but as a political force that makes us understand that we all *maintain*, *continue*, and *repair* our world in a “complex, life-sustaining web”⁸¹ can be a useful tool during challenging times characterized by a sense of the loss of politicization in academic culture, a sense that is “actually adverse to practices of (feminist) critical pedagogy”, as Hanna Meissner (2015) states.⁸² So, following the feminist motto that the *personal is political*,⁸³ I conclude by arguing that strategies to retake and repoliticize the situation, to place care in the centre of life,⁸⁴ and to create the availability for time to care and care for time constitute some of the feminist politics of resistance and responsibility useful for scholars facing this time of crisis.

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Notes

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60 Conesa Carpintero

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62 Conesa Carpintero

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(No) time for care and responsibility **63**

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 **2. “NEO-GERENCIALISMO
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¿DOS CARAS DE LA MISMA
MONEDA?”**

[“NEW MANAGERIALISM
AND AUSTRERITY IN THE
SPANISH AND EUROPEAN
ACADEMIC CONTEXT.
TWO SIDES OF THE SAME
COIN?”]

■
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Neo-gerencialismo y austeridad en el contexto académico español y europeo. ¿Dos caras de la misma moneda?

Ester Conesa Carpintero ¹ y Ana M. González Ramos ²

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Resumen. El personal académico viene afrontando situaciones de vulnerabilidad y precariedad en el contexto español y europeo. Por un lado, la situación de crisis proporciona una justificación a los recortes en financiación para ciencia y universidades; por otro, previamente a la crisis, la dinámica neo-gerencialista produce nuevas condiciones simbólicas y materiales basadas en la competitividad. Este artículo aporta evidencias sobre la situación laboral del profesorado universitario español considerando ambas dinámicas y las diferencias de género. En primer lugar, examinamos la dinámica neo-gerencialista y la dinámica de austeridad en el contexto académico europeo y español. En segundo lugar, mostramos la evolución numérica del profesorado en las universidades públicas españolas durante la última década mediante un análisis de fuentes secundarias distinguiendo por sexo y categorías laborales. Los resultados muestran el descenso del personal funcionario (mayormente hombres) y el incremento del personal laboral con anterioridad a la implementación de las medidas de austeridad. Por otra parte, persiste un elevado número de profesorado asociado que sostiene la carga docente de las universidades. El número de mujeres aumenta lentamente, estrechando la brecha de género en las etapas iniciales y medianas de las carreras académicas. En conclusión, las políticas de austeridad justifican y facilitan una rápida implementación del modelo neoliberal de ciencia en España.

Palabras clave: neoliberalismo; crisis; universidades; personal académico; género.

[en] New Managerialism and Austerity in the Spanish and European Academic Context. Two Sides of the Same Coin?

Abstract. Academic personnel face situations of vulnerability and precariousness in the Spanish and European context. On the one hand, the crisis situation provides justification to funding cutbacks in science and universities; on other hand, previous to the crisis, the dynamic of new-managerialism yields new symbolic and material conditions based on competitiveness. This paper provides evidences about the labour situation of the Spanish academic staff concerning both dynamics and gender differences. Firstly, we examine the new-managerialist dynamic and the austerity dynamic in the European and Spanish context. Secondly, we display quantitative evolution of the Spanish public universities during the last decade, using secondary data from databases distinguishing by sex and labour categories. The results show the decrease of civil servant personnel (mostly men) and the increase of labour personnel, before the implementation of austerity measures. Moreover, it remains a

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high number of assistants who hold teaching overload in universities. Women figures increase slowly, narrowing the gender gap in early and medium stages of the academic careers. In conclusion, austerity policies justify and facilitate quick implementation of the neoliberal model of research in Spain.

Keywords: neoliberalism; crisis; universities; academic personnel; gender.

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Sumario. 1. Introducción. 2. El neo-gerencialismo en el mundo académico y científico. 3. Ciencia y academia en tiempos de crisis. 4. Evolución del personal académico de las universidades públicas españolas en la última década. 5. ¿Dos caras de la misma moneda? 6. Conclusiones. 7. Notas metodológicas. 8. Bibliografía.

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1. Introducción

La globalización de la economía junto a la valorización del conocimiento como producto medible y comercializable ha impuesto una retórica y una agenda de competitividad en las instituciones académicas y científicas. En el año 2000, la Agenda de Lisboa establece la necesidad de que Europa se convierta en “la economía del conocimiento más competitiva y dinámica del mundo” (Parlamento Europeo, 2000) con el fin de competir con países como Estados Unidos o Japón. En el 2005, una comunicación de la Comisión Europea (2005: 2) insta a la modernización y mejora de la calidad de las universidades como “motores del nuevo paradigma basado en el conocimiento”, para que estas puedan “contribuir plenamente a la estrategia de Lisboa”. Se exhorta a aparecer en los *rankings* de las mejores universidades del mundo; también se alude al desfase en innovación y gestión de recursos humanos, a la excesiva reglamentación y financiación insuficiente (Comisión Europea, 2005). Las instituciones de enseñanza superior, los gobiernos y las instituciones de la Unión Europea deben mejorar la calidad, la gobernanza y la autonomía de las universidades (gestionando y haciéndose responsables de sus programas formativos, recursos humanos y resultados); además, deben estimular todas las fuentes de financiación para posibilitar la modernización de las universidades (por ejemplo, Fondos Estructurales Europeos, Banco Europeo de Inversiones, etc.), invirtiendo “en calidad de alto nivel/excelencia” (Comisión Europea, 2005: 14).

A pesar de este énfasis en el aumento de búsqueda de financiación, muchos gobiernos europeos han establecido políticas de austeridad en educación y ciencia ante la situación de crisis de los últimos años (European University Association, 2015; Hollanders y Kanerva, 2015; Amoedo-Souto y Nogueira, 2013). Los recortes han afectado sobre todo al personal de las universidades y centros de investigación, así como a las partidas de inversiones e infraestructuras (EUA, 2015). Sin embargo, ya encontramos situaciones de precarización, inestabilidad y

flexibilización laboral, relacionadas con las dinámicas neoliberales anteriores a la crisis, que persiguen lógicas de competitividad y autonomía financiera propias del neo-gerencialismo (Deem y Brehony, 2005; Lynch, 2014; Ball, 2015; Saura y Muñoz, 2016). Por ejemplo, ha habido una pérdida de posiciones estables y una diversificación de categorías laborales, lo cual conlleva situaciones de desigualdad e inseguridad profesional (García Calavia, 2015; Slaughter y Cantwell, 2012; Hey, 2001; Henkel, 1997).

Es necesario examinar cómo han afectado las políticas de austeridad a la gestión del personal académico, y si la precarización laboral se justifica por la aplicación de recortes o se debe a la aplicación de una lógica neoliberal de desigualdad y competitividad. Este trabajo pretende aportar evidencias examinando los datos para el Estado español y reflexionar sobre las dos dinámicas, a nivel español y europeo. El artículo describe, en primer lugar, la génesis y características del neo-gerencialismo en el contexto europeo y explora su genealogía, discursos y aplicación en el contexto español. El segundo apartado examina el efecto de las políticas de austeridad en las instituciones académicas a nivel europeo y español. El tercer apartado muestra los resultados de la evolución del profesorado de las universidades públicas españolas desde el curso 2004-2005 hasta el curso 2014-2015 por categorías laborales y comparando las diferencias de género. Este análisis, basado en las fuentes del Ministerio de Educación, Cultura y Deporte (MECD), permite reflexionar sobre aspectos relacionados con la estabilidad y los derechos laborales. Los dos últimos apartados discuten y muestran los principales resultados en relación a las dos dinámicas presentadas –la neoliberal y la de austeridad– y su impacto en la precarización del personal académico a nivel europeo y nacional.

2. El neo-gerencialismo en el mundo académico y científico

El neo-gerencialismo (del inglés “New Managerialism”), o nueva gestión pública (“New Public Management”), se refiere a los valores, prácticas y técnicas propias del sector privado aplicados a la gestión de las organizaciones del sector público con el fin de alcanzar una mayor eficiencia, efectividad y excelencia (Deem, 2001; Deem y Brehony, 2005)³. La aplicación de estas prácticas y valores en las instituciones académicas ha recibido numerosas críticas a lo largo de las últimas décadas, ya que ha derivado en una “marketización” de sus objetivos convirtiendo el conocimiento en un producto comercializable (Morley, 2016; Slaughter y Rhoades, 2004). Este cambio de cultura organizacional ha interferido en la identidad, prácticas y trayectorias del personal académico como muestran diversos estudios cualitativos que complementan los resultados de este artículo (González y Revelles-Benavente [en prensa]; Fochler *et al.*, 2016; Morley, 2016; González *et al.*, 2016; Clarke y Knights, 2015; Müller, 2014).

³ Aunque a menudo ambos términos se han usado indistintamente en la literatura sobre academia, según Deem y Brehony (2005), “New Managerialism” se refiere a la configuración ideológica de estas ideas y prácticas y, por tanto, se insiere en un debate crítico del desarrollo de estas políticas y sus condiciones socio-económicas, más que a una nueva ortodoxia administrativa y técnica aplicada a nivel internacional, como se refiere el “New Public Management”. Es la tradición crítica del “New Managerialism” la que las autoras siguen en este artículo.

2.1. El neo-gerencialismo en Europa

Según Slaughter y Cantwell (2012: 589), el movimiento hacia el mercado es impulsado por la presión de organizaciones intermediarias y grupos de expertos durante los años 80 en Estados Unidos y Europa para “promover políticas que siguen programas de empresa competitiva, vinculando universidades, investigación y corporaciones, creando la *Smart Economy*”. Estos grupos de presión tuvieron un papel importante en la promoción de la agenda de Lisboa (Slaughter y Cantwell, 2012), el plan de desarrollo aprobado en el año 2000 que tiene como objetivo convertir la Unión Europea en “la economía del conocimiento más competitiva y dinámica del mundo, antes del 2010, capaz de un crecimiento económico duradero acompañado por una mejora cuantitativa y cualitativa del empleo y una mayor cohesión social” (Parlamento Europeo, 2000). El plan se apoya sobre dos pilares fundamentales, la ya iniciada Reforma de Bolonia con la creación del Espacio Europeo de Educación Superior y la creación del Espacio Europeo de Investigación (Salaburu, 2011). Esta agenda de competitividad a nivel global ha marcado el posterior desarrollo de las instituciones académicas europeas haciendo hincapié en la inversión privada en investigación, las redes internacionales, la innovación tecnológica y la movilidad y atracción del talento.

La dinámica neo-gerencialista se materializa a través de sistemas de gestión que monitorean, contabilizan y evalúan la actividad académica como forma de asegurar la competitividad en este escenario internacional, dentro de lo que podemos llamar más ampliamente como “cultura de la performatividad” (Ball, 2003; Luengo y Saura, 2013). Su actividad principal se focaliza en la creación de productos transferibles (artículos publicados en revistas de alto impacto, patentes, etc.). Su contabilización se realiza a través de “indicadores de calidad” mediante sistemas de auditoría para garantizar “la objetividad” y la transparencia de la evaluación. El binomio calidad y objetividad va ligado al discurso de la excelencia, que descansa sobre un supuesto sistema neutral de consecución de méritos, sin embargo criticado por los sesgos de género que conlleva su aplicación (Van den Brink y Benschop, 2012; Bagilhole y Goode, 2001; Scully, 2002).

Los artículos científicos deben ser publicados en revistas con factor de impacto –sistema de valoración de las revistas basado en el número de citas recibidas– que se encuentren en el sistema de citaciones “Journal Citation Reports” (JCR), propiedad de la multinacional Thomson Reuters. El factor de impacto es el principal indicador para la toma de decisiones en la evaluación y acreditación del profesorado, la adjudicación de financiación de proyectos, e “incluso en decisiones sobre salarios o promoción” (Moed, 2005: 92), condicionando así la progresión de la carrera o la posición de prestigio de la institución. Este sistema de evaluación, que proviene de las ciencias experimentales, se extiende a todas las áreas omitiendo rasgos específicos de las ciencias sociales y las artes y humanidades. En estas áreas se produce una situación compleja, ya que existe un número reducido de revistas dentro del sistema JCR y aún menos revistas de alto factor de impacto, accesibles al personal de investigación⁴.

⁴ Existen otros indicadores de impacto, normalmente menos valorados (esto depende de cada institución, agencia de evaluación, etc.).

Las instituciones científicas compiten entre sí para atraer financiación y alumnado, por lo que se establecen *rankings* de prestigio entre las universidades y centros de investigación a nivel mundial. El personal científico reconocido por su alta producción y actividad competitiva, *research stars* (Deem, 1998, Henckel, 1997), aporta *valor añadido*, siendo así objeto de atracción entre instituciones. Otra apuesta importante es el fortalecimiento de los vínculos entre empresa y universidad, por ejemplo, mediante la creación de parques de investigación. Con el objeto de maximizar la obtención de fondos, se extienden las oficinas de transferencia del conocimiento que dan soporte al proceso de búsqueda de financiación, producción de patentes y generación de empresas derivadas de la investigación (Slaughter y Cantwell, 2012). En la nueva orientación al mercado, las áreas STEM (ciencia, tecnología, ingeniería y matemáticas) se sitúan en el centro de la competencia global y de los discursos normativos, y concentran los fondos de financiación más importantes (Slaughter y Cantwell, 2012). La investigación orientada proveniente de fondos competitivos (privados o públicos) establece las líneas de financiación prioritarias, lo cual determina las temáticas a desarrollar (Gómez y Jódar, 2013; Slaughter y Cantwell, 2012).

Aunque la investigación (y su transformación en productos contables) aparece como prioritaria, la docencia es la que asegura los fondos públicos de las universidades en función del número de matriculaciones y justifica la contratación o promoción de personal. Por eso, las universidades también compiten entre ellas para atraer estudiantes, nacionales e internacionales. La estrategia de Lisboa exhorta a aumentar los ingresos buscando otros modelos de financiación y a que las tasas académicas aumenten (EUA, 2016; Slaughter y Cantwell, 2012; Guerrero, 2012).

Los ingresos generados desde la investigación aparecen como indicadores del éxito profesional, configurando cada vez más los objetivos del personal académico (Morley, 2016) y afectando a sus “prácticas epistémicas” (Fochler *et al.*, 2016), es decir, la elección de temáticas que presentan una mayor garantía de resultados positivos, y condicionando la actividad docente del profesorado.

Así, el neo-gerencialismo se ha entendido como “el brazo organizacional del neoliberalismo” (Lynch, 2014:1). Aunque el neoliberalismo académico se ha generalizado, presenta variaciones, actuando más bien como un conjunto de prácticas que migran y mutan según el contexto (Ong, 2007; Lynch, 2014). Siguiendo a Ball y a Saura y Muñoz, podemos entenderlo como aquellas prácticas que se dan localizadas en “el aquí” –el “pequeño neoliberalismo” (Ball, 2015:1; Saura y Muñoz, 2016).

2.2. El neo-gerencialismo en España

Aunque en la Ley de Reforma Universitaria (LRU) de 1983 se habla del “reto del desarrollo científico-técnico” y “la previsible incorporación de España al área superior europea”, no es hasta el texto de la Ley Orgánica de Universidades (LOU) en 2001 donde aparece como un “reto de enorme trascendencia: articular la sociedad del conocimiento en nuestro país” (L.O. 6/2001: 49401) y la necesidad de desarrollar medidas que la propicien. En consonancia con la Agenda de Lisboa (2000) se enfatiza el papel de la universidad como líder del cambio y el refuerzo de

la actividad investigadora. También se mencionan como principios centrales la autonomía universitaria y la necesidad de crear “una docencia de calidad, [y] una investigación de excelencia” mediante la “eficiencia, eficacia y responsabilidad” (L.O. 6/2001: 49400). Estos principios, junto con la “rendición de cuentas a la sociedad que la financia, solo serán posibles mediante la introducción de “la cultura de la evaluación” (L.O. 6/2001: 49401) como nuevo sistema objetivo y transparente para garantizar la calidad y excelencia de forma eficaz.

El fomento de la calidad y competitividad internacional pretende “contribuir al avance del conocimiento, la innovación y la mejora de la calidad de vida de los ciudadanos y la competitividad de las empresas” (art. 41.1). La movilidad de los investigadores es también uno de los objetivos prioritarios “para la formación de equipos y centros de excelencia”, acompañado de la incorporación de científicos “de especial relevancia” (art. 41.2. c. y d.) que aportarán prestigio y mejorarán la posición de la institución en los *rankings* internacionales. Otros objetivos comprenden “la vinculación entre la investigación universitaria y el sistema productivo, como vía para articular la transferencia de los conocimientos generados y la presencia de la Universidad en el proceso de innovación del sistema productivo y de las empresas” (art.41.2. g); el fomento de la creación de centros y estructuras mixtas entre las instituciones públicas y las privadas, y la creación de “empresas de base tecnológica a partir de la actividad universitaria” (art. 41.2.f. y g.). Así se sientan las bases del discurso y las prácticas neo-gerencialistas, en un contexto considerado “atrasado”, excesivamente burocratizado (Salaburu, 2011), fomentando la relación público-privado y la comercialización del conocimiento.

La LOMLOU de 2007 (modificación de la LOU 2001) y la Ley de la Ciencia de 2011 insisten en la relación entre universidad y tejido productivo. La transferencia, entendida como “servicio social” del personal académico, será evaluada y reconocida como mérito y criterio relevante (L.O. 4/2007). Se subraya la necesidad de poner “mayor énfasis en la investigación técnica y el desarrollo tecnológico” y de apostar por la innovación “estrictamente necesaria para el crecimiento y competitividad de nuestro sistema productivo” (L. 14/2011: 54392). Asimismo, se incentiva la reforma de la financiación y ejecución del plan de I+D+i por parte del sector privado y se promueve el “mecenazgo”. La mención a las áreas sociales y humanísticas es inexistente, tal y como señalan Slaughter y Cantwell (2012), así como su potencial para la mejora del bienestar social.

En cuanto a la “cultura de la evaluación”, en 2002 se crea la Agencia Nacional de Evaluación de la Calidad y Acreditación (en adelante, ANECA) que pone en marcha los procesos de acreditación nacional del profesorado universitario a partir de 2007, sustituyendo la habilitación anterior. El objetivo de la acreditación es “garantizar una selección eficaz, eficiente, transparente y objetiva del profesorado funcionario, de acuerdo con los estándares internacionales evaluadores de la calidad docente e investigadora” (L.O. 4/2007, art. 57.1). Aunque la “modernización de las universidades europeas” (L.O. 4/2007: 16241) pretende potenciar su autonomía y suprimir los sistemas altamente burocráticos por sistemas de gestión y evaluación eficaces, en el caso español la acreditación toma la forma de un proceso burocrático (Salaburu, 2011), a menudo considerado opaco. Paralelamente, se crean otras agencias de calidad en las diferentes Comunidades Autónomas (en adelante, CCAA) que adoptan algunas variaciones en sus criterios

evaluativos. Recientemente la ANECA, que ha pasado de agencia estatal a organismo autónomo, ha reformado el sistema de evaluación y sus criterios, actualmente en revisión debido a las críticas por su endurecimiento en muchas áreas de conocimiento⁵.

En cuanto a la financiación de las universidades españolas, excepto en unas pocas autonomías que aún son reguladas mediante un modelo incrementalista (basado en las necesidades de personal respecto a la financiación del año anterior), la mayoría adoptan programaciones plurianuales elaboradas por las universidades (Rodríguez Cornejo, 2013; Guerrero, 2012). En los llamados “contratos programa” aprobados por las CCAA se establece una financiación en función de objetivos evaluados mediante indicadores. Así, las cuantías y conceptos financiados en cada universidad dependen del gobierno de las CCAA, lo que produce variabilidad entre universidades (Guerrero, 2012).

Según Guerrero (2012), las universidades públicas presenciales obtienen entre 75-80% de ingresos públicos y 20-25% de fondos de origen privado. Esta proporción es “bastante habitual en los sistemas universitarios europeos comparables al español” (p. 158), aunque difiere de países como Finlandia, Noruega o Reino Unido que obtienen una participación más importante de fondos privados (Guerrero, 2012; Estermann y Bennetot, 2011). Pueden ser considerados competitivos, según Guerrero, los ingresos de las matrículas aportadas por el alumnado y sus familias, dada la competición por la atracción de estudiantes, así como la financiación conseguida en las convocatorias competitivas de investigación. Las universidades también tratan de incrementar los fondos provenientes de la transferencia de tecnología y del sector privado relativos a actividades de I+D+i (Guerrero, 2012). El éxito en la recaudación de estos fondos competitivos, de la que depende en buena parte la investigación, recae en la producción de resultados según indicadores estandarizados (como el JCR), como veíamos en el apartado anterior. La investigación de los “centros de excelencia”, parcialmente financiados con fondos públicos, pero de gestión privada, depende mayormente de fondos competitivos o privados, lo que supone una búsqueda constante de financiación y pone en riesgo la propia investigación cuando no se vislumbran futuros réditos económicos en forma de productos comercializables.

Los informes de expertos reiteran la “escasa cultura para realizar investigación bajo demanda” (Consejo de Universidades y Conferencia General de Política Universitaria, 2010: 12). La “equidad, eficiencia y eficacia institucionales” se siguen vinculando al crecimiento económico; se insiste en la internacionalización (donde las relaciones con Latinoamérica solo son “un estímulo de la misma”) y en la incorporación de rectores e investigadores extranjeros de prestigio (CU y CGPU, 2010; Tarrach *et al.*, 2011: 48).

⁵ Ver el comunicado de la Conferencia de Rectores de las Universidades Españolas (CRUE): <http://www.crue.org/Documentos%20compartidos/Comunicados/2016.12.16%20NP%20Reuni%C3%B3n%20Crue%20Universidades%20Espa%C3%B1olas%20y%20ANECA%20-%20nuevo%20sistema%20acreditaci%C3%B3n%20docentes.pdf> y las críticas que el nuevo sistema ha suscitado: http://cadenaser.com/emisora/2016/12/20/radio_bilbao/1482231690_755647.html y <http://www.elmundo.es/sociedad/2016/12/13/584e8db8468aeb90368b4587.html>

3. Ciencia y academia en tiempos de crisis

3.1. Europa, I+D y Universidades

El incremento de la financiación en investigación y desarrollo establecido en la Agenda de Lisboa fijó porcentajes para los gobiernos y el sector de los negocios que no se han cumplido debido a la aplicación de políticas de austeridad a raíz de la crisis financiera. Esto ha afectado a los sistemas universitarios y científicos de la mayoría de países miembros, aunque en diferente grado (Hollanders y Kanerva, 2015).

La Unión Europea crea en 2010 la Estrategia Europa 2020 para fortalecerse y superar la crisis “a través del crecimiento inteligente, sostenible e inclusivo”, aunque las cifras de desempleo, pobreza y exclusión social de 2012 no superan las de 2008 (Hollanders y Kanerva, 2015). Para la investigación, la Comisión Europea aprueba el programa Horizonte 2020 con una dotación elevada: 80 billones de euros a partir de 2007 hasta 2013. Este nuevo programa, orientado a la *Innovation Union* se sigue rigiendo por el neoliberalismo académico: “reuniendo todos los fondos existentes de la UE en materia de investigación e innovación y prestando apoyo de manera continua desde la idea al mercado (...)” (Hollanders y Kanerva, 2015: 271).

A pesar de estos esfuerzos económicos, los sistemas universitarios públicos son dañados por recortes a nivel nacional. Los más afectados durante el periodo 2008-2015, según el último informe del Observatorio de Financiación Pública (EUA, 2015), son Croacia, Grecia, Irlanda, Islandia, España, Serbia, el Reino Unido, la República Checa, Hungría, Italia, Letonia, Lituania y Eslovaquia. Los siete primeros países son considerados “sistemas en peligro”, debido al crecimiento del número de estudiantes sin mejora de la financiación, aunque se da una compleja variedad de situaciones: Grecia tiene dificultades para cubrir los costes básicos; Portugal presenta una tendencia positiva, aunque sufrió importantes recortes presupuestarios antes de 2008; Dinamarca, Alemania, Austria, Francia y la comunidad flamenca de Bélgica han incrementado su financiación en ese periodo a pesar de haber tenido un crecimiento comparativamente más rápido de estudiantes. Solamente Noruega y Suecia han incrementado su financiación pública de acuerdo al crecimiento de estudiantes.

Algunos países han implementado medidas de austeridad recientemente, como Dinamarca, que prevé recortar los fondos para investigación en el 2% anual entre 2016 y 2019. También en Irlanda y los Países Bajos el ajuste financiero afecta a diversas partidas dedicadas a la investigación. Actualmente la docencia ha sufrido recortes en República Checa, Polonia, Eslovenia, Países Bajos, Suecia y Reino Unido.

La inversión de capital en infraestructuras y equipamiento continúa deteriorándose en la mayoría de países, ya que se espera que las universidades se financien con recursos propios o privados (EUA, 2015). Según el mismo informe, “el desarrollo de este año ha vuelto a confirmar la tendencia previa establecida hacia un ‘rebalanceo’ de los sistemas públicos de financiación y una mayor atención de los gobiernos hacia la financiación basada en resultados, las medidas

de eficiencia y un uso más activo de los indicadores de rendimiento” (EUA, 2015: 11).

Para compensar los recortes en los fondos competitivos nacionales, los gobiernos han presionado a los equipos de investigación para obtener fondos europeos (además de privados), generando una alta competitividad con una tasa muy baja de éxito (EUA, 2015). Esto priva “a las universidades de la posibilidad de conseguir programas de investigación estratégicos coherentes y sostenibles en el tiempo frente a la posible recompensa de [obtener] fondos a corto plazo” (EUA, 2015: 12). La menor capacidad de algunas universidades de obtención de recursos para infraestructura, servicios de apoyo a la investigación y contratación de *top researchers* genera una mayor presión en estas (EUA, 2015; Guerrero, 2012). Además, los fondos europeos se han reducido, ya que se han redireccionado a otros propósitos (EUA, 2015; Hollanders y Kanerva, 2015).

En términos generales, en el periodo 2008-2015 “el descenso en [la] financiación ha tenido un impacto en el personal en la mayoría de sistemas [universitarios], resultando en despidos, tasas de reposición más bajas y beneficios reducidos” (EUA, 2015: 10). En esos años hay un crecimiento del personal académico por debajo del 10% en países como Austria, Francia, Hungría, los Países Bajos, Polonia, Eslovenia y Reino Unido. Los países donde el personal decrece son República Checa, Irlanda, España, Italia, Letonia y Eslovaquia. Además, a lo largo del 2016 algunas universidades de Dinamarca y Finlandia han sufrido despido de personal, en Irlanda se aplican reducciones de personal público y en Italia la tasa de reposición se ha limitado al 60%. El trabajo precario se ha extendido en muchas instituciones de educación superior donde han aumentado los contratos temporales e incluso la ausencia de contrataciones (Steinthorsdottir *et al.*, 2016). El aumento de posiciones postdoctorales financiadas con fondos competitivos externos no conduce a la estabilización de la carrera académica, sino a una sucesión de contratos temporales (González *et al.*, 2016; Müller, 2014; Le Feuvre *et al.*, 2015).

3.2. España, universidades e I+D

El sistema universitario y científico español ha sido uno de los que más han sufrido los recortes a causa de la crisis financiera, afectando especialmente a las contrataciones y promoción de personal docente e investigador (PDI). La tasa de reposición ha sido muy reducida e incluso nula⁶. Entre el año 2003 y 2009 esta tasa se mantuvo al 100%. Sin embargo, coincidiendo con los primeros años de la crisis, se ha aplicado una tasa de reposición del personal de baja del 30% en 2009. Este porcentaje ha descendido hasta el 15% en el año 2010, el 10% en el año 2011, y ha llegado a una tasa de reposición nula en el año 2012 (Amoedo-Souto y Nogueira, 2013). En el año 2015, la tasa de reposición ha aumentado hasta el 50% según la Ley de 2014 de Presupuestos del Estado y se espera que se recupere paulatinamente hacia el 100% en los próximos años.

Los recortes han afectado a las condiciones laborales más duramente en los años 2011, 2012 y 2013, a través de textos legales como el Real Decreto-Ley

⁶ La tasa de reposición es el porcentaje de plazas abiertas en función del número de jubilaciones, renunciaciones y otras situaciones como el fallecimiento o la excedencia del personal académico.

20/2011. Este decreto establece que las retribuciones del personal del empleo público, en el que se incluye a los profesionales de las universidades, no podrán experimentar ningún incremento respecto a las del año anterior (art. 2) y durante el ejercicio 2012 no se “procederá a la incorporación de nuevo personal” ni a la contratación de personal temporal o funcionarios interinos (art. 3). Un año después, el Real Decreto-Ley 14/2012 establece la racionalización del gasto público en la oferta de titulaciones y la determinación de la actividad docente en función “de la intensidad y excelencia de su actividad investigadora” (R.D.L. 14/2012: 30977), que regula el incremento de los créditos docentes. El número de horas dedicadas a la docencia pasa de 24 a 32 horas en el caso de profesorado sin sexenios (periodo de evaluación de los seis años previos de su actividad investigadora). A partir de entonces la incorporación de personal se somete a los presupuestos generales del Estado que tienen que cumplir con la Ley de Estabilidad Presupuestaria de 2012, basada en los compromisos de estabilidad marcados por la Unión Europea.

Así, la contención del gasto durante los años de la crisis ha creado un “cuello de botella” que ha afectado al número de contrataciones y promociones del personal académico. Las personas habilitadas o acreditadas han tenido que esperar o siguen esperando la apertura de plazas, algunas en situaciones de precariedad o en posiciones de interinidad (Castillo y Moré, 2016). La precariedad laboral no solo consiste en la ausencia de contratos de acceso y de promoción del personal académico, sino en afrontar una elevada carga docente (además de tareas administrativas) que impide realizar tareas de investigación y, por tanto, dificulta el cumplimiento de los indicadores de calidad y de excelencia. La reforma del plan Bolonia ya había aumentado la carga docente del profesorado con la adopción de un modelo de evaluación continua y la tutorización y evaluación de los trabajos finales de grado y máster en un entorno de masificación en las aulas (Cazorla, 2011), a la que ahora se debe hacer frente con una plantilla en situación de vulnerabilidad laboral.

Los presupuestos aprobados por los Consejos Sociales de las universidades españolas reflejan un descenso en la financiación total de las universidades públicas de más de 1.500 millones de euros entre el año 2010 y 2014 (Federación de Enseñanza de CCOO, 2014). La parte correspondiente al gasto en personal supone un descenso de más de 484 millones de euros entre 2010 y 2014, 31,8% del total de los recortes realizados (FECCOO, 2014). Respecto al conjunto del gasto de personal e inversiones, las CCAA presentan situaciones muy variadas entre 2010 y 2014: mientras Andalucía, Madrid, Cataluña o el País Valenciano presentan recortes del presupuesto muy elevados (277 millones de euros, 288 millones de euros, 296 millones de euros y 143 millones de euros, respectivamente), Navarra, Islas Baleares o la Rioja sufren recortes de entre 8 y 10 millones de euros (FECCOO, 2014).

La subida de precios de la matrícula ha sido implementada por las comunidades autónomas de manera muy diferenciada. Por ejemplo, se ha incrementado de forma aguda en Cataluña y Madrid a partir del curso 2012-2013 (MECD, 2016). La tendencia al crecimiento del alumnado (de 2007-2008 a 2011-2012) se quiebra a partir de la subida de precios desde 2012-2013, con 95.443 matrículas menos en el curso 2014-2015 (MECD, 2016).

El gasto interno en I+D, que comprende el sector de la administración pública, las empresas, la enseñanza superior y las instituciones públicas sin fines de lucro, desciende de 14.701 a 12.821 millones de euros entre 2008 y 2014 (MECD, 2016). En la enseñanza superior, el gasto comienza a descender a partir de 2010, de 4.123 a 3.606 millones de euros en 2014. El gasto de las empresas es el más cuantioso en comparación con el resto, aunque su descenso es mayor durante los años de crisis (de 8.073,5 millones de euros en 2008 a 6.784,3 millones de euros en 2014).

4. Evolución del personal académico de las universidades públicas españolas en la última década

En este apartado analizamos la evolución del personal académico en las universidades públicas españolas, a partir de los datos registrados anualmente por el Ministerio de Educación y Deporte (MECD). Después de la recogida y organización de los datos, se ha procedido a la agrupación por categorías laborales, primero distinguiendo entre personal funcionario y laboral, y luego en cuatro grupos diferenciados por su estatus laboral. Posteriormente, hemos dispuesto esta información distribuida por sexo y calculado los porcentajes correspondientes. Para mostrar los resultados de este análisis descriptivo hemos procedido a visualizarlos gráficamente. A continuación, explicamos las diferencias entre las categorías laborales para una mejor comprensión del análisis.

4.1. Descripción de las categorías del profesorado

Con la introducción de la LOU, el número de figuras de funcionariado se reduce por la extinción de las categorías de Catedrático de Escuela Universitaria y Titular de Escuela Universitaria (CEU y TEU), mientras que se incorpora una línea de contratación de profesorado laboral, que debía ser “una carrera académica más o menos paralela con la carrera funcional” (Salaburu, 2011: 120). En esta línea se establecen las categorías laborales de “Profesor Contratado Doctor” (originalmente equivalente a Profesor Titular), una figura contractual a tiempo completo y con contrato indefinido, “Profesor Ayudante Doctor”, y “Ayudante”, ambos a tiempo completo y contrato temporal (entre 1 y 5 años). La LOU mantiene la categoría de Profesor Asociado que, como en la LRU (1983), son definidos como “especialistas de reconocida competencia que acrediten ejercer su actividad profesional fuera de la Universidad” (L.O. 6/2001:49412) y se endurecen las condiciones de contratación (acreditar su contrato profesional) a fin de evitar las irregularidades que en el pasado habían generado una acumulación de asociados a tiempo parcial (y a veces, completo), con funciones docentes, como un primer paso para incorporarse a la carrera académica, y no como especialistas de reconocido prestigio (Moreno, 2015). Por último, se crea la figura de “Profesor Colaborador”, contratado con la finalidad de “impartir enseñanzas solo en aquellas áreas de conocimiento que establezca el Gobierno previo informe del Consejo de Coordinación Universitaria (...)” (L.O. 6/2001:49412). Esta es la única figura que no exige que el profesorado sea doctor o esté en vías de serlo, pero desaparece en el redactado de la LOMLOU (2007) considerándola una figura a extinguir. La

siguiente tabla muestra los requisitos y características de las figuras laborales descritas anteriormente, de acuerdo a la LOU (versión de texto consolidado de 2016): conocimiento que establezca el Gobierno previo informe del Consejo de Coordinación.

Tabla 1. Figuras del profesorado

Profesor Contratado Doctor	Profesor Ayudante Doctor
<p>Requisitos: doctores con evaluación positiva de la ANECA (o equivalente).</p> <p>Finalidad contrato: tareas docentes y de investigación, o prioritariamente investigación.</p> <p>Contrato: indefinido y a tiempo completo.</p>	<p>Requisitos: doctores con evaluación positiva de la ANECA (o equivalente). El mérito preferente es la estancia del candidato en universidades o centros de investigación de prestigio, españoles o extranjeros.</p> <p>Finalidad contrato: tareas docentes y de investigación.</p> <p>Contrato: temporal y a tiempo completo (mín.1 año, máx.5 años)</p>
Ayudantes	Personal Asociado
<p>Requisitos: que hayan sido admitidos o estén en condiciones de serlo en estudios de doctorado.</p> <p>Finalidad contrato: completar la formación docente e investigadora y colaboración en tareas docentes de índole práctica (máx.60h anuales).</p> <p>Contrato: temporal y a tiempo completo (mín.1 año, máx.5 años).</p>	<p>Requisitos: que sean especialistas de reconocida competencia ejerciendo su actividad profesional fuera del ámbito universitario (deben acreditarlo).</p> <p>Finalidad contrato: tareas docentes donde aporten sus conocimientos y experiencia profesionales.</p> <p>Contrato: temporal y a tiempo parcial (trimestral, semestral o anual, renovable).</p>

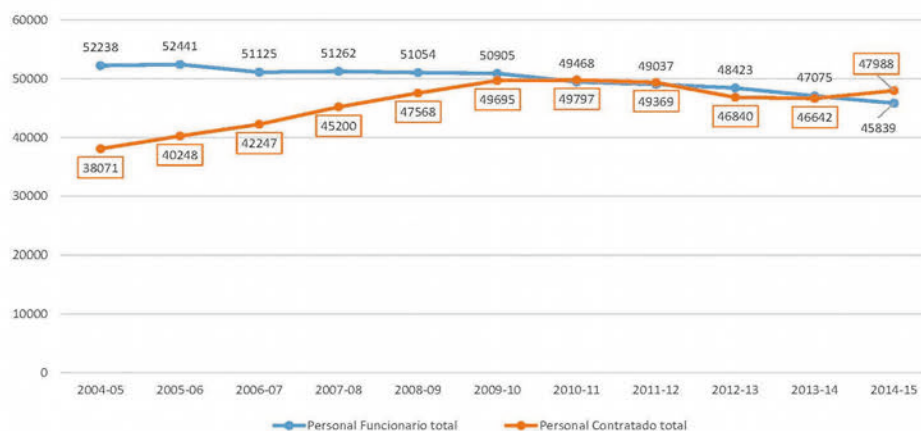
Fuente: elaboración propia basada en LOU (2016).

Además de estas categorías, las universidades y centros de investigación españoles se nutren de otras figuras financiadas a partir de la consecución de una beca o contrato competitivos provenientes de fondos externos correspondientes a distintas etapas de la carrera científica. Respecto a los contratos pre-doctorales, se modifican las condiciones de las becas FPI y FPU, preexistentes en la LRU. Los contratos post-doctorales corresponden, a nivel estatal, a las figuras Juan de la Cierva, en el grado júnior, y Ramón y Cajal, en el grado sénior; a nivel europeo Marie Curie, ERC, y a nivel autonómico con diversas figuras, como el programa ICREA en Cataluña y el Ikerbasque en el País Vasco. A través de estas figuras también se puede acceder al resto de posiciones del PDI universitario con la debida acreditación.

4.2. Evolución numérica del profesorado universitario según categorías laborales

La evolución del personal académico de las universidades públicas españolas muestra, de forma general, un descenso del personal funcionario y un aumento del personal laboral a lo largo de la última década (gráfico 1). Las cifras del personal funcionario han pasado de 52.441 en el curso 2005-2006 (la cifra más alta) a 45.839 en el curso 2014-2015, mientras que las del personal contratado laboral han pasado de 38.071 a 45.988 (de 2004-2005 a 2014-2015). Esta tendencia podría explicarse debido a las políticas de austeridad, aunque observamos el inicio del decremento del personal funcionario a partir del curso 2005-2006, cuando la tasa de reposición era del 100%, antes de que alcanzara el 30% en 2009. En el curso 2010-2011 –con la tasa al 15% en 2010–, se produce un punto de inflexión donde el personal laboral supera al funcionario (49.797 a 49.468). Después de una caída de 2.727 posiciones en los cursos 2012-2013 y 2013-2014, el personal laboral vuelve a superar al funcionario en el último curso del periodo, 2014-2015 (47.988 frente a 45.839). Por tanto, el modelo de contratación laboral iniciado con anterioridad a la crisis, que supone una diversificación de posiciones y pérdida de estatus contractual fuera de la estructura funcionarial (García Calavia, 2015), queda reforzado con los recortes, apuntando a una intensificación del modelo neoliberal de contratación. Esta tendencia sigue el modelo de otros países para propiciar más libertad y autonomía a las universidades en relación a la gestión del personal académico, sugerido por los expertos (Salaburu, 2011; Tarra *et al.*, 2011).

Gráfico 1: Comparativa entre personal funcionario y personal contratado

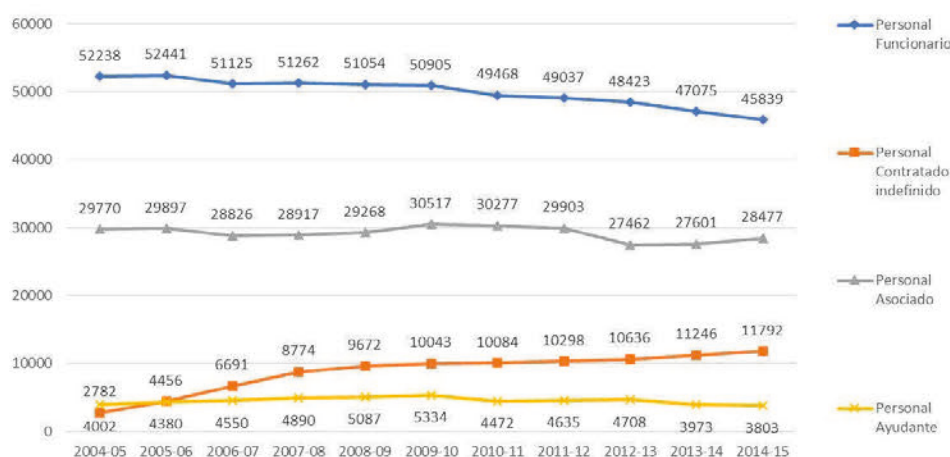


Fuente: elaboración propia basada en fuentes del MECD.

La evolución del peso del PDI, distinguiendo por categorías, permite analizar su situación y condiciones laborales. Con este fin, se ha agrupado, por un lado, las distintas figuras funcionariales (Catedrático y Profesor Titular, junto con las figuras a extinguir de TEU y CEU) y, por otro, de contratación, diferenciando su situación

de estabilización o temporalidad. Así, la categoría Personal Contratado Indefinido está compuesta por las categorías de Contratado/a Doctor/a y Colaborador/a (éste último en extinción) que gozan de un contrato indefinido y a tiempo completo; Personal Asociado aúna las categorías de Profesorado Asociado, Profesorado Asociado de Ciencias de la Salud y Otros Asociados (ya sean de las categorías Pre-LOU y LOU, extinguidas en el curso 2008-2009 o LOMLOU) con contratos temporales (trimestrales, semestrales o anuales) y a tiempo parcial; y Personal Ayudante compuestas por las categorías Ayudante (no doctor) y Ayudante Doctor, junto a las figuras pre-LOU, extinguidas en el curso 2009-2010, Ayudantes de Facultad y de Escuela Universitaria⁷.

Gráfico 2: Distribución por categoría laboral



Fuente: elaboración propia basada en fuentes del MECD.

De todas las categorías, el Personal Funcionario es el que ha sufrido un mayor descenso: 6.602 posiciones (gráfico 2). Por el contrario, el Personal Contratado Indefinido ha incrementado en un total de 9.010 plazas nuevas (actualmente el número total asciende a 11.792 plazas). Este aumento se ha producido fundamentalmente en la categoría de Contratado Doctor, de 1.434 a 9.442 (8.008 plazas más). La figura de Colaborador/a aumentó de 1.348 en el curso 2004-2005 a un máximo de 4.240 en 2007-2008, para descender en el curso 2014-2015 hasta 2.35 (por lo que el balance en toda la década es de 1.002 plazas nuevas).

El Personal Asociado es el más numeroso del conjunto del personal laboral. Ha pasado de 29.770 a 28.477 posiciones en toda la década (1.293 contratados menos). Respecto a esta categoría, se ha señalado que un porcentaje son “falsos asociados” por “el carácter abusivo y/o fraudulento de las contrataciones temporales reiteradas y sucesivas (...) así como el incumplimiento de los requisitos exigidos por la ley para su

⁷ Cabe señalar que la figura de Ayudante Doctor es considerada equivalente a una posición postdoctoral, pero aquí la contabilizamos junto a la categoría de Ayudante debido a sus parecidas condiciones contractuales.

contratación” (Moreno, 2015: 3), sin tratarse de especialistas de prestigio. En esta categoría se encuentran personas con condiciones muy diversas: asociados de larga duración que alcanzan más de 16 años de contratos sucesivos (Moreno, 2015), personas que conjugan contratos de asociados en dos universidades pero no ejercen como profesionales, personas que pagan la cuota de autónomos o realizan trabajos precarios para poder acreditar otro trabajo, entre otras. El peso que supone cada uno de estos casos es desconocido, pero “se puede asumir que hay un número importante de profesores asociados cuyo empleo en las universidades es casi su única actividad remunerada y, por tanto, para los que este empleo es incierto y precario” (García Calavia, 2015: 90). Además, esta figura contractual no contempla un perfil investigador, por lo que no se les permite liderar proyectos o pertenecer a proyectos de investigación, necesarios para avanzar en la carrera académica. Precisamente, su coste laboral, su perfil docente y el hecho de que no se les presupone una carrera científica han animado a las universidades a utilizar estas figuras profusamente para abastecer la demanda docente de las facultades. La evolución de esta figura ha sido fluctuante: entre 2005-2006 y 2006-2007 disminuyó algo más de 1.000 posiciones (probablemente debido a que la transición hacia la LOU facilitó el acceso de personal asociado con grado de doctor a otras figuras); entre 2008 y 2010 aumentó significativamente en más de 1.200 plazas, para disminuir posteriormente en 2012-2013, años en que la crisis impactó en mayor medida (27.462 plazas); desde este momento, el volumen de asociados aumenta en unas mil plazas hasta el curso 2014-2015.

El Personal Ayudante (no doctor y doctor) supone la entrada a la carrera académica mediante contrato temporal. Su evolución denota una pérdida de 199 plazas en el total del periodo. La figura de Ayudante (no doctor) experimenta un descenso importante en todo el periodo: de un pico de 3.225 en 2005-2006 a 907 en 2014-2015. En el curso 2009-2010 se extinguen las figuras de ayudante Pre-LOU. En cambio, el Personal Ayudante Doctor experimenta un incremento importante hasta el curso 2009-2010, y, después de un ligero descenso, continúa en aumento sostenido hasta el fin del periodo (de 984 plazas en 2004-2005 hasta llegar a 2.896 en 2014-2015).

A lo largo de toda la década se produce una pérdida de 7.891 plazas del PDI funcionario, asociados y ayudantes, y la creación de 9.010 plazas nuevas de personal laboral permanente. Si tenemos en cuenta el crecimiento de alumnado hasta 2011-2012 (frenado por la subida de las tasas) y realizamos el corte en el personal existente entre el curso 2009-2010 y 2014-2015 (años de recortes), nos encontramos con una pérdida total de 8.637 plazas (de los cuales 5.066 son funcionarios) y con la creación de 1.749 nuevas plazas (correspondientes a Contratado Doctor). Además, la autonomía universitaria ha creado un gran número de figuras o “soluciones temporales” bajo la fórmula de interinidades que precariza la situación laboral de este personal e impide su incorporación plena en la carrera investigadora (ver Castillo y Moré, 2016).

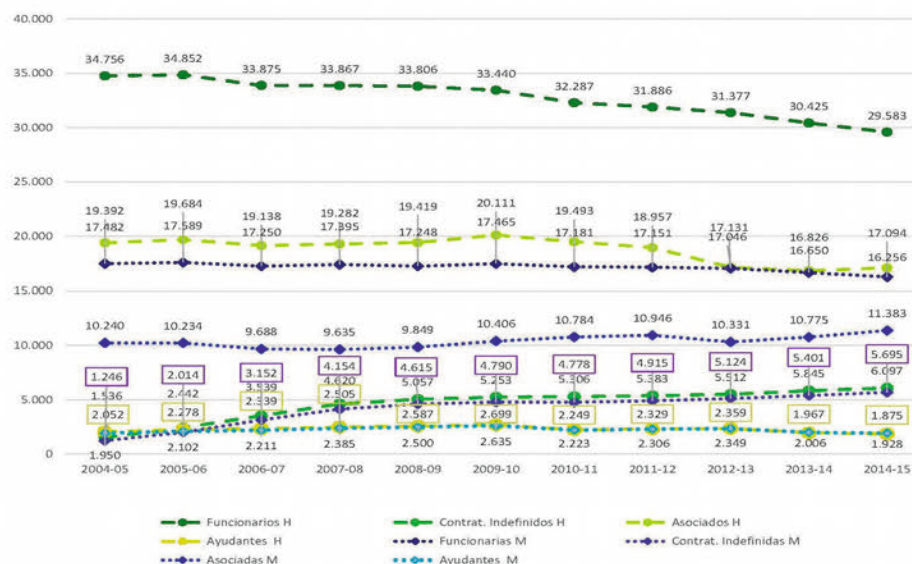
4.3. Brecha de género en la evolución del profesorado

La brecha entre hombres y mujeres entre el Personal Funcionario es considerable en todo el periodo, aunque se ha reducido ligeramente en los últimos años debido a una mayor disminución de hombres funcionarios. De hecho, se trata de una reducción del 14,9% de hombres frente a una reducción mucho menor de mujeres, del 7,01%. Si en 2004 el número de hombres funcionarios era de 34.756 frente a

17.482 mujeres funcionarias, en 2014 el número era de 29.583 hombres y 16.256 mujeres (gráfico 3). El porcentaje de mujeres funcionarias es del 33,4% en 2004-2005 frente al 66,6% de hombres, y de 35,5% mujeres frente a 64,5% de hombres en 2014-2015 (gráfico 4).

El personal contratado indefinido mantiene cierto equilibrio de género, ya que las mujeres representan el 44,7% y el 48,3% en 2004 y 2015 respectivamente, aumentando 3.5 puntos porcentuales. Entre el Personal Asociado existe una brecha significativa, ya que las mujeres representan el 34,4% al inicio del periodo y a lo largo de la década experimentan aumentos y descensos suaves, con una tendencia positiva al final (debido al incremento de más de mil plazas a partir de 2012-2013). Por su parte, los hombres han experimentado una tendencia descendente en los últimos cursos (gráfico 3), por lo que las mujeres asociadas han sido contratadas en mayor medida durante la fase posterior a los recortes más graves, representando el 40% en 2014 (gráfico 4). Las mujeres ayudantes representan el 48,7% en el curso 2004-2005 y el 50,7% durante 2014-2015, por lo que, como señala la metáfora del suelo pegajoso, parece que las mujeres alcanzan el equilibrio respecto a los hombres (o incluso lo aumentan) únicamente en las categorías inferiores de la carrera académica.

Gráfico 3: Distribución por categoría laboral y sexo



Fuente: elaboración propia basada en fuentes del MECD.

Si comparamos entre sí el personal funcionario y el contratado (gráfico 5), los hombres superan en un número considerable a las mujeres en los dos grupos. En el gráfico 5 se observa que las mujeres con contratos laborales superan a las mujeres funcionarias y, por el contrario, los hombres laborales no superan el volumen de

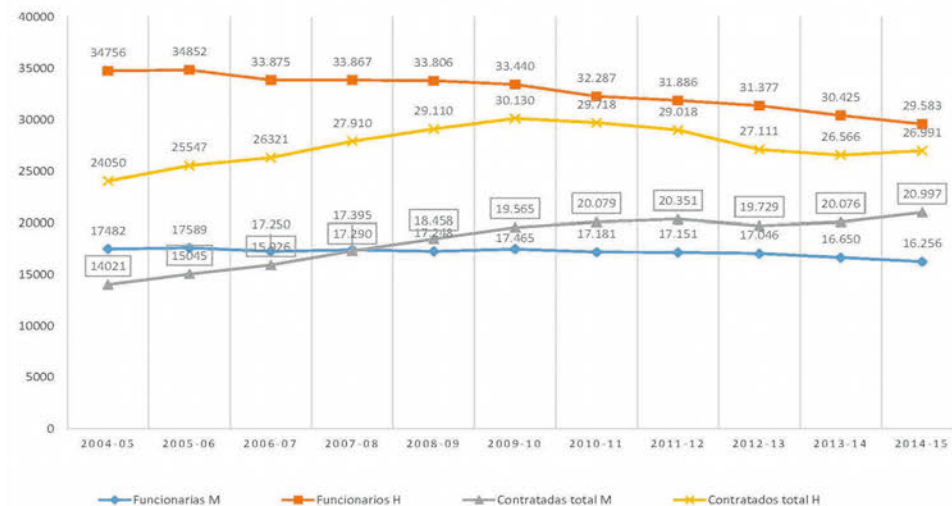
funcionarios hombres. En general, la brecha de género disminuye paulatinamente sobre todo por el aumento de mujeres contratadas (a partir del curso 2008-2009) y el descenso de hombres contratados (a partir del curso 2010-2011) y funcionarios (a lo largo de todo el periodo). No se debe, por tanto, a un incremento de funcionarias, donde aún se mantiene una brecha importante en la posición de catedrática: 21% de mujeres (UMyC, 2016).

Gráfico 4: Porcentaje de mujeres por categoría



Fuente: elaboración propia basada en fuentes del MECD.

Gráfico 5: Comparativa personal funcionario y contratado por sexo



Fuente: elaboración propia basada en fuentes del MECD.

Podemos concluir que el aumento del personal laboral por encima del funcionario, (gráfico 1) se debe al descenso de hombres funcionarios y al aumento de mujeres contratadas, sobre todo en los dos últimos cursos (correspondiente al incremento de unas mil asociadas y unas seiscientas contratadas doctoras).

En cuanto al personal de I+D contratado a partir de convocatorias públicas competitivas, los datos del Ministerio (2016: 139) muestran un equilibrio de género entre las personas contratadas predoctorales (FPI y FPU, este último presenta un mayor número de mujeres que de hombres) y contratadas postdoctorales júnior (Juan de la Cierva con un 46,5% de mujeres), pero no en el caso de las contratadas sénior (Ramón y Cajal donde las mujeres representan el 35,6%).

5. ¿Dos caras de la misma moneda?

En las páginas previas se ha analizado la dinámica neo-gerencialista seguida en el modelo de gestión académica y científica caracterizado por la lógica de la competitividad y el discurso de la excelencia. También se han examinado las políticas de austeridad aplicadas a los sistemas universitarios, que han mermado las condiciones laborales del personal académico, creado “cuellos de botella” de acceso a figuras contractuales con garantías de estabilidad y aumentado la carga de trabajo del PDI. Pero, ¿hasta qué punto la precarización del personal académico se ha producido a resultas de las políticas de austeridad justificadas por la situación de crisis o como consecuencia de las lógicas neoliberales iniciadas con anterioridad a la crisis?

Según Deem (1998: 50-51), los discursos y prácticas neo-gerencialistas en el sector público han sido alentados “no solo por [las] severas críticas al poder profesional y a la presunta pobre calidad de los servicios públicos, sino también por los intentos de reducir el gasto público e imponer una monitorización y una auditoría más ajustada del gasto”. La aplicación de estas políticas a partir de los años 80 en países como Estados Unidos, Reino Unido, Francia o Alemania ha supuesto una flexibilización de las condiciones de trabajo y la proliferación de nuevas modalidades contractuales, que han propiciado situaciones de precariedad y desigualdad (García Calavia, 2015; Slaughter y Cantwell, 2012; Hey, 2001; Henckel, 1997). Los discursos y prácticas neoliberales sobre la calidad y eficiencia son utilizados en la aplicación de las políticas de austeridad. Según la EUA (2015: 11), “[a]demás de los cambios en las modalidades de financiación pública, las autoridades públicas a veces justifican los recortes presupuestarios con la necesidad de incentivar las instituciones a operar más eficientemente”.

En el contexto español, la justificación legal sobre el recorte presupuestario en las universidades emplea un argumento similar: “Se trata, en definitiva, de introducir importantes elementos de racionalidad y eficiencia en el sistema educativo, que redundarán en una mejor prestación de este servicio público indispensable” (R.D.L. 14/2012: 30977). Como hemos visto, esta situación ha significado recortes en el capítulo de personal (de más de 484 millones de euros entre 2010 y 2014) que ha causado precarización e incertidumbre sobre la estabilidad del personal académico una pérdida total de 8.637 plazas frente a 1.749 plazas nuevas entre 2009-2010 y 2014-2015. Al mismo tiempo, se ha intensificado

la demanda de productividad “excelente” en la investigación, aumentando la sobrecarga docente de quienes no cuentan con indicadores de productividad científica “suficientes”, reforzando así la dinámica neoliberal basada en la producción de resultados.

Por otro lado, la Unión Europea exhorta a las universidades a diversificar sus fuentes de ingresos para superar las restricciones presupuestarias mediante una mayor autonomía institucional e incentivos para fondos que incrementen la inversión privada (Estermann y Bennetot, 2011). De esta forma, las políticas de austeridad justifican y refuerzan la insistencia en la inversión privada, el mecenazgo y la transferencia de conocimientos al sector productivo, imperativos que ya aparecen en las leyes españolas de los años anteriores a la crisis. Por ejemplo, para compensar los recortes se recomienda a los gobiernos seguir sistemas de financiación en que los fondos públicos se establezcan en función de los fondos obtenidos del sector privado (*matched funding scheme*, que se emplea en las universidades de Reino Unido, Noruega y Finlandia) (Estermann y Bennetot, 2011)⁸. La dependencia del sector privado significa adaptarse a sus fluctuaciones imprevisibles (relacionadas con la inestabilidad financiera) y sus intereses (solo se financiará aquella investigación orientada al beneficio), lo que vulnera la independencia de la investigación y pone en riesgo los derechos laborales. Según el informe UNESCO Science, en 2013 “el descenso de las empresas activas en innovación, junto a la caída en copublicaciones públicas-privadas y una inversión más baja en capital de riesgo, apunta a una posible repercusión (retardada) de la crisis económica en el sector privado” (Hollanders y Kanerva, 2015: 238).

La “autonomía institucional” puede suponer también una mayor separación de las políticas públicas estatales; por ejemplo, favoreciendo el aumento del personal contratado o, incluso, la supresión del estatus de empleado público (Enders, 2000 citado en García Calavia, 2015; Slaughter y Cantwell, 2012), como ha ocurrido en Finlandia desde 2009 (Välímaa *et al.*, 2014). Se posibilita así la flexibilización y precariedad laboral a través de la diversificación contractual, que ha aumentado el uso de contratos temporales de corta duración y, en algunos casos, la incorporación de personal sin contrato como en la Universidad de Trento (Steinhorsdottir *et al.*, 2016, García Calavia, 2015). En España, la disminución del personal funcionario y el aumento del personal laboral comenzó en los años previos a la crisis, como consecuencia de la aplicación legislativa que pretende “modernizar” las universidades españolas, y se intensifica por los recortes de la misma, hasta llegar al punto en que el personal laboral supera al funcionario. Las posiciones más precarias, el personal asociado, a tiempo parcial y con contratos temporales, sostienen gran parte de la docencia, como lo había hecho antes de la crisis, a pesar de las evidencias de irregularidad (Moreno, 2015; Castillo y Moré, 2016). En los últimos años, las mujeres asociadas han engrosado estas categorías laborales precarias, sobrepasando el número de mujeres en posiciones laborales a las mujeres funcionarias, situación que no sucede con los hombres.

Incluso en países donde la crisis no ha tenido tanta repercusión, como en Suiza o Austria (Hollanders y Kanerva, 2015), un elevado número de personas

⁸ Por ejemplo, el gobierno finés prometió donar 500 millones de euros a la Universidad de Aalto (fusión de universidades como medida de racionalización económica), solo en caso de que esta consiguiera al menos 200 millones de euros del sector privado (Välímaa *et al.*, 2014).

en posiciones postdoctorales, financiadas mediante convocatorias competitivas externas, sostiene el peso del trabajo de investigación sin disfrutar de una carrera académica estable (Le Feuvre *et al.*, 2015; Müller, 2014). La desregulación laboral ha supuesto la asunción de mayor responsabilidad y riesgo por parte del personal académico en sus carreras (Armano y Murgia, 2013; Gill, 2009). Esta situación de inestabilidad e incertidumbre, incrementada por la obligatoriedad de una movilidad internacional y la consecución de una alta producción científica, perjudica especialmente a las personas con cargas familiares y escasas redes de apoyo y recursos económicos (González *et al.*, 2016; Le Feuvre *et al.*, 2015).

Silvia Walby (2013) señala que el poder financiero y su inestabilidad guían el proyecto neoliberal en su búsqueda por “marketizar”, financiar y des-democratizar los servicios públicos, generando desempleo y reduciendo las condiciones laborales. Esta dinámica afecta especialmente a las personas según género y clase social. Todavía hay muchas universidades europeas sustentadas mayormente con financiación pública, pero la lógica neoliberal gana terreno, tanto a nivel legislativo como de toma de decisiones presupuestarias y gestión del personal.

6. Conclusiones

La creación de las figuras laborales en la LOU (2001), junto a la insistencia de leyes e informes en la competitividad, la financiación privada y la gestión empresarial de los resultados académicos refleja, en el contexto académico español, la lógica neoliberal de la dinámica neo-gerencialista. Los datos sobre el PDI de las universidades públicas muestran el descenso del funcionariado y aumento del personal laboral, iniciado en los años anteriores a la crisis. Las políticas de recorte y congelación de la tasa de reposición inciden en esta dinámica de cambio, llegando a una situación en la que el personal laboral supera al funcionario (habrá que prestar atención en los próximos años con la restauración de la tasa al 100%). El importante y constante volumen de personas en la categoría de asociadas demuestra un uso abusivo de esta figura que, junto con las posiciones interinas, apunta a la precarización e inestabilidad del personal laboral.

En cuanto al análisis de género, las mujeres siguen representando un menor porcentaje en las posiciones de funcionariado, sobre todo en las categorías de mayor influencia y reconocimiento (catedráticas). La brecha de género entre el PDI laboral y funcionario se estrecha paulatinamente debido al descenso de hombres funcionarios y contratados, al mismo tiempo que aumenta el número de mujeres en categorías laborales (especialmente por el incremento de asociadas en los dos últimos años). De manera positiva, se observa cierto equilibrio en el Personal Contratado Doctor (laboral permanente). La única figura donde se llega a una paridad de género (50%) es entre el personal ayudante, que representa las categorías inferiores de la carrera académica.

La lógica neoliberal exhorta a incrementar las fuentes de financiación de cara a “modernizar” las universidades y aumentar sus posiciones en los *rankings* internacionales, lo que implica mayor presión para la producción de resultados bajo indicadores estandarizados y lógicas empresariales. Paralelamente, las políticas de

austeridad en el ámbito universitario y científico generan situaciones de precariedad en las condiciones laborales, inestabilidad en la carrera académica y un aumento de la carga de trabajo, bajo discursos de eficiencia y calidad propios del neo-gerencialismo.

El trabajo precario es, asimismo, el resultado de una lógica de flexibilidad y desregulación laboral iniciada con anterioridad a la emergencia de la crisis, debido a las dinámicas neo-gerencialistas del “hacer más con menos” (Deem, 1998; Henckel, 1997; EUA, 2015; Steinhorsdottir *et al.*, 2016). El discurso de las políticas de austeridad también sirve para presionar al PDI y a las instituciones académicas a aumentar los fondos de origen privado y promover la comercialización del conocimiento, reforzando o justificando, así, la lógica neoliberal.

Por último, esta dinámica dirigida a procurar la “excelencia” se concentra en un número selecto de investigadores, grupos de investigación e instituciones, lo que fomenta una elitización del modelo científico. Es difícil encontrar discursos que aborden la mejora de las universidades y del sistema científico diferentes a los de lógica neoliberal, de donde las áreas sociales y humanísticas han quedado desplazadas. El profesorado es afectado de manera sustancial por estas dinámicas, perpetuando y aumentando las desigualdades de género y clase social previamente existentes. El equilibrio de género dependerá también de la aplicación de políticas de igualdad en las prácticas de contratación y sesgos en la evaluación que pueden o no aplicarse sobre las próximas convocatorias de plazas de promoción.

7. Notas metodológicas

Los datos del profesorado se han obtenido de

Ministerio de Educación, Cultura y Deporte (MECD). “Datos y Cifras del Sistema Español Universitario” (en sus diversas ediciones). Estadísticas e Informes Universitarios: MECD. Disponible en:

<http://www.mecd.gob.es/servicios-al-ciudadano-mecd/estadisticas/educacion/indicadores-publicaciones-sintesis/datos-cifras-sistema-universitario.html>

Ministerio de Educación, Cultura y Deporte (MECD). “Estadísticas del personal universitario (EPU)”. Estadísticas e Informes Universitarios. Estadísticas Universitarias: MECD. Disponible en:

<http://www.mecd.gob.es/educacion-mecd/areas-educacion/universidades/estadisticas-informes/estadisticas/personal-universitario.html>

No se han contabilizado dentro del profesorado contratado laboral, el profesorado visitante y emérito por tener características muy diferentes. Tampoco está contabilizada la categoría “Otros” aunque se computan en el total del personal contratado.

A partir del curso 2010-2011 aparece la categoría Lector, que no hemos contabilizado. En ese curso eran contabilizados un total de 748 personal Lector (383 mujeres) y durante el curso 2014-2015, un total de 461 (248 mujeres).

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 **3. “ACCELERATED
RESEARCHERS:
PSYCHOSOCIAL RISKS IN
GENDERED INSTITUTIONS
IN ACADEMIA”**

■
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Accelerated Researchers: Psychosocial Risks in Gendered Institutions in Academia

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In recent decades, scientific institutions have undergone significant changes due to new managerialism and the application of excellence in research. This research model has given rise to tensions related to increasing pressures and working demands in a competitive international environment that accelerate the pace of academic life. In addition, precarious working conditions and job insecurity have affected academics' lives and careers. Academic literature has already addressed these organizational changes and their impact on academics, however, few studies have focused on psychosocial risks related to time constraints, meritocratic pressures and career insecurity from a gender perspective. This analysis is relevant given the gendered distribution of responsibilities and the evidence of gender biases in academia that hinder the advancement of gender equality in scientific institutions, as the persistent lack of women at the top of research careers show. In this paper, we explore the psychosocial effects of the new organizational model of science characterized by accelerated time regimes and precarious working conditions from a gender perspective. We draw attention to gender-based discriminatory practices that may yield an accumulative effect on the well-being of women academics. We analyze 36 interviews from women and men researchers from five areas of knowledge in Spanish universities and research centers, following a 'gendered institutions' approach. The results highlight psychosocial risks for both men and women academics as a result of accelerated work organizations, intensified by uncertainty and hyper-competition due to lack of positions. The hegemonic male work model characterized by total availability confirms academia as a gendered institution, especially damaging women's well-being and careers, as well as those of men committed to care responsibilities – challenging motherhood explanations – which may discourage them from the pursuit of gender equality. Our findings highlight discriminatory practices toward women academics which create psychological harm and feelings of being unwelcome, putting their career progression at risk. Lastly, we suggest a different model of work organization following the implementation of a culture based on an 'ethics of care' feminist approach.

Keywords: gender, academia, time, well-being, precariousness, scientific careers

INTRODUCTION

New managerialist practices and the application of excellence and competitiveness in research institutions (Deem, 1998, 2001; Shore and Wright, 2000; Van den Brink and Benschop, 2012a) have increased working rhythms, accelerating the pace of the academic life (Ylijoki and Mäntylä, 2003; Gill, 2009, 2017; Walker, 2009; Vostal, 2015). This has impacted in researchers' experiences, raising constraints in the academic practice and psychosocial risks, as some studies focused on academia have mentioned (Morley, 2005; Lynch, 2006; Sparkes, 2007; Menzies and Newson, 2008; Gill, 2009; Burrows, 2012; Leathwood and Read, 2013; Knights and Clarke, 2014; Mountz et al., 2015; Vostal, 2015). According to the European Agency for Safety and Health (Eurofound and EU-OSHA, 2014, p. 10) "psychosocial risks at work" refers to the likelihood that certain aspects of work design and the organization and management of work, and their social contexts, may lead to negative physical, psychological and social outcomes."

The audit culture that measure research performance through quantitative indicators, is identified as the origin of increasing stress and anxiety (Morley, 2005; Lynch, 2006; Burrows, 2012; Leathwood and Read, 2013; Knights and Clarke, 2014; Felt, 2017). Uncertainty over research careers and precariousness in the academic labor market also affect the working conditions shaping researchers' career development and personal lives (Gill, 2009; Müller, 2014; Fochler et al., 2016; Bozzon et al., 2017; Heijstra et al., 2017). However, few studies are focused on psychosocial risks of time constraints and precariousness from a gender perspective (Acker and Armenti, 2004; Menzies and Newson, 2008; Gill, 2009; Mountz et al., 2015). Many studies report gender biases in academia – centered, among others, on the lack of recognition, old boys' networks, gendered construction of scientific excellence and harassment (Fitzgerald et al., 1988; Rossiter, 1993; Wennerås and Wold, 1997; Steinpreis et al., 1999; Bagilhole and Goode, 2001; Gupta et al., 2004; Van den Brink and Benschop, 2012a; Jagsi et al., 2016) – which impede the advancement of women researchers and add an accumulative risk on their psychological well-being.

Our research explores psychosocial risks experienced by women and men academics emerging from accelerated time regimes and precariousness from a gender perspective. We also pay attention to specific gender-biased attitudes that may exacerbate psychosocial risks on women. The study focuses in Spanish academia, drawing on 36 interviews from five different research and academic institutions. We firstly present the literature review addressing: (a) the influence of acceleration and audit culture on the well-being and practices of researchers; (b) the impact of uncertainty and precarious working conditions on researchers; and (c) gender inequality in academia with a specific focus on time regimes. In the methodology section, we describe the design of the fieldwork and analysis. We adopt a content analysis methodology drawing on a *gendered institutions* approach (Acker, 1992). In the results, we show psychosocial risks from a gender perspective related to (a) time constraints due to increased work expectations, (b) lack of positions, labor precariousness and career uncertainty, and (c) invisible

and specific discriminatory practices on gender basis. In the discussion, we underscore the main results and limitations of the study, and lastly, we explore policy implications and conclusions.

LITERATURE REVIEW

The Impact of Acceleration and Audit Culture

Scientific excellence has been "discussed primarily in terms of productivity" and measured by indicators as part of new managerialist audit practices in recent decades (Deem, 1998, 2001; Shore and Wright, 2000; Van den Brink and Benschop, 2012a, p. 508). These practices are based on "critiques of professional power" and used to boost outputs and to seek differentiation between individuals, institutions, and countries in a competitive international environment (Deem, 1998, p. 51, Deem, 2009). Indicators, that were originally conceived as sources of information, nowadays enact *academic value* – especially regarding journals impact factor – that guides crucial decision-making processes, such as funding achieved or career progression (Burrows, 2012).

Within these organizational changes, researchers' demands and expectations have increased leading to an acceleration of academic working pace (Ylijoki and Mäntylä, 2003; Walker, 2009; Müller, 2014; Vostal, 2015). Vostal (2015, p. 298) points out tensions between increasing workload and unchanging temporal resources which "might have particularly unfortunate implications – for social environments, human relations, mental health and well-being." In their study of time in academia, Ylijoki and Mäntylä (2003) find four temporal structures in conflict: schedule time (externally imposed timetables), timeless time (in-depth time needed for reading and writing), contracted time (referring to uncertainty and limited time of contracts) and personal time.

Some works mention audit culture as a source of stress and anxieties under constant self-monitoring and self-discipline (Morley, 2005; Lynch, 2006; Walker, 2009; Burrows, 2012; Knights and Clarke, 2014; Walker, 2014; Mountz et al., 2015). Morley (2005, p. 86) describes "stories of occupational stress, illness, alienation, fear, and resentment" among academics that highlight governance by numbers and rankings. On the one hand, the scarce time to perform research properly triggers feelings of vulnerability, failure, self-doubt, *imposter syndrome*, and occupational insecurity (Knights and Clarke, 2014). On the other, personal time for self-care, family or other interests, is "something that is lacking and constantly at risk of being excluded" which leads to academics' burnout (Ylijoki and Mäntylä, 2003, p. 68).

Audit culture also affects the working environment as time constraints and output pressures give rise to individualistic strategies (Sparkes, 2007; Müller, 2014; O'Neill, 2014; Clarke and Knights, 2015). In this respect, some authors report that social relations are damaged and individual identities are *contaminated* by competitiveness, eroding friendly relationships and companionship in the workplace (Morley, 2005; Sparkes, 2007; Baker, 2010). Ostensibly, poor quality of work is also a

side-effect related to the achievement of excellence as defined by quantitative indicators, which contrasts with a focus on a wider-ranging impact of the academic work – research, teaching and service – on society and the students (Lynch, 2006; Walker, 2009; Hartman and Darab, 2012; O’Neill, 2014). This also creates psychological tensions in academics such as feelings of frustration and a loss of meaning related to ethical and professional values (Knights and Clarke, 2014).

Grant culture or *projectification*, meaning the “organization of research through third-party funded projects” (Felt, 2017, p. 55), is becoming another major source of pressure to pursue research careers and to be promoted. Not only continuity depends on the funding achieved in many cases, but also professional identity and self-image become connected to the grants obtained (Knights and Clarke, 2014; Morley, 2016). Projectification also defines researchers’ strategies in predefined units of time: “[K]nowledge production must now be packaged in (generally) 3-year units, and publications are required during this time-span to demonstrate the worth of the investment” (Felt, 2017, p. 55). Research is structured in a standard and compressed way and different processes or unexpected events might not necessarily fit with the diversity of researchers’ experiences, which might cause stressful situations.

The promise of peer recognition sustains the work model of researchers in academia (Knights and Clarke, 2014), keeping them in a constant rat race for merits while dealing with the necessary time for self-care or the care for others. This creates conflicting feelings: “We [researchers] experience over-work, stress, guilt and anxiety as well as, if we are lucky, pride, relief and joy. We want to escape, but we are continually seduced by the potential pleasures on offer – either that and/or we simply need the job” (Leathwood and Read, 2013, p. 1172). However, expected rewards have a negative side as a result of rejection fear and unsuccessful aspirations, what is a highly frequent experience in academia – for instance, highly-ranked journals usually “reject 95% or more of submitted articles” (Gabriel, 2010, p. 763, cited in Knights and Clarke, 2014, p. 344).

The Impact of Uncertainty and Precariousness

New managerial practices also attempt to “reduce public expenditure and impose tighter monitoring and auditing” (Deem, 1998, p. 51; Shore and Wright, 2000) that jointly with austerity measures have diminished working conditions. Permanent positions have decreased while new labor categories characterized by low salaries and instability have fragmented the labor force (Hey, 2001; Slaughter and Cantwell, 2012; Conesa and González, 2018). An increasing ratio of uncertainty and precariousness has extended in the form of short-term and/or part-time contracts (Steinthorsdóttir et al., 2016) which may aggravate anxiety. Following Gill (2017, p. 5), “[m]any are on zero hours contracts – or do not even have contracts – and often find themselves burdened with tutoring or grading responsibilities.”

Lack of permanent positions intensifies *hyper-competition* (Fochler et al., 2016) with a large number of academics forming a bottleneck (Conesa and González, 2018). This situation

reinforces acceleration of working pace as researchers in early career stages and in non-tenure track positions struggle to increase their productivity in shorter periods of time with lower resources (Müller, 2014). In this competitive environment, working and living to anticipate and secure the future (Ylijoki, 2010; Müller, 2014) is fundamental since “[t]here is always someone who will work longer hours and produce even more ‘products’ to justify their position in the pecking order of the academy” (Walker, 2014, p. 62). Hyper-competition, therefore, hampers the rational utilization of work time and the adequate conditions to safeguard researchers’ well-being. Job precariousness and temporal constraints hinder researchers’ personal plans, such as having a family (Bozzon et al., 2017) because career stability arrives at later stages (Felt et al., 2017).

Budget cutbacks derived from the economic crisis have urged governments to push universities to apply for external funding, even though success rates are low due to wide competition (European University Association [EUA], 2015). For instance, the Horizon 2020 EU programs report a success rate of “approximately 14% in first 100 calls” (European University Association [EUA], 2015 p. 12). This pressure interferes in researchers’ work, particularly when they hold temporary contracts or they depend on grants to maintain their contracts, separating academics between winners and losers (Morley, 2016; Felt, 2017). Therefore, career progression relies on researchers who become responsible for their professional future (Gill, 2009; Leathwood and Read, 2013).

Some scholars have described this situation as an *affective economy*, indicating that hyper-competition and lack of career stability create emotional dependence on success (Müller, 2014; Fochler et al., 2016), which may lead to flawed scientific practices such as *salami-slicing*, text recycling or fraud (Lutz, 2012; Felt et al., 2017; Horbach and Halfman, 2017). Similarly, and according to Heijstra et al. (2017), fear of losing continuity makes academics in non-stable or precarious positions accept more time-consuming tasks, coined ironically *academic housework*. They usually accept the intensive work expecting a mid-term improvement in their position (Heijstra et al., 2017), perceiving that “a foot-in-the-door [is] a way of gaining a ‘proper job’” (Gill, 2017, p. 5). Women are usually reported to sustain high rates of part-time work and fixed term contracts in academia (Van den Brink and Benschop, 2012a; European Commission, 2016, p. 102), as well as undertaking a high proportion of academic housework (Heijstra et al., 2017).

Gender Inequality in Academia and the Impact of Academic Time Regimes

Although we would agree with the idea that not all academics experience accelerated academia as a constraining experience (Vostal, 2015), social factors such as gender may have a differential impact on women’s well-being. Many studies report inequality practices, revealing academia as a *gendered institution* (Acker, 1992; Van den Brink and Benschop, 2012a,b). The focus of these studies ranges from misrecognition and

biased assessment procedures based on gender (i.e., deemed less competent, judged harder or judged on their physical appearance), to old boys' networks and gendered scientific excellence (Rossiter, 1993; Wennerås and Wold, 1997; Steinpreis et al., 1999; Bagilhole and Goode, 2001; Gupta et al., 2004; Van den Brink and Benschop, 2012a,b) as well as sexual harassment (Fitzgerald et al., 1988; Jagsi et al., 2016), among others. Gendered practices governing academia indicate major pressures and difficulties for women overcoming psychological health risks.

Scientific excellence as assessed by quantitative rates and number of publications means that "time, and not quality, accounts for a large part of the appreciation," which emerges as an unspoken rule that goes uncorrected for part-time researchers and those bearing more care responsibilities (Benschop and Brouns, 2003, p. 199; Van den Brink and Benschop, 2012a). As a gendered institution, academia reproduces the hegemonic male model of total time availability and devotion to work (Acker, 1992, 2006; Bailyn, 2003; Bleijenbergh et al., 2012; Bozzon et al., 2017). Care responsibilities are still understood as a women's issue and rarely raised by men, leaving the model unquestioned (Van den Brink and Benschop, 2012b; Herschberg et al., 2014). Regarding the remaining gendered division of labor, some women are expressly unwilling to apply for promotion due to lacking the time and energy necessary for work-life balance (Baker, 2010). Although women currently working in the sciences are in no doubt about the importance of their professional careers and having more collaborative partners, there is still a gendered asymmetry of power in daily domestic and familiar responsibilities (González, 2014). This situation becomes especially onerous in international mobility periods, where women have to juggle complex decisions regarding their multiple roles (González and Vergés, 2013; González, 2014).

Although the topic of time and gender is often mentioned few studies have focused on women's psychosocial risks, or the embodied effects related to time constraints and precariousness. Those that highlight these phenomena state that more research on this "too rarely discussed" topic is needed (Acker and Armenti, 2004; Gill, 2009; Mountz et al., 2015, p. 1236). High levels of health risks are reported, caused by sleep deprivation and fatigue – especially dealing with motherhood – and anxiety about future work, as the most common (Acker and Armenti, 2004). Gill (2009, p. 9) highlights that those women who want to have children might feel unable due to the intensification of demands that "make[s] it extremely difficult to manage" to do so, or job insecurity "that makes it too late." Besides lack of sleep, Menzies and Newson (2008) report that women show higher rates of different indicators of stress compared to men. Due to their positions as 'outsiders' in academia, they have a greater pressure to present themselves as worthier, which may compel them to internalize to a large extent the precepts of high productivity expectations (Aisenberg and Harrington, 1988; Acker and Armenti, 2004). Embodied effects and affective states, such as overload, hurt, distress, shame, fear, isolation and guilt, are connected to fast regimes of time and quantitative metric-oriented careers in academia (Gill, 2009; Mountz et al., 2015).

METHODOLOGY

The Study

This study is developed within the framework of the GENERA project, which aims to compare scientific performance and academic cultures in different disciplines and research institutions in Spain from a gender perspective. We conducted 10 case studies based on a qualitative methodology including biographical interviews and document analysis of the recruitment policies, institutional web page content, and focus groups.

For this paper, we address psychosocial risks of women and men academics analyzing data gathered from interviews from five case studies located in different Spanish regions: three university departments and two research centres (see **Table 1**). They cover five fields of knowledge: humanities, architecture, telecommunications, environmental sciences, and biomedicine.

We analyze 36 semi-structured biographical interviews (lasting from 60 to 180 min, audio-recorded and transcribed) conducted in 2015 and 2016. They are comprised of a balanced number of women and men at each stage of the research careers within these institutions (adjunct professors, junior and senior post-doc positions, associates, full professors, fellow researchers, senior researchers and leaders of research groups). All academics interviewed were full-time employees except four women adjunct professors. Their ages ranged from 28 to 67 years.

The biographical method based on personal interviews allows the researcher "to apprehend the prominent experiences from the life of a person and the definitions that person applies to that experiences," therefore supposing an appropriate method to approach interviewees' experience of psychosocial risks (Taylor and Bogdan, 1984/1992, p. 102). The subject matter of the interviews addresses professional and personal history, relevant moments in their careers, presence or absence of mentoring and institutional support, their experience on selection and promotion processes, scientific practices, time organization, future expectations and aspirations, and main obstacles experienced in their lives/careers.

A key informant from each institution put us in touch with the department director or a superior manager of the research centers who provided approval to undertake fieldwork – having been previously informed of the goals and characteristics of the study – and gave access to members of the institution, and to internal documents concerning hiring processes. The key informant also made initial contact with researchers, methodologically selected from a pool of candidates in correspondence with a theoretical sample and provided us their email addresses. We agreed to send

TABLE 1 | Type of institution, field, and number of interviews.

Institution	Field	Number of interviews
Public University	Humanities	8 (4 men, 4 women)
Public University	Architecture	8 (4 men, 4 women)
Public University	Telecommunications Engineering	8 (4 men, 4 women)
Research Centre	Environmental Sciences	4 (2 men, 2 women)
Research Centre	Biomedicine	8 (4 men, 4 women)

a report outlining the main results and recommendations related to gender advancement and to receive their (voluntary) feedback, subsequently incorporated in the final report.

The participants were invited to take part via an email announcing the aims of the study, the methodology, the duration and procedure of the interviews (audio-recorded), and providing information regarding the privacy, confidentiality, and anonymity of the gathered data. A more detailed document was attached containing the name and funding program of the study, team members involved, abstract and main objective, methodology, our ethical commitment to the research, and communication of the final report prior to the publication of results. In this document we also provided information about the expected impact: the presentation and publication of results in scientific conferences and journals, and the dissemination of main results and good practices to policy bodies and to the general public and media. Following their positive response, we arranged a date for carrying out the interview and, immediately before starting the interview, we established verbal informed consent, stating the following: the objective of the study; that the interview would be audio recorded; that all personal data and information used would be anonymized and only accessible to the members of the study team; that they were free to ask any questions about the project at any moment, to stop the interview at any moment or to avoid replying to any of the questions for any reason. Verbal informed consent was obtained from all research participants regarding research participation.

Our commitment to safeguarding interviewee anonymity has resulted in the use of fictitious names and the erasure of any personal information that may identify them. Ethics approval was not required by the funding organization, national regulations, nor the university where the research was undertaken.

The Analysis

We conducted a qualitative content analysis of the interviews. The analytical strategy is inspired by the method of constant comparisons in a spiraling process developed by Corbin and Strauss (1990/2015). Firstly, from an inductive process we highlighted the topics found in the interviews (codes) and, through several comprehensive readings, we detected commonalities (categorizations). Key questions around time, work intensification, precariousness, uncertainty, and discrimination emerged in connection with psychosocial risks and health issues and their possible relations to gender. Secondly, the quotations concerning previously mentioned key issues were constantly compared both within the interview discourse and between the interviews as a whole, examining pieces of data against each other to search for similarities and differences (Corbin and Strauss, 1990/2015). On one hand, this refines key questions into main categories (time regimes, working conditions, and discrimination practices) and, on the other, identifies variations and commonalities, leading the analysis to a more abstract level, following *theoretical comparisons* (Corbin and Strauss, 1990/2015). During a third phase, we applied consecutive comparisons contrasting interview discourses and main categories with the existing literature following the *gendered institutions* approach (Acker, 1990). Throughout this

phase, we aimed to uncover novelties with respect to other studies, attaining in-depth and new knowledge. In a final phase, we reexamined our findings in order to assess the interpretation of data and select the most relevant quotations that connect the theoretical analysis with the fieldwork. In all of these phases we used analytical strategies, such as a special attention to language, expressed emotions, metaphors, different meanings of words, contrast examples and negative cases (Corbin and Strauss, 1990/2015).

Our gender analysis draws on the concept of *gendered institutions* developed by sociologist Acker (1992, p. 567): “The term “gendered institutions” [sic] means that gender is present in the processes, practices, images and ideologies, and distributions of power in the various sectors of social life,” referring to institutions such as the state, the economy, politics, or academia (Acker, 1992). Gender is embedded in organizational functioning, being that organizations are not gender neutral (Acker, 1990). Gendered processes are referred to by Acker (1992) more specifically as procedures that shape hierarchies, construct images and symbols, personal interactions based on *doing gender* and construction of the gendered self through ongoing accomplishment (see West and Zimmerman, 1987). According to Acker (1990, p. 568), “understanding how the appearance of gender neutrality is maintained in the face of overwhelming evidence of gendered structures is an important part of analyzing gendered institutions.”

RESULTS

A great variety of institutions make up the Spanish research and innovation ecosystem (universities, research centers, R&D enterprises, and other organizations) and they display different cultures regarding internationalization and competitiveness. In this study, time constraints are connected to high pressures surrounding research performance (i.e., publications and projects) and high teaching workloads in universities, although productivity expectations depend on departmental cultures and types of research center.

Psychosocial Risks in Accelerated Male Time Regimes

Work organization and expectations in academia follow a time pattern that entails total availability related to high demands and research productivity. This feature of academic work is linked with hegemonic masculinity: “someone who gives total priority to work and has no outside interests and responsibilities” (Bailyn, 2003, p. 139; Acker, 2006; Bleijenbergh et al., 2012), that is, a white, middle-class and male breadwinner. In that context, personal time is neglected because of the centrality of work and the idea that a good and efficient academic should work long hours. This affects many women and men researchers following the same organizational and hegemonic masculine patterns. Therefore, those researchers with more responsibilities outside professional spheres – mainly women due to gendered division of work (Acker, 1992) – are highly exposed to psychosocial risks; although as we have found in the fieldwork, some

men, committed with care responsibilities also endure similar difficulties.

Time Schedules and Obsession With Scientific Productivity

The academics interviewed devote more hours to work than the established in their labor contracts. Their schedule is determined as 'extremely exhausting' in the pursuit of merits and maximum productivity. Both women and men have interiorized this professional commitment which provokes psychosocial risks:

When I started the thesis, I worked from Monday to Sunday, 10 h a day, for 3 years and I burned out. It drained my energy, my strength and, finally, I decided not to work on weekends for my psychological well-being (...). You cannot work from Monday to Sunday for years without consequences. You realize that you don't go out, you don't have social life, I didn't see my family (Miguel).

Despite his concerns about health risks, Miguel continues to overwork, as research performance is a requisite in the scientific career while time for family and social life can be relegated (Ylijoki and Mäntylä, 2003; Bleijenbergh et al., 2012). A culture of long hours is normalized to such an extent that not following this unwritten rule could mean, as Miguel states, that researchers do not cherish science sufficiently: "in science there is this culture that you have to suffer, otherwise [it seems] you don't want it enough."

Pressures related to the attainment of high citation impact and publication rates become an obsession for researchers given that these measurements enact academic recognition and value (Burrows, 2012). The *publish or perish* culture could easily entail abuse of working conditions, since academics may become caught up in institutional demands, misreading labor relations, which constitutes a threat to researchers' well-being. In the quotation below, Mar explains how the high demands from her female boss exceed current legislation on working conditions:

My boss is a person who lives working 7 days a week, seven! And 12 months – or maybe 11 and a half – only working! I mean that she... her obsession is to publish articles, the greater the impact the better... and, if you have to do other things outside work it is simply not possible. You should leave whatever you want to do because you have to do this [research] right now! (...). One day I received maybe 10 or 15 emails from her saying 'this is urgent'... whatever it was. Besides that, I received a text message, and if she had been able to come to my home, she would have come to. I knew what she was like this before and I accepted it! But also, I said to her that I didn't want to live only for this [work]. And she accepted it too. I mean... (Mar).

Regarding international mobility, high pressure work situations intensify psychosocial risks because researchers lack support and networks (González and Vergés, 2013). Brenda felt under pressure in the United States, where her male boss did not allow her to have free time and holidays, compelling the entire research team to work all day long at the office. Brenda

reports that she was living in a bubble in which only work existed (days meant an endless loop). Post-traumatic symptoms are evident even now whenever she receives her current boss' calls. She highlights her difficulties in caring for her husband when he broke his leg in the US:

And then, he broke his leg, I was stressed because I didn't have friends, everybody was at home, winters there [in the United States] last 7 months... I only ate junk food. It was the only thing that made me happy: to eat and smoke. My husband put on 17 kilos and I put on 11 kilos in a year. I ate a lot. It didn't matter what you wore, you didn't care about anything. You lose perspective... You have to go [to the office] the next day and deliver the results. If that night you can't have dinner or you keep working until 3 am, so be it. Because it's the only thing that matters in your life. And you are in this loop and it's hard to get out. It's difficult to stop... And I'm still... my boss calls me and I jump and show up at the lab quickly... It is still in my head. I feel frightened. I'm afraid of people saying 'she is lazy'... (Brenda).

This high-pressure environment, abuse in power relations and lack of tools and support (she raises her concerns about her visa status considering the possibility of quitting the contract) eventually led to feelings of isolation and anxiety that produced a lack of self-care and an emotional dependence on giving results to her boss (Müller, 2014; Fochler et al., 2016).

Care and Professional Values in Accelerated Time Regimes

When interviewees talk about family responsibilities, women refer to tight schedules, scant sleeping hours, and high levels of exhaustion (Acker and Armenti, 2004; Mountz et al., 2015). Care work distribution with partners and the support of colleagues, especially in scheduling and in peer recognition, are crucial to maintain the necessary energy and motivation. Support from other relatives when it is not externalized – only mothers or female relatives are mentioned – is necessary to deal with high amounts of work or short-term mobility. Psychosocial risks appear more intense for women where partners are absent (single or divorced mothers), relatives are not close (or nonexistent) or home responsibility is recognized as unequally distributed. Flora, who leads two relevant international grants, displays high self-control regarding scheduling at work-life balance. She reports feelings of isolation owing to a lack of understanding from her colleagues who, she explains, want her to spend more time in the workplace; time with her daughters is paramount and care duties are unequally distributed between her and her partner. To solve this conflict, she has developed an exhausting time regime that she calls *being chronometered*, a timekeeping self-discipline that she implements to deal with work and family, avoiding any possible time wasting:

[If] You are the only one in a group of 12 people who is a mother or a father, it's complicated... Let's say that you feel different. You feel [like you are] in a different world, that... of course, you have chosen... but... you would also like to spend more time with them [her colleagues] instead of *being*

chronometered all the time. . . Now, you see, I'm looking at the clock all the time, 'I have 15 min left.' It's always like this, and it is very exhausting. But. . . could I do it differently? I don't know... I could control my time less frequently but then I'm not with my daughters and that's not a way to live. I feel responsible for them. . . it's like a constant double responsibility (Flora).

Stress and depletion impact on researchers as a result of a work organization that outweighs spare time, family time and care time, since both family and care time are traditionally undervalued and unpaid work-time (Tronto, 1993; Torns, 2005). Even if women researchers strictly control time for work and family, they embody feelings of guilt due to a lack of time for caring, failing to accomplish other researchers' expectations in a masculine work model, and failing to spend more quality time in each activity:

I always feel guilty about everything: the students, the colleagues... You know? I always leave [work] a bit early [to be with her daughters]. Then, I work every night but it's like. . . Ok, you are putting your daughters to bed or giving them a bath, and you are thinking 'Oh, I have to reply this email!'; 'Oh, I have to finish this!'

Flora places the responsibility for the situation as a whole on her choices and her own time management, assuming gendered clashing patterns: she deals with caring responsibilities while assuming the breadwinner role of a more-than-full-time work commitment. Tensions are intensified where there are high professional and family ethics and values that cannot be honored (Knights and Clarke, 2014). She does not question general work organization, nor does she call for a more reasonable and balanced time distribution, because she already experiences the lack of understanding of her colleagues without family responsibilities and the loneliness of being an outsider in a masculinized environment (Aisenberg and Harrington, 1988).

Few men raised similar concerns on family issues. Those who did expressed worry and distress about their productivity and career prospects because of difficulties in dealing with commitments in both spheres. Pablo explains that he is dealing with anxiety and describes himself as being a burden because he is no longer driven by high productivity: "Well, now, to break my back is more difficult. I mean, I have three children. Before I was in the lab every weekend and now I am only [there] exceptionally."

A culture of excellence in science based on productivity (Van den Brink and Benschop, 2012a) creates harmful conditions that lead researchers to think they are not fast enough in terms of productivity, and as such that they are worthless. This condition displays an affective economy based on success dependency (Müller, 2014). Expressions such as "break my back" show an extreme devotion to work and being burned out means *failure* in research performance norms. Mario explains that he is held back in his career when compared to those colleagues who have advanced faster than him. He cites that he is a picky person, working alone and methodically, and that family responsibilities compel him to spend more time with his wife and children

than other colleagues do: "my family needs a lot from me." Like many other academics in university, he values knowledge transmission and prefers devoting time to teaching ("[I] prioritize my students") instead of research, and placing family before scientific productivity (Lynch, 2006; O'Neill, 2014). He represents a reversal of the traditional male model in academia and develops an alternative competitiveness based on an individual scheme that slows his publishing output.

Care responsibilities mentioned by men researchers is a novelty in the Spanish context, since it is a topic barely raised, as Herschberg et al. (2014) also note in the context of the Netherlands. Despite discourses of worry over career advancement, male frustration and anxiety seem to be more related to a desire to have time for family and to take on care responsibilities, while women's appraisal of family is deeply interiorized and taken for granted. Male researchers are not outsiders within academia, whereas women attempt to engage in both spheres at the same level owing to an awareness that they need to demonstrate their value as workers (Aisenberg and Harrington, 1988).

Psychosocial Risks and Precariousness: A Gendered Race for Scarce Resources

Austerity has weakened working conditions in academia. Among European countries, Spanish academia has been strongly affected by cutbacks (European University Association [EUA], 2015; Conesa and González, 2018). This creates a psychosocial impact on researchers connected to long-term precariousness, career prospects, family strategies and unwilling mobility. Lack of positions, especially tenured or tenure-track, is a common situation that increases hyper-competition, reinforcing an accelerated academy (Müller, 2014; Walker, 2014; Fochler et al., 2016). However, there are differences between universities and research centers.

Public Universities

Competitiveness and precariousness within universities are especially connected to a lack of positions rising from the freezing of replacement positions (Amoedo-Souto and Nogueira, 2013; Conesa and González, 2018). The result is a bottleneck situation in almost all public universities. This raises anxiety about the future as well as provoking the erosion of colleagues' relationships, creating unfriendly working environments and emotional problems (Morley, 2005; Sparkes, 2007). Personal tensions lead to embodied effects such as somatization, internal fears, and loneliness. Marta's words reflect this stressful environment where collegiality and well-being are at risk: "Because of these null replacement rates there are huge queues of people ready for promotion. And. . . it will be. . . a war! Come on!" (Marta). Tomás and his colleague, also a friend, had to deal with the situation of being offered the same position as lecturer. After receiving this offer, Tomás suffered abdominal pain as a result, on the one hand, to the need to compete against a friend, and on the other, to the fact that it represented an important step in a career offering very few opportunities for promotion or advancement: "When I came home, I had stomach ache... I mean. . . I had a

knot in my stomach... I was sick... Well, I suppose that's nerves..." (Tomás).

Long-term precariousness affects the careers and lives of researchers who become burned out and exhausted (Ylijoki and Mäntylä, 2003). Multiple demands combined with a lack of stability is a common formula for researchers expected to do more with less, absorbing their energy and motivation (Deem, 1998; Hey, 2001; Walker, 2009). In some universities there are long-term non-stable positions held by academics waiting on job vacancies for more than 10 years, contracted as temporary tenure-track associate professors or part-time, fixed-term adjunct professors with low salaries (Castillo and Moré, 2016).

Jorge explains that a long-term non-permanent position led him to burn out due to maintaining a precarious post for many years – a position that did not allow him to undertake research projects – all the while struggling with multiple demands and waiting for a position that never arrived. He had committed himself to maintaining a more managerial-based role as a foot-in-the-door (Gill, 2009) which led to personal and career setbacks. Dealing with the many quantified demands together with a precarious situation also affects the quality of teaching, clashing with professional values and bringing frustration (Lynch, 2006; Knights and Clarke, 2014):

All professors need to take on responsibility for the management of the university in order to understand how the university works, but it cannot be a priority because it makes you postpone research, it hinders your curriculum, and teaching also suffers. Students notice the lack of quality. You need to stop at some point because in the midst of so many demands, quality surveys, publications, stays abroad, excellence, teaching material... it is just impossible. (...)

For the last 2 or 3 years I have not had time to improve my teaching subjects: I have neither the head space nor the strength. I do not meet deadlines. (...) You end up burned out, profoundly burned out (Jorge).

Women in early careers hold adjunct professor positions (with one-semester or annual contracts and very low income), conducting *academic housework* and hoping their situation will provide the first step in their academic career, and are thus afraid of losing a very precarious position (Gill, 2009; Heijstra et al., 2017). This type of contract hinders career progression as it is designed for teaching support and stability is not guaranteed, a common situation in Spanish universities (Castillo and Moré, 2016). Sandra, in her forties, cannot advance in her research career despite a brilliant CV. Consequently, she conducts research in grueling working conditions:

This situation has been going on for the past 14 years and I'm tired because this position doesn't allow you to apply for research projects, doesn't allow you to... I mean, I renew the contract annually... I cannot create a research group, I cannot access funding, I cannot apply for European funding because my contract is very precarious and it is continuously renewed (Sandra).

Statistical reports from Spanish public universities (MECD, 2017) confirm Felt et al.'s (2017, p. 33) observations about the extension of the period during which scholars still count as junior, non-established academics. This situation generates feelings of helplessness and cynical responses: 'Being stable when you are 45 years... It's too much (...) I mean, mmmm, the future... (...) So... in my department, [laughs] this is the problem... The problem is that the Spanish university is a pile of shit and that's all I can tell you' (Cristina). This has consequences for both men and women's life plans in terms of housing, family, and the economic security necessary for different life circumstances (Bozzon et al., 2017), creating feelings of insecurity, worry, anxiety, or rage.

Research Centers

In research centers job positions rely on grants and projects, and thus the culture of internationalization and hyper-competitiveness is pivotal. Early career researchers deal with anxieties surrounding job insecurity as they realize there are few available intermediate or permanent positions and large numbers of predoctoral or postdoctoral researchers, which leads Miguel to state: "a research career does not exist." Brenda characterizes the workplace as hostile and unfriendly due to poor future prospects and high competitiveness:

(...) [T]he people that end up here are *very* competitive. There's one position for 450 PIs [principal investigators]. We all know these statistics... Very, very, very, very competitive. And your best friends are never in your field because you're fighting for the same grant, for the same money (Brenda).

Therefore, she refuses to become a principal investigator (PI), given that this position implies a total immersion in competitive and pressuring practices related to *projectification* and audit culture. Constant stress and limited resources become entangled in an affective economy (Müller, 2014) that leads researchers to feign being the best:

Would you like to be a PI?

No. No. I wouldn't. The pressure they suffer... especially the young ones. Not those who have already built their fortress and live comfortably... The pressure they [junior PIs] are under to find money, the pressure to publish, the pressure they suffer to talk publicly, to pretend that you're the best, otherwise they eat you. And this is related to your personality eh... of... of being the best of the best: 'I don't care about anything, and I never make mistakes.'

Brenda depicts the ideal researcher as a tough person, never making mistakes lest "they eat you." Even if academic work is presented as neutral, hegemonic masculinity values characterize work and leadership styles where aggressiveness and hyper-competitiveness contrasts with a supportive, friendly and kinder style (Acker, 1992, 2006; Van den Brink and Benschop, 2012b; Morley, 2016). Brenda is also concerned about future uncertainty and lack of economic resources due to budget cutbacks. Austerity measures, limited time regimes, hegemonic masculine environments and a desire to have a family may push her to abandon academia and look for a job in a different sector. A self-protection response from psychosocial risks emerges from her

words when comparing herself with another colleague working at the same institution:

‘(...) in my lab, there’s a guy who developed his career during the golden years of the leader [the boss] (...) Now he is 47 years-old. Now, the boss has no money. What is this guy going to do? I don’t want it to happen to me at 47 years old and with two children. I am still able to pack my bags and move, so I prefer to do it now.’

Gender, few grants available and accelerated time regimes intertwine in Flora’s decision, as she strives to overcome all these common obstacles. She defines academia as a rat-race, a pursuit of scarce resources (Müller, 2014), suffering from masculine hegemonic norms understood as neutral (Van den Brink and Benschop, 2012b). She is developing a brilliant career in a work environment where care work is worthless, which places her at a disadvantage (having to work faster in order to not fall behind):

A lot of women are in part-time work. In my case, I have done this Ph.D., I have went through everything for a goal [to be a scientist]... and I have a family! If I do not publish, if I do not have research projects, of course, I will lag behind the men, and if I am behind the men, I cannot win relevant grants and I won’t have other things [resources]. It was very clear to me: it is like this [to struggle bitterly for her career] or I have to start selling ice creams (Flora).

Academic aspirations taken in tandem with breadwinner and caring roles present genuine difficulties for women’s career progression. Pain and sacrifice represent a persistent state of affairs in academia in a gendered race for limited resources (Vázquez-Cupeiro and Elston, 2006; Ylijoki, 2010).

Psychosocial Risks Due to Sexism and Gender Discriminatory Practices

We have already identified practices and patterns embedded in male organizations which support evidence of academia as a gendered institution (Acker, 1992; Van den Brink and Benschop, 2012a,b). In this section we outline specific but invisible gender discriminatory practices based on gendered personal interactions and power distribution (West and Zimmerman, 1987; Acker, 1992) that emerge as a source of psychosocial risks exacerbated by work organization in academia. These practices are often hidden by a lack of awareness on the part of men and women in academia and are related to lack of recognition, lack of authority and sexual harassment suffered by women, which lead to exclusionary effects such as feeling unwelcome. Only exceptionally, women express discomfort with discriminatory attitudes toward them, conveyed as anger, sadness, and frustration. We explore these psychosocial effects through the examination of evaluation processes, daily work, and particular events within the working environment.

The climate created in recruitment and selection processes strongly influences future actions and performance of researchers, encouraging (or discouraging) them to pursue their aspirations in academia. The evaluation process is stressful for candidates, such that disrespectful comments concerning personal life and doubts about professional competencies may

cause harmful states. Sexism, deeply rooted in our society, appears in evaluation meetings, provoking discomfort and anxiety in early-career women. During a fellowship interview, Brenda was asked gender-biased questions from an evaluator who inquired about her husband’s plans – he also being a researcher – assuming it may affect her career:

I did the interview, one of them [evaluators] was lovely – there were two – but the other destroyed me. And, obviously, he was going to ask [uncomfortable] questions... but of course, these questions were already what I went through every day. ‘Oh, really? Why have you decided to come here? Do you think you are able to be a PI here? We don’t offer internal promotion here.’ And I replied: ‘Neither here nor any other place where I’ve been.’ ‘Is that so? And is your husband going to come along with you?’ (Brenda).

She related that her interview was difficult, and that the woman interviewed previously had left the room crying. Pressing women in the interviews appears as a legitimate strategy as it establishes the strength of character required to pursue a *challenging* career. Men, however, are not subjected to these kinds of questions imbued with gender stereotypes; firstly, the male model presupposes strong and secure candidates (Van den Brink and Benschop, 2012b), and secondly the breadwinner model takes for granted that men are in charge of family life while women are subordinated to male plans (Acker, 1992; Van den Brink and Benschop, 2012a,b; González, 2014).

Informal practices, such as their exclusion from decision-making and influential networks, prevent women’s progression in research careers (Bagilhole and Goode, 2001; Van den Brink and Benschop, 2012a). A senior female researcher in a male dominated institution explains that she had never been invited in decision-making meetings to pre-select future senior researchers which other senior, male colleagues attended. She states that this is not only a discriminatory practice but that it also has implications for diversity in the recruitment of researchers to the institution (i.e., not necessarily white male researchers). She feels angry and ignored since she is isolated from influential panels: “I mean, we [women] are not a flower jar for decoration. None of us!” (Tina).

Discrimination on a gendered basis is also manifested in the dismissal of women’s authority, misrecognition, verbal insults and even sexual harassment, which cause women discomfort and fear of losing their job. Inappropriate comments or insults are a hidden injury only mentioned in the corridors (Gill, 2009) creating toxic environments for women. Sonia explains that during a discussion about professional issues, her department director argued with her alluding her recent divorce: “He shouted that I was a nervous wreck because I was getting divorced. I felt very bad... (...) I thought that ‘a man does not receive this kind of comment!’” (Sonia). Sonia expresses indignation and rage that he would use her personal situation as a means of dealing with a professional confrontation.

Offensive comments from other colleagues undervalue and misrecognize women’s research competence. She also relates another male colleague’s comment about her saying: “‘You have

a rating of 19 on ResearchGate while I have 14. And I think this is because you are pretty. You have received a higher rating because of your photograph.” She explains her feeling regarding his comment: “I was stunned... Come on! Could it not be that they are interested in my publications?” She expresses indignation over the threat to her self-confidence and competence, considering his comments about her physical appearance as both inappropriate and sexist. This example illustrates that casual comments or even jokes between colleagues are still keeping women in a subordinated position.

Sonia spoke about sexual misconduct when she was a young student undertaking an internship in an automobile factory:

I had problems... just because I am a woman, I swear, because they treated me like a fool. I had two bosses in this company, one of them... he was good but the head of purchasing treated me as if I was silly! And, once... he... he touched me on my thigh (...). And I took his hand away and since that moment, there were bad vibes! Nothing else... between us, nothing else... Thereafter, I was unhappy in this job, the people... afterward, everything was bad (Sonia).

Such a situation came to generate negative feelings, disaffection in the workplace and finally the abandonment of her job. The “negative consequences for sexual non-cooperation” in rejecting *deliberate touching* was identified by Fitzgerald et al. (1988, p. 167) in academic settings. This signifies a double abuse: the unwanted touching behavior that leads women to feel uncomfortable (and carries with it the objectification of the female body at work, in addition to being treated as foolish), on top of the hostile environment following the incident (“bad vibes”) that threatens women’s well-being and constrains their career decisions (Connell, 2006).

DISCUSSION

By adopting a gender perspective, in this study we attempt to explore psychosocial risks that arise from an accelerated academy model (Vostal, 2015, 2016) embedded in precarious working conditions. We thus contribute evidence focused on time and gender regimes in academia and provide more in-depth knowledge about their psychosocial effects (Acker and Armenti, 2004; Menzies and Newson, 2008; Gill, 2009, 2017; Mountz et al., 2015).

We show academia as a gendered institution in which practices, images and values are defined by a male hegemonic norm understood as universal, neutral and disembodied (Acker, 1990, 1992, 2006; Connell, 2006; Mählck, 2012). Organizations are gendered, incorporating assumptions about gender in their performance and reproducing gender power relations (Acker, 1990).

Acceleration of academic working pace due to high and monitored expectations of scientific productivity, and reinforced by understaffing, increases workloads and corresponds to a work model that demands total time devotion and in which “family, community, and personal life are secondary” (Bleijenbergh et al., 2012, p. 23; Bozzon et al., 2017). Accelerated time

regimes draw on excellence and new managerial practices that generate long working hours, relegating private lives and self-care linked to personal well-being. Obsession with accountability and publication rates affects both women and men, damaging their health, and potentially resulting in negative power relations that intensify psychosocial risks.

This analysis goes beyond the motherhood explanations that are often mentioned as a means of addressing the ‘issues faced by women’ in research (Bozzon et al., 2017). Although time for caring responsibilities affects women careers, this issue does not take into account the diversity of women researchers and their different responses as per their own values and goals. Instead, we propose an examination of gendered institutions and the ways in which scientific organization shape researchers’ careers and lives and especially hinder women’s careers. This analysis entails an understanding of a gendered distribution of roles as regards professional and care responsibilities. Support from actors close to women researchers (partners, family, colleagues, and superiors) are paramount, although they still do not prevent them from experiencing exhaustion and stress as a result of the accelerated academic pace. Moreover, this support is usually hard to come by, as it depends on many non-controllable factors, and is particularly problematic during international mobility (González and Vergés, 2013; González, 2014).

Those men who want to contribute equally in career and caring responsibilities – and who begin to dare to talk about it (Herschberg et al. (2014) – also experience additional tensions in this accelerated and precarious labor framework, erected upon a universal and disembodied male identity as researchers. Academic work organization also penalizes non-traditional masculine identities, which may discourage more men from pursuing gender equality in the future. This finding reinforces our recommendations regarding the necessary changes in academic work organization with respect to researchers’ experiences, in order to prevent psychosocial risks and career disadvantages.

Psychosocial risks increase in parallel with job insecurity and precariousness. This yields hyper-competition (Fochler et al., 2016), erosion of collegiality, unfriendly environments, poor academic quality and burn out. Scarcity of positions intertwined with gender discrimination results in serious conditions for women who put up with an intense masculine work model jointly with caring responsibilities. Women make a great effort in the race for limited resources while trying to “manag[ing]e the unmanageable” (Gill, 2009, p. 11), taking on high levels of stress, discomfort and isolation.

Psychological harm is on the rise in gendered institutions, given sexism and discriminatory practices against women comprised of undermining, exclusion, isolation, objectification, mistreatment, and sexual misconduct. As Connell states, sexual harassment in gendered institutions impacts on women’s self-confidence in organizational settings (Acker, 1990, 1992; Connell, 2006, p. 838). Masculine power relations lead to feelings of being unwelcome that hinder their advancement within academic organizations (Fitzgerald et al., 1988; Jagsi et al., 2016).

Limitations

As academic researchers, the authors of this study are aware of the risks of bias and preconception in the methodological process, especially in the analysis of interviewees' discourses (Ylijoki and Mäntylä, 2003; Van den Brink and Benschop, 2012a). Taking into account that research is a situated human activity, we have tried to engage with *partial objectivity* (Haraway, 1988). We have been conscious of our positions while we have applied analytical distance through the constant comparison method and making connections with other research findings. This implies the revision of our own interpretations of academics' discourses, and discussion between the co-authors of this paper as a means of examining different meanings and seeking out counterexamples to validate findings. Although our research is influenced by our own trajectory, we have consciously avoided dismissing those examples questioning our own prejudices, placing the participants' words over our own experiences and understandings. Witnessing stress and worries about lack of time and self-care was the starting point for this research; some hypotheses were confirmed by the data from the fieldwork, whereas others were difficult to validate, such as, physical illnesses suffered by researchers that may remain hidden or neglected by interviewees' responses. Only one woman explicitly talked about sexual misconduct.

Despite difficulties in uncovering hidden symptoms, we found means of generating interviewees' openness and trust that cast light on significant evidence. Moreover, some researchers explicitly showed willingness to articulate their experiences of stress, exhaustion, indignation and feelings of uselessness and exclusion.

Policy Implications and Future Contributions

According to the evidence, the model of excellence based on quantitative indicators and high competitiveness needs to be addressed in academic organizations so as to promote well-being, quality in both research and teaching duties, and the inclusion of women in research institutions, particularly at senior stages and at decision-making levels.

Advancing in gender equality may require the application of an *ethics of care* feminist perspective that places care at the center of the political arena (Tronto, 1993; Carrasco, 2001; Mountz et al., 2015), and that counteracts a culture only based on (scientific) productivity and undervalues care work (such as 'academic housework'). This perspective understands caring as a crucial activity "to maintain, continue and repair our 'world' so that we can live in it as well as possible" (Fisher and Tronto, 1991, p. 40; Tronto, 1993, p. 103), supporting ideas of interdependency and vulnerability linked to all beings. In this sense, it questions the disembodied hegemonic masculine model promoting an alternative gender-balanced organization of work and responsibilities.

This overhauls the underlying argument that takes for granted that women should adapt themselves to gendered organizations, as the development of work-life balance policies seem to support. These policies are ambiguous and fundamentally focused on women, avoiding tackling inequalities in multiple work, family,

and societal spheres (Torns, 2005; Mescher et al., 2010). In the same vein, certain gender equality measures in academia such as mentoring, coaching, and quotas are only focused on "helping women to adjust to the male world," instead of changing academic institutions (Van den Brink and Benschop, 2012b, p. 81).

Institutional changes should include an understanding of self-care and care for others as important aspects in the sustainability of personal and social life (Tronto, 1993; Carrasco, 2001), taking into account time availability as a powerful resource that needs to be equally distributed (Conesa, 2017). From an ethics of care feminist perspective, governments and policy-makers should *care about* the effects and consequences of new managerial practices and its accelerated time regimes, requiring *attentiveness, responsibility, and constant evaluation* – including *willingness to listen* to academics' experiences for "managing the unmanageable" (Tronto, 1993; Gill, 2009, p. 11; Conesa, 2017). Changing academic institutions means, under an ethics of care feminist lens, to disrupt the exclusionary effects of gendered organizations.

In order to prevent psychosocial risks, we propose an extension of care culture, paying attention to work expectations and working time regimes, job security, healthy environments and respectful interactions which erode implicit and subtle biases. A culture based on the feminist ethics of care entails cooperation instead of competition, equal treatment and good working conditions, while promoting social justice and the encouragement of women's and men's advancement toward gender equality.

More concrete measures may include the assessment of quality through more qualitative than quantitative procedures (DORA, 2012; Hicks et al., 2015). As regards time regimes, an adaptation of schedule demands to more real and rational time resources (Ylijoki and Mäntylä, 2003; Vostal, 2015) is needed to take into account the sustainability of life, as well as a reversion of the long hours culture, that should be underpinned by labor rights. Other recommendations may entail a valorization of the different roles related to science and academic practice, and an understanding of the time needed to develop quality in teaching and research. Furthermore, less standardized and more flexible rules for projects and research outputs, in addition to an appreciation of diverse academic profiles and different types of epistemic cultures. Good working conditions should be guaranteed in order to prevent abuses of power driven by an obsession with productivity.

More research focused on the ethics of care feminist perspective to be applied in the academic context needs to be done. Psychosocial effects in the accelerated academy needs as well further contributions including an intersectional perspective that tackles other axes of inequality (Gill, 2009; Walker, 2009; Mountz et al., 2015).

CONCLUSION

This paper addresses gender equality in academia by examining the psychosocial costs of accelerated working time regimes, job insecurity, and gender discriminatory practices brought

about by excellence, audit culture and competition, adding a gender perspective. Going beyond explanations centered on motherhood, it tackles scientific organization via the *gendered institutions* approach (Acker, 1992), and suggests the application of an *ethics of care* feminist perspective (Tronto, 1993; Carrasco, 2001). Time constraints in academia penalize and exclude a diverse body of valuable researchers and approaches. This model, based on a hegemonic male norm, hinders women's professional and personal lives, as well as men's advancement toward gender equality.

AUTHOR CONTRIBUTIONS

EC designed the study for her doctoral thesis, conducted field work and analysis, and wrote the first drafts of

the manuscript and successive revisions. AG principal investigator of the main project, conducted field work and analysis, and contributed to the successive revisions of the manuscript.

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 **4. “SUBJECTIVATION
PROCESSES AND GENDER
IN A NEOLIBERAL MODEL
OF SCIENCE IN THREE
SPANISH RESEARCH
CENTRES”**

■
Vayreda, A. [Agnès], Conesa, E. [Ester], Revelles-Benavente, B.[Beatriz] & González, A. M. [Ana M]. (2019). **Subjectivation processes and gender in a neoliberal model of science in three Spanish research centres.** *Gender, Work and Organization*, 26(4), 430-447.
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ORIGINAL ARTICLE

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Subjectivation processes and gender in a neoliberal model of science in three Spanish research centres

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From a Foucauldian approach, neoliberal rationality in science can be understood as a form of governance of the self that produces mechanisms through which the subject is constructed and subordinated at the same time. In this study we examine subjectivation processes and gender in centres of research created under neoliberal scientific rationality. We analyse 19 semi-structured interviews of men and women researchers conducted in three highly competitive centres of excellence – a context rarely addressed in the literature of academic subjectivities. Following a critical discourse analysis, we show how subjectivation processes of neoliberal rationality result in two main discursive mechanisms of subjection that prevent or hinder alternative subjectivities and collective resistance, especially for women, presenting a double turn that we call: a ‘turn on oneself’ and a ‘gendered turn on oneself’. We conclude that these centres are spaces which provide the conditions of possibility to develop a scientific entrepreneurial self, excluding ‘other’ scientific subjectivities and preventing possible resistances that could emerge from them.

KEYWORDS

gender, neoliberal model of science, resistance, scientific subjectivities, subjectivation processes

1 | INTRODUCTION

Under neoliberalism, science has received greater recognition from governments as a place for economic progress and international positioning (Bastalich, 2010; Fassa, 2013; Fletcher, Boden, Kent, & Tinson, 2007; Morley, 2016). Academic institutions are considered motors of the so-called knowledge economy, now driven by new managerialism, the 'organizational arm of neoliberalism' (Lynch, 2014, p. 1), through audit and accountability practices (Deem & Brehony, 2005; Shore, 2008). In the name of excellence, the principle of productivity has become compulsory (Fassa, 2013; Van den Brink & Benschop, 2012a), thereby underpinning a generalized culture of performance (Giroux, 2002; Thomas & Davies, 2002). Research, in the form of publications in specific indexed journals, patents, funding achievement and industry relationships, has moved to the fore (Baker, 2010; Fisher, Atkinson-Grosjean, & House, 2001; Morley, 2016; Slaughter & Rhoades, 2000).

These new directions have brought changes in the academic profession and academic subjectivities. Academics are guided (and instrumentalized) through progression and rewards linked to their productivity while traditional values such as collegiality or academic autonomy have been eroded (Clarke & Knights, 2015; Grant & Elizabeth, 2015; Müller, 2014; Olssen, 2016; Parker & Jary, 1995). Alongside this, changes are also observed in the academic labour context which lead to greater precariousness and high levels of labour insecurity (Archer, 2008b; Gill & Donaghue, 2016; Parker & Jary, 1995). This situation prompts workers to value adaptability and flexibility and to develop entrepreneurial skills (Coin, 2017). Although new managerial values were supposed to bring gender equality into academia (Castaño, 2016), many studies stress major pressures on women to adjust to this highly masculinized culture where they still constitute 'the other' (Acker & Armenti, 2004; Grant & Elizabeth, 2015; Thomas & Davies, 2002; Van den Brink & Benschop, 2012b; Whitehead, 1998).

The majority of these studies are based on universities. However, universities have stopped being the only centres of knowledge production (Pestre, 2008). In this transformation, new organizations, such as centres of excellence, have been created to foster the most challenging lines of scientific research, with a strong focus on productivity, attracting funding and promoting transfer to the private sector, in order to change research culture (Fisher et al., 2001). According to this model of organization, over the last 15 years, new centres have been created in Spain. As explicitly differentiated from universities and other public research centres, these centres of excellence highlight the flexibility, autonomy and efficiency of their model of governance and their orientation towards excellence, high competitiveness and international impact (Cruz-Castro, Sanz-Menéndez, & Martínez, 2012; Giachi, 2016). The characteristics of these centres under neoliberal directives make them especially interesting cases to explore the constitution of scientific subjectivities.¹ Additionally, few studies have considered researchers working in these types of centres from a gender perspective, with gender-based analysis usually exploring academics in public centres or those affiliated to a university (de Cheveigné, 2009; Roth & Sonnert, 2010).

Neoliberal rationality can be understood as a form of governance of the self (governmentality) that produces mechanisms through which the subject is constructed (subjectivation processes) and subordinated (subjection processes) at the same time, forming subjectivities² (Brown, 2003; Butler, 1997; Foucault, 1994) that are always marked by gender. This ambivalence between subjectivation and subjection processes makes any type of resistance difficult and leads us to ask about 'the psychic form that power takes' (Butler, 1997, pp. 2-3) and the mechanisms through which resistance is counteracted or prevented (Davies & Petersen, 2005a, 2005b). Drawing on this approach, in this study we aim to shed light on how neoliberal governmentality in science is entrenched with gender in the constitution of subjectivities to understand (im)possible forms of resistance, a terrain explored in detail by few poststructuralist approaches and only in academic contexts (Archer, 2008b; Davies & Petersen, 2005a, 2005b; Thomas & Davies, 2002). Our first objective is to thoroughly explore subjectivation processes connected to different discourses which are present in the centres of excellence, and to consider how gender plays a part in these processes. Our second objective is to detect possible resistances and to understand how resistance is possible or not, especially in relation to gender.

To do this, we have selected three Spanish research centres working in the fields of physics and biomedicine, driven by a private management model and internationally known for their competitive research. Through a

poststructuralist critical discourse analysis (Chiapello & Fairclough, 2002), we analyse 19 semi-structured interviews of men and women researchers who occupy different positions in these centres.

In Section 2, we review the Foucauldian literature around neoliberal governmentality, subjectivation processes and the concept of resistance, as well as its gender implications in academia. In Section 3, we characterize the research centres selected and the qualitative methodology used. Section 4 shows a detailed analysis of three processes of scientific subjectivation: Individualisms; Love of science and the illusion of freedom and autonomy; Self-responsibility and blame. In Section 5, we discuss how subjectivation processes of neoliberal rationality in these centres prevent or hinder collective resistance, especially for women, presenting a double turn: 'a turn on oneself' and a 'gendered turn on oneself'. We conclude that these centres are spaces which provide the conditions of possibility to develop a scientific entrepreneurial self, excluding 'other' scientific subjectivities and preventing possible resistances that could emerge from them.

2 | NEOLIBERAL GOVERNMENTALITY WITHIN ACADEMIA

From a Foucauldian critical perspective, neoliberalism in academia is conceptualized as a form of governmentality, a non-coercive form of governing the soul, which needs a 'positive arm' that 'extracts compliance from individuals in order to engineer a market order' (Clarke & Knights, 2015; Davies & Petersen, 2005a, 2005b; Olssen & Peters, 2005, p. 319; Rose, 1999; Thomas & Davies, 2002). In this regard, Brown (2003) conceptualizes neoliberalism as a constructivist project (p. 41), with one of its basic principles being the promotion of new subjectivities (Thomas & Davies, 2002, p. 375).

The government of the self produces mechanisms by which the subject is constructed and interpellated in the subjectivation processes (Foucault, [1984] 1994). In his analysis of subjectivity under neoliberalism, Foucault ([1979] 2008) arrives at the nuclear figure of the neoliberal '*homo oeconomicus* as entrepreneur of himself, being for himself his own capital, being for himself his own producer, being for himself the source of [his] earnings [*sic*]' (p. 226). The figure of the entrepreneur of the self is thus continuously produced so that it is not fixed or completed, but designates a direction towards the transformation of subjectivities (Bröckling, 2005, p. 12). In the same way, the new academic subjectivity, driven by new managerial demands, points to the embodiment of an entrepreneur academic that is being instrumentalized through progression and rewards linked to their productivity, as a commodification of their effort (Parker & Jary, 1995).

2.1 | Subjectivation processes in academia and gender

Subjectivation processes are understood as self-governance mechanisms that are carried out, in part, through discursive practices that enable researchers to relate to themselves (and others) and judge themselves (and others) in order to achieve a self-transformation according to certain values (Gómez & Jódar, 2013). These processes depend on the different, and sometimes opposing, social discourses available at a given moment in history (Clarke, Knights, & Jarvis, 2012). Clarke and Knights (2015) note that academics are not passive receptors of these discourses and that they usually follow individualistic strategies, although there is room for tensions and ambiguities. In this sense, studies show how academic subjectivity is stretched when using different discourses (Davies & Petersen, 2005a, 2005b), up to the point of becoming an authentic 'battlefield' (Alvesson & Willmott, 2002; Archer, 2008a; Barry, Chandler, & Clark, 2001; Coin, 2017). Likewise, the presence of various discourses with different consequences has also been reported.

On the one hand, different authors have shown the uncritical adoption of neoliberal discourses and vocabulary associated with certain concepts related to success, which are characteristic of the ethos underpinning business (Davies & Petersen, 2005a, 2005b; Morrissey, 2015; Parker & Jary, 1995), but few have considered how gender plays a part in this (Davies, Browne, Gannon, Honan, & Somerville, 2005; Ledwith & Manfredi, 2000). Individuals are

conceived as being responsible for their own merits (Van den Brink & Benschop, 2012a) and for the success of institutions through articles published, patents produced and funding achieved. Some authors warn about the perils that this individualistic focus is producing, such as careering strategies, undermining collegiality and altruistic collaboration or ethical engagement (Clarke & Knights, 2015; Müller, 2014) in a highly competitive culture (Fochler, Felt, & Müller, 2016). Likewise, these changes tend to be considered unavoidable by academics (Davies et al., 2005; Davies & Petersen, 2005a, 2005b; Ledwith & Manfredi, 2000).

On the other hand, studies have identified the presence of discourses which romanticize the past and that conceal conservatism and exclusionary practices (Davies & Petersen, 2005b; Parker & Jary, 1995), in so far as they focus on the loss of a profession 'by scholars at liberty to pursue knowledge in a rigorous and critical way, enjoying the Independence of means and mind [sic]' (Weber, 1918a, 1918b, cited in Barry et al., 2001, p. 88). This imaginary also evokes the idea of academia as a vocation (Barry et al., 2001; de Cheveigné, 2009), education as a public good (Giroux, 2002), and the 'labour of love' that can be framed within a wider context of cultural and artistic professions (Clarke et al., 2012; Gill, 2009; Scharff, 2016) which share this intimate relation with work, and that can lead to a blurring of the boundaries between work and leisure (Clarke et al., 2012; Davies & Petersen, 2005a).

Neoliberal rationality is presented as ungendered, 'which produces an imaginary of a seemingly disembodied researcher' (Mählck, 2012, p. 65). Meritocracy perpetuates this neutrality (Roth & Sonnert, 2010; Van den Brink & Benschop, 2012a) when it denies the presence of gender in the name of fairness (Acker & Armenti, 2004). This discourse contrasts with that of the university as traditionally discriminatory in terms of gender, social class and race (Gill & Donaghue, 2016), as metaphors such as 'gentleman scholar' and 'exclusive men's club' illustrate (Thomas & Davies, 2002, pp. 378–379). By contrast, Bruni, Gherardi, and Poggio (2004) argue that neoliberal entrepreneurship is a cultural archetype underpinned by a masculinity associated with initiative, risk, the conquering of unexplored territories and the solitary hero, among other traits. Even gender equality practices can turn into inequality when they do not question the stereotyped male model, promoting, instead, the adjustment of women to it (Van den Brink & Benschop, 2012b). This gender subtext reinforces competitiveness, instrumentality and individualism, which then conflicts with archetypal feminine discourses such as empathy, support and care (Parker & Jary, 1995; Thomas & Davies, 2002; Whitehead, 1998). With such stereotyped attributes being the norm, women in this field may experience greater pressure to counter such figures (Van den Brink & Benschop, 2012b, p. 85). Neoliberalized universities continue to be 'alien' spaces for women, when woman, or rather femininity, constitutes 'the other' (Thomas & Davies, 2002, p. 382).

2.2 | Resistance and gender

Following Foucault ([1984] 1994), subjection is 'the process of becoming subordinated by power as well as the process of becoming a subject' (Butler, 1997, pp. 2–3). This leads Butler to ask about 'the psychic form that power takes', and to affirm that it is 'marked by a figure of turning, a turning back upon oneself or even a turning on oneself' (pp. 2–3). This makes any type of resistance difficult, considering that subordination is directly related to the desire for survival (Butler, 1997, p. 18). But the conditions of subordination 'are not static structures but temporary, that is to say, active and productive' (p. 27).

This implies that the subject has a certain power or strength even within its own conditions of possibility that establish the normative framework. Davies and Petersen (2005b) ask: 'how do the conditions of neo-liberalism form us and constrain us and what can we do to transform them?' (p. 79). This question highlights the need for academics 'to recognize for themselves how insidious and invisible their inculcation is' (p. 95) in order to be able to resist it. This involves the important task of uncovering and highlighting the mechanisms through which resistance is prevented or hindered (Davies & Petersen, 2005a, 2005b; Thomas & Davies, 2002; Worthington & Hodgson, 2005).

Research on academia highlights uses of resistance to neoliberal processes, such as 'more routinized, informal and often inconspicuous forms of resistance in everyday practice' (Thomas & Davies, 2005, p. 686) also understood as

partial and temporary movements, called micro-resistance (Alvesson & Willmott, 2002, cited in Zanoni & Janssens, 2007). This covers a complexity of discourses and actions, such as, for example: false consent or distancing from certain neoliberal processes and discourses (i.e., 'playing the game'; 'lip service'), criticizing the system in small groups (overcoming pressure and ways of publishing), complying with auditing requirements minimally, ignoring or eluding pressures to reduce workloads, dedicating attention to teaching instead of scientific productivity as personal ethical engagement (Archer, 2008b; Barry et al., 2001; Clarke & Knights, 2015; Clarke et al., 2012; Davies & Petersen, 2005b; Grant & Elizabeth, 2015; Leathwood & Read, 2013; Thomas & Davies, 2002; Worthington & Hodgson, 2005), or maintaining personal research interests despite outside pressure (Clegg, 2008), up to the point that abandoning the university is interpreted as an act of rebellion (Coin, 2017). Considerably wide consensus exists on the absence of a kind of resistance in the sense of a collective and political organization with the objective of transforming the currently existing hegemonic culture in academia (Archer, 2008b; Clarke et al., 2012; Clegg, 2008; Davies & Petersen, 2005a; Giroux, 2002; Grant & Elizabeth, 2015; Thomas & Davies, 2005).

With regard to gender, and in line with the poststructuralist literature, Grant and Elizabeth (2015) affirm that the activation of stereotyped gender emotions as being subject to governmentality explains, to some extent, the absence of opposition to the system: the pleasure of 'being a good girl' and the 'fear of being exposed as not productive enough', pressurize women to research and publish more, offering a weak base for collective political action (p. 299). Leathwood and Read (2013) argue that the desire to be included and recognized can be interpreted as compliance, but also as contesting an 'old order' and claiming a position within the academy. This shows the contradictions and tensions in the constitution of academic gender subjectivities at this moment in time (p. 1171) and indicates that the costs for women are especially high (over-work, stress, guilt and anxiety), although some do benefit from the situation and enjoy it. Thomas and Davies (2002) report how, on the basis of cultural scripts of femininity, different academics resisted, presenting an alternative self who was critical and reflexive in relation to the highly masculinist and competitive positions offered by the university. Not without consequences, they positioned themselves as 'secondary', and distanced themselves from the front line of knowledge production in favour of education and student support. We also find resistance as a construction of an alternative self for men in Whitehead (1998), who highlights the potential of male managers in higher education, in order to subvert and reconstitute the discourse of masculinity that this subject position constitutes (p. 212). Nevertheless, this resistance is not necessarily planned and rational. All the examples given highlight the unpredictability of the consequences of certain discourses. Thus, we underline the difficulties of interpreting resistance and the need to consider the importance of context.

3 | METHODOLOGY

3.1 | Research context

During recent decades, new directives have been implemented in Spain to respond to the precepts of the Lisbon strategy and the European Research Area (Conesa & González Ramos, 2018). These precepts were translated into scientific policies in 2002, with an emphasis on the promotion of centres of excellence, the mobility of researchers, the incorporation of scientists of 'special relevance', the creation of mixed structures between public and private institutions and the relationship with the productive sector, among others (Conesa & González Ramos, 2018, p. 262). In line with this development, new centres of excellence dedicated exclusively to research have been created over the last 15 years, called 'hybrid' or 'semi-public' research centres due to their legal status as private non-profit foundations, publicly supervised and partly publicly funded (Cruz-Castro et al., 2012; Giachi, 2016).

For this study, we have selected three centres that undertake research in the fields of physics and biomedicine. The model of excellence of these centres is measured following the principle of productivity to enhance their competitiveness, international impact and relevance. Being at the cutting edge of the organizational system of science today, they are linked to the most challenging lines of research. They follow a private management model with the

explicit aim of enhancing flexibility and efficiency in contrast to Spanish universities, which they perceive as old and very bureaucratic institutions. At universities, alongside the research career ladder, there is also a pathway of career progression that integrates teaching and administration (Castaño, 2016).

Among other characteristics, the centres follow the PI (Principal Investigators) organizational model (Roth & Sonnert, 2010): a hierarchical and informal model in which scientists of international prestige are responsible for research projects and their funding, which is mainly competitive and external. Under the direction of the PI, early career researchers (postdoctoral and predoctoral researchers) constitute the largest proportion of the scientific personnel, beside support staff, having a limited permanence in the centre and subject to mandatory international mobility. They depend on the funding attracted by their group or the length of their projects or grants, becoming trapped in a state of hyper-competition (Fochler et al., 2016), since there is very little or no possibility of promotion in the centres, and permanent mid-level positions do not usually exist. Due to this institutional policy, uncertainty shapes their professional trajectories and characterizes the corporate culture of the centres (González Ramos, Conesa, & Vayreda, 2016). With regard to gender, the distribution of the researchers' positions in the three centres shows a clear disparity in terms of the women holding the position of group leader (almost 10.5 per cent), which contrasts with the already low level (21 per cent) of women in Spain holding senior positions in research careers in 2015 (Unidad de Mujeres y Ciencia, 2016). This type of research centre has been created ad hoc within the neoliberal programme, driven forward by the scientific policies of the state to promote research. For this reason, alongside the lack of women in the centres, we consider this model an interesting case to explore processes of scientific subjectivation from a gender perspective.

3.2 | Research participants and discourse analysis of data

For this article, we have drawn primarily on the interview data collected from 19 men and women conducted between 2014 and 2016 as part of a qualitative in-depth study addressing women's careers by exploring different institutional contexts in the Spanish R&D system and geography. Interviewees were selected by means of purposive sampling. We have chosen a balanced number of men and women and we have included participants at different stages of their career.

We used semi-structured interviews in order to explore various aspects of their personal and professional careers in the past and the present, as well as their expectations as researchers, in order to highlight discourses and values on research development and missions, as well as their present situation in the institution. We also asked them about their mentors and about the main reasons that had encouraged them to persevere in their research careers, as well as their future expectations and further goals. Interviews lasted around two hours and were audio-recorded and analysed after transcription. A key informant facilitated our access to the centre and contacted the researchers to be interviewed. The interviewees were informed of the purpose of the study and of our commitment to anonymity. Nobody refused to participate; on the contrary, they all showed particular interest in the subject of the study. As a feedback agreement, we sent a report to the centre and the researchers containing the main findings of the study and suggestions for improving the presence of women and avoiding gender biases.

The interviews were analysed following the poststructuralist tradition of critical discourse analysis (CDA) (Chiapello & Fairclough, 2002; Chouliaraki & Fairclough, 1999). From this perspective, discourse is considered to be a situated social practice. In other words, the discourses found in the interviews are actions relating to the world (interrelating or justifying it, for example) as opposed to a representation of any pre-existing reality. According to CDA, the speaker's presence is embodied in their discourse, their points of view, their attitudes and values. Furthermore, unlike content analysis, CDA goes beyond the text, extracting pre-constructed meanings that emanate from a collectively constituted memory, providing echoes of previous discourses. In this way, the linguistic is linked to the social and the historical. The exploration of how discourses intersect (Clegg, 2008; Davies & Petersen, 2005a; Thomas & Davies, 2002; Whitehead, 1998) and their effects on the constitution of subjectivities and resistances is

one of the goals of our analysis. As mentioned above, scientific subjectivities are the result of a temporal and contingent position that individuals occupy within a web of discourses which are more or less robust or hegemonic at different levels (Archer, 2008a; Bristow, Robinson, & Ratle, 2017; Olssen, 2016). This will enable us to reveal a diversity of individual experiences while also managing to identify certain similarities or 'family resemblances' among them. The adoption of a critical perspective helps us to identify the role of discourses as a practice of exclusion and domination, as well as resistance (Chiapello & Fairclough, 2002).

4 | FINDINGS: SUBJECTIVATION PROCESSES

We have identified different subjectivation processes under neoliberal rationality, considering gender in this specific scientific context. We have classified the processes into three groups: Individualisms (containing three sub-types), Love of science and illusion of autonomy, and Self-responsibility and blame. In the following section we explore these processes through the discourses of scientists. We find the construction of the contours of a successful subject, a masculine entrepreneurial scientific self, not exempt from tensions and contradictions, especially in the case of women. In view of this, in the discussion section (Section 5) we will highlight how mechanisms involving subjection and prevention of possible resistances are formed.

4.1 | Individualisms

In order to clarify the exploration of this complex process of subjectivation, we have divided individualisms into three different discourses that participate in the construction of an appropriate scientific subjectivity: (i) individualism as a strategy; (ii) individualism as collaboration; and (iii) individualism as self-promotion. In our analysis, individualisms in general refer to types of discourses that concentrate on securing individual achievements and merits within an uncertain and highly competitive labour context (Clarke & Knights, 2015; Fochler et al., 2016).

4.1.1 | Individualism as a strategy

The first discourse of individualism emerged when women and men researchers were explaining how to obtain research posts, to secure funding, to publish in high impact journals, to make contacts or become part of scientific networks of excellence. The expression 'by fending for myself', used by one of the researchers to define his strategy for advancing in his career in a competitive environment, illustrates this idea:

[...] basically, I tried everything I could with the first project, saw it wasn't working out and moved on to the other one. And in fact, a lot of my publications came out of the second one, they were really thanks to that project. That was the study that led to my current project. So, in the end, I basically fended for myself again.

I: But is this related to your thesis or is it the same thing?

Oh, of course. Never put your eggs, all your eggs, in one basket. That also applies in science. So, what happens is that you're always seeing a lot of different things and you have to have an eye to be able to decide 'this works, this doesn't', and that's it. (Postdoctoral man)

This account is an example of a justification of how to survive and be successful using a business discourse, such as 'not putting all one's eggs in one basket'. In other words, it is wise to invest in different options in order to minimize risk: an individual who thinks about themselves as an economic unit, whose existence is similar to that of an enterprise and whose success depends on a plurality of options of action (Foucault, [1979] 2008), is presented as an obligatory adaptation to the competitive context (Davies et al., 2005; Davies & Petersen, 2005a, 2005b; de Cheveigné, 2009; Ledwith & Manfredi, 2000; Olssen & Peters, 2005). In some way, all men and women researchers acknowledged that

although individualism in science was necessary and inevitable, it was nevertheless a criticizable strategy. Neoliberal rationality fits in comfortably with discourses of pragmatism and survival: a reality which is not necessarily ideal is defended (Davies & Petersen, 2005a). Certain practices are adopted to be able to survive without this necessarily being internalized as a 'desirable' scientific value or defended as such. That is to say, it provides an example of a subjectivation process that Leathwood and Read (2013) call compliance. Or, in other words, 'playing the game' to survive 'rather than a whole-hearted commitment' (p. 1168), in a way that constitutes a suitable subjectivity in the researchers' lives.

4.1.2 | Individualism as collaboration

The second individualism emerged when we identified collaborative discourses, usually understood as far removed from any form of economic exchange, transformed into the consideration of others as resources in an opportunities environment. This kind of collaboration was visible at different academic levels and in both men and women interchangeably. This is not an example of a move away from the egotistical and individualistic ethos (Clarke & Knights, 2015; Fassa, 2013), but rather, we interpret this as a slippage towards a form of *Hodie mihi, cras tibi* (Today it's me, tomorrow it will be you). For example, a woman group leader who leads a team and advocates collaborative practice spoke about the tension she witnessed between the aggressive atmosphere on the one hand, and the will to collaborate on the other, when remembering a centre where she used to work:

There was aggression. That was no paradise without crocodiles. No. That paradise had crocodiles and many other animals. But whenever a clear objective came in sight, and when it was clear that it was going to be a success, then that success was extended to everyone. If it's good for you, it's good for everyone. And if you have a good idea and what I know how to do supports your idea and we put it in your project, then that's going to work in your favour. Next time you'll help me out.

As group leader, she defended a view according to which everyone serves everyone else and lets themselves 'be used' by everyone else, so that they can all advance in their own careers. Collaboration is therefore underpinned by a vested interest that benefits all those involved (Roth & Sonnert, 2010). In the end, whatever the academic's status, they all shared the same goal of promoting their own progress and survival, constituting an appropriate subjectivity in competitive centres.

However, this self-interested collaboration coexisted with a type of collaboration, expressed by some women, that was not focused on individual gain but on the advancement of science itself, connected with a discourse that considered the importance of genuine collegial scientific work, following traditional values of altruism and personal autonomy (Barry et al., 2001; Clarke & Knights, 2015; de Cheveigné, 2009; Parker & Jary, 1995). For example, referring to her relationship with her team members, this same researcher stated:

We are still us. What I mean is that we continue to move along together. And I still know today that Francis has got over whatever it was that was annoying him and that Veronica continues to tell me 'Oh, today more soluble than yesterday!' and that's what I get day after day. Not just some days, but every day! I do enjoy it, and it seems to me that this does help to advance science. But no ... This is my own standpoint, of course.

The temporal adverb 'still' with which she initiates her response marks the awareness of this transformation as a loss: a 'genuine collaborative subject' that finds itself in relapse, in favour of an 'interested-in-their-career collaborative subject'. This illustrates the affirmation according to which the entrepreneurial self designates a direction for the transformation of subjectivities and not a closed subject position (Bröckling, 2005).

Additionally, when talking about group dynamics at work, some men justified the typical group or more sociable behaviour of women invoking the discourse of gender stereotypes: for example, a predoctoral man commented that the women in the group tended to dedicate more time to tasks related to increasing sociability, organizing group

meals, improving coexistence, organizing activities together, etc. Speaking for himself, he also stated that: 'Sometimes, on average, girls want to talk more, but also about what they're doing, to discuss the details.'

Gender stereotypes discourse consists in assigning and evaluating in accordance with the contexts, skills, personal traits and predispositions associated with the fact of being a man or a woman (Ridgeway, 2001). The fact that sociability was attributed only to women hinders and undermines its potential, depoliticizing it. In other words, we interpret it as the discarding of a potential position and discourse offering an alternative scientific subjectivity more genuinely collegial in centres. It was not considered negatively or in a critical way, but they simply considered it as a marginal or secondary matter, not a central part of an appropriate scientific subjectivity. In this way it was rendered incompatible with a political matter.

4.1.3 | Individualism as self-promotion

The third discourse of individualism, referred to as self-promotion, was identified as always being associated with situations where researchers exhibit themselves in order to advance in their careers. Competitive academic culture and the context of selection processes is the perfect environment for the construction of subjectivities as 'exchange values' through self-promotion practices (Morley, 2016). A particularly illustrative example is provided by this woman associate researcher when referring to herself in the third person — 'Tere' — as a brand name used to negotiate a possible change in her current position in the centre:

So it's not, 'Oh she's so nice, Tere, and, well, with everything she's got going for her ...' Oh no, no, no. It's not like that at all. It's more like, Tere is a product, a personal brand, or however you want to put it. And if you're interested, fine. If we can reach an agreement, good. And if not, no worries, she'll just go and set up a beach bar.

This is a self-evident example of the process of the constitution of the entrepreneurial self (Bröckling, 2005; Foucault, [1979] 2008) according to business values. In this sense, the way she presents herself can be interpreted as overcoming the figure of 'the other' in academia, while internalizing the masculine norms of the entrepreneurial self (Leathwood & Read, 2013). Another researcher explained how to write a scientific curriculum, comparing it to the typical formula used in business:

And I started to take Spanish classes to make my curriculum stand out from the rest. 'That makes me diverse.' I help lots of friends with their curriculum and it's not about what you've done but about how you describe it. More assertive. In my experience, guys are more assertive than girls in general. If you don't draw attention to yourself then you don't get anywhere. It's like in business. Maybe there are different ways of writing a curriculum depending on gender ... (Postdoctoral man)

This man highlights the lack of assertiveness, which he sees as characteristic of women, as a stereotypical role. Furthermore, with a paternalistic gesture, he explains how he helps others to improve their self-promotion. Alongside this, we find a postdoctoral woman who commented that she would not want to become a group leader due to the pressure of not only having to publish and secure funding, but also having to pretend to be the best and having to act like it. Authors such as Grant and Elizabeth (2015) have shown how, in university settings, self-promotion is opposed to the modesty traditionally attributed to women. Similarly, Van den Brink and Benschop (2012a) conclude that modesty in selection processes proved to be an obstacle for women in such a highly individualistic and competitive environment.

It is precisely in relation to these issues that we find two examples of micro-resistance, which is to say two partial and temporary movements that hinder or break with a certain course of events (Alvesson & Willmott, 2002, cited in Zanoni & Janssens, 2007) in this case, containing exhibitionist behaviour. In the first example, a woman research fellow justified the reason why she rejected a male candidate for a postdoc position, considering his self-promotion to be over-exaggerated: 'He seemed to me to be more focused on his career than on the science itself, too

much focused on himself' (woman research fellow). In the second example, a woman group leader argued something similar:

[...] and often we are also shy. And that's down to the way we've been brought up, it really is! And, and, it's really rare to hear women coming to you saying, 'I did it, I did it'. You can even see this in the verb forms we use; we say 'in our laboratory this or that is done': 'we have done it!'. If you look at the letters [letter of motivation], you see straight away who the signatory is. The others are 'I have done'. And when I look at it I think 'are you completely stupid'? I mean what do you mean 'I have done'? It is your PhD after all!

The discourses of both women researchers are individual responses revealing opposition in the face of such a merchandising subjectivity that fits with cultural masculinized attributes. This was an example of the construction of private small spaces in which they may be able to continue acting in line with their own principles (Archer, 2008b), thus illustrating a sporadic movement following personal ethics (Clarke & Knights, 2015).

4.2 | Love of science and the illusion of freedom and autonomy

The love of science and knowledge is another example of a discourse upon which subjectivation processes are based and that has been considered a prominent instrument of governance in the context of neoliberalized science (Busso & Rivetti, 2014; Clarke et al., 2012; Gill, 2009). Those interviewed expressed this as something that emerged naturally from their innermost being. The emotional appeal transforms this discourse into a very effective subjection instrument. Those interviewed refer to discourses of science as a personal interest that makes it difficult to separate their work from their personal life (Clarke et al., 2012; Davies & Petersen, 2005a; Heijstra, Steinhorsdóttir, & Einasdóttir, 2017). In some interviews, this discourse interpellated and justified a researcher who was entirely dedicated to his work, without feeling tired or in need of slowing down (Busso & Rivetti, 2014; Davies & Petersen, 2005b). For example, this researcher stated that 'To be a hard worker comes from being passionate about what you do. If you like what you're doing, working is not an effort' (male research fellow). We find another example of a researcher who remembered the 'old days' when she had no tasks apart from science:

Your family was in the laboratory and so you stayed in the laboratory. My boss was adorable. [...] There was an incredible love of science. I mean everyone went there and talked about Science. We used to go to the cafe and say things like 'this has happened on my project'. You never see anything like that here. [...] But I had a brilliant time. I came and went as I liked, even at weekends. Nobody said anything to you. And I think it was because of that that they did such good science. Because they had a more old-school mentality, like those you see on the TV, of 'let's think, it doesn't matter ...' (Postdoctoral woman)

In both examples, values highlighted are passion ('an incredible love of science'; 'be passionate about what you do') and total dedication. Alongside other authors, we consider that this 'love' makes the subject more susceptible to control, and to (self) exploitation (Clarke et al., 2012; Coin, 2017; Gill, 2009), and even self-flagellation (Archer, 2008b), in order to comply with the principle of productive work (Fassa, 2013) and the strong culture of performance (Thomas & Davies, 2002). Both quotes contained clear gender implications: the promotion of the figure of a disembodied scientist (Mählck, 2012, p. 65) with no bonds outside science and with no spatial or temporal limits inside science (Davies & Petersen, 2005b, p. 95).

The emphasis on autonomy is another discourse upon which the entrepreneurial subject is constituted (Rose, 1999), also in the academy (Beaufaÿs & Kraus, 2005; Davies & Petersen, 2005b; Gill, 2009). However, these authors warn that this is a dangerous illusion which is a necessary condition for subjection possibilities to arise (Rose, 1999).

Additionally, this illusion is complemented with a rejection of dependencies (Binkley, 2011). For example, when asked about his relationship with his thesis supervisor, a postdoctoral man mentioned that:

In the end he helped me, [...] but he was never against my ideas and left me to do what I wanted. Something like 'I am not your boss, I am a friend, I'm your father, but I'm not your boss.' [...] You were completely free [in your scientific choices]. [...] He was a kind of second father for me.

The interviewee goes on to say: 'You need a good team and a good boss.' Or as a different researcher explained:

My current supervisor is the person who has been heading the project, mainly he has always given me freedom and incredible responsibility [...] this responsibility for saying, I have to get by no matter what, you know? And this is also a really important lesson that not everyone learns [...] however, here I am, it's me who's going out into the 'jungle'. (Male research fellow)

In the interviews, it was clear that the support that proved to be 'positive' came from someone (thesis director, supervisor) who stimulated their transformation into autonomous and free subjects. However, freedom and disembodiment without bonds also turns out to be a gendered illusion that conceals the necessary supports and networks (Van den Brink & Benschop, 2012a).

In thinking about themselves as autonomous beings, they also self-constructed themselves as controlling the situation of work pressures and did not undermine their own capacity to self-direct. In this way, the researchers assumed that they were in control of the limits between pleasure and sacrifice or suffering; between passion and obligation. It could thus be argued that this was experienced as 'liberating', since they thought of themselves as inhabiting a space which was 'free' from control. For example, another male research fellow described how he felt in relation to his job in this manner: 'I don't think there's anything that bores me. Maybe that's because I have so much freedom to do more or less what I want.' He goes on to add that 'I think I'm being myself. There are pressures, but I don't feel under pressure [...]. Normally they're pressures that I impose on myself ... all the things about outcomes comes from me.'

In contrast, while sharing the same illusion of control, some women suggested certain tensions, for example, in relation to controlling the limits of their working hours: 'I don't think it's the career itself. It's more about your choices and what you take on. I work all these hours but once I get home I don't spend any more time on it. The interviewee concludes that: 'You have to make a certain amount of sacrifice but within limits' (postdoctoral woman). These pressures also show a temporary loss of confidence in the illusion of control.

4.3 | Self-responsibility and blame

The discourses of self-responsibility and blame also become components of the construction of this appropriate scientific subjectivity in these centres. According to Coin (2017), the violence of neoliberalism is hidden both in narratives of guilt and merit. Both are processes of neoliberal subjectivation (Davies & Petersen, 2005a) that are underpinned by the idea of self-responsibility. It has been confirmed that due to social background, class, race and gender, those who have joined academia recently ('the others') show ontological insecurity related to feelings of low confidence (Archer, 2008a; Thomas & Davies, 2002). De Cheveigné (2009) reported that women researchers of the CNRS in France tended to blame themselves for their bad decisions, while men tended to emphasize their skills and aptitudes for their success in science.

In our case, only the female researchers explained and justified the bad decisions they had taken in relation to their careers on the basis of personal motives, such as mistakes, doubts, straying from the path, etc., not taking into account the nature of the system and the discourses to which they had been exposed. For example, a postdoctoral woman explained how, after holding a position of responsibility, she (in her own words) 'committed the error' of accepting an internship 'and I had more than four years of experience. It's my fault because I accepted it.' With this

type of explanation, she avoided stating that the 'bad' decisions and actions were taken under given circumstances that were out of her control, for example, the access to key information about career choices provided by networking (Van den Brink & Benschop, 2012b). While being careful not to fall into closed or essentialized gender categories, we detect certain similarities (or 'family resemblances') among those interviewed in this regard. In various interviews with women, they looked for reasons for issues that happened to them in their careers within themselves, resulting in emotions of blame and lack of self-esteem: 'and I also have a lower self-esteem as a scientist' (research fellow woman). This same researcher held that there was a difference between herself and her male colleagues: 'if I receive bad news, my reaction is to blame myself, whereas men will probably blame the system'. Another woman research fellow with a very successful career confessed that:

I don't know if we all think the same. It's easier to talk to another woman about science because a man ... sometimes I think I don't know as much as they do, I'm not as good ... that scientific inferiority complex.

To admit that limitations are intrinsic to the fact of being a woman diverts attention from the public to the private, depoliticizing the gaze, inscribing it within the limits of the self. As in Bröckling's (2005) critical analysis of self-help guides with regard to the skills needed by all women who would like to become entrepreneurs: it is of no surprise that all the skills are compounds of the self (self-esteem, self-assurance, self-respect, self-confidence, etc.). This suggests a way of recuperating the control over oneself which has been lost temporarily, since these women's careers continue to be successful. Moreover, these discursive resources of blame and low self-esteem with which these women thought about themselves as scientists, constitute temporary obstacles preventing them from imagining scientific emancipatory subjectivities.

It is, in fact, a discourse that mainly directs energy towards oneself, as in this response provided by a woman research fellow when asked if her expectations regarding science had been fulfilled:

No. I've changed my mind. I used to think that I would do really important things and that my results would help to change the world [...], this doesn't bother me as yet. You write articles, and, well, it's just another article. I still like what I do [...]

This researcher expressed a gap between traditional expectations regarding science ('help to change the world') and a less optimistic reality ('it's just another article') that she has to overcome ('I still like what I do'). This gap is understood as an individual matter related to managing herself ('I've changed my mind') and not as a matter of shared responsibility.

5 | DISCUSSION

We have identified subjectivation processes for scientists working in Spanish research centres characterized by a strong focus on productivity and funding achievement – the main features of the neoliberal transformation of science and knowledge production. Both men and women have adopted the appropriate scientific subjectivity in these centres in order to maintain their positions within them, based on some of the characteristics of the masculine entrepreneurial figure, although we have found gender differences.

Throughout the subjectivation processes explored, we have detected two main discursive mechanisms that produce subjection to neoliberal governmentality in science: the first, that affects both men and women, exemplifies 'the psychic life of neoliberalism' (Butler, 1997; Scharff, 2016) in these centres, the form that power takes 'marked by a figure of turning back upon oneself or even a turning on oneself' (Butler, 1997, pp. 2–3). We call it the 'turn on oneself', presented as neutral in relation to gender, that is manifest in all subjectivation processes. From our gender analysis, we have also detected a second mechanism of subjection that we call the 'gendered turn on oneself', that affects women in particular in our study, thus adding a double job on themselves in this neoliberal psychic life, which is made present in 'self-responsibility and blame' and insinuated in 'love of science'. Both discursive mechanisms contribute to

concealing the conditions of self-construction of this appropriate scientific subjectivity, in a way that, in our view, prevents resistance, as a construction of alternative subjectivities.

As for the 'turning on oneself', the three individualisms, as strategy, as collaboration and as self-promotion, expressed through the business discourse adopted, show how researchers focus on themselves and think about themselves as an economic unit (Bröckling, 2005; Foucault, [1979] 2008) (i.e., to put all your eggs in one basket; being a brand). Likewise, they understand others as resources for their own interest in a logic of debt (i.e., if I help you, you owe me something). These subjectivation processes imply a belief that they can manage their own self in the face of a plurality of different options. This discourse is supported by a notable degree of self-confidence, with the locus of control being situated inside oneself, driven by an illusion of autonomy ('These are pressures I put myself under').

It is, in fact, an illusion of control as in the case where researchers followed strategies such as 'playing the game', to justify and support the pragmatism needed to carry out individualistic practices. These strategies finally become a lever to (self) exploitation (Coin, 2017; Gill, 2009) to a regime of productivity implicitly demanded from the centres, justified by the love of science and covered by the sense of freedom and autonomy. Similarly, we interpret that the example of micro-resistance, when women occupied private small spaces acting in line with their own principles (Archer, 2008b), constitutes a reinforcement of the illusion of autonomy since it only involves a sporadic action. The fact that researchers over-estimate the control they have over their own subjectivation processes leads to them becoming subjected to neoliberal governmentality. This, together with the assumption of the inevitability of this transformation, erases any attempt of active resistance to change the system, working thus as an instrument of prevention.

We refer to the second turn on oneself, the gendered turn, to the fact that women researchers activated critical reflections about themselves to achieve an appropriate scientific subjectivity in the centres. This showed tensions and conflicts with themselves, giving yet another turn to the turning on oneself which is characteristic of neoliberal psychic life. We find a first example in the 'love of science, freedom and autonomy' subjectivation process, where some women expressed tensions (i.e., 'sacrifice but within limits') which constituted a temporal loss of confidence in the illusion of control.

They themselves become an object of governance, in so far as their difficulties appear to be something that can be easily diagnosed and overcome (Rose, 1999). In this way, in the 'Self-responsibility and blame' subjectivation process, the women researchers took time to describe their own transformation, pointing at the existence of a gap between themselves and the successful scientific masculine subjectivity (lack of assertiveness, shyness or modesty) and their inadequacy in relation to the masculine entrepreneurial figure (self-blame for failure, negative self-esteem and inferiority complex as a scientist), as if it was their own responsibility. They did not hide these tensions or their own deficiencies, nor did they hide their desire to overcome them and the difficulties they experienced trying to overcome them (fears and insecurities), with them themselves being the object of their attention in order to achieve the desired model. In this sense, they made visible their own (re)construction. In contrast, men and also some women did not problematize themselves when thinking about themselves as scientists. That is to say, they were not the object of identification, or the focus of attention of their discourses, thus making invisible their process of subjection to the appropriate scientific subjectivity (the turn on oneself).

This second 'gendered turn', unlike the first one, is critically reflexive on the self. However, it ignores the fact that it is another practice of governance that women exert on themselves on the basis of thinking of themselves as different, as 'the other' in science: a subjection practice marked by gender and directly related to the desire to participate in a masculinized science.

From the debate on opportunities for resistance, different authors have suggested that contradictions and tensions (Alvesson & Willmott, 2002; Archer, 2008a; Barry et al., 2001; Coin, 2017) and ambiguities and uncertainties (Clarke & Knights, 2015) in the constitution of academic subjectivities are an opportunity for opposition and resistance to hegemonic significance (Grant, 1997, cited in Morrissey, 2015; Thomas & Davies, 2005) and to the possibility of building an alternative subjectivity (Whitehead, 1998). From a gender perspective, Thomas

and Davies (2005) suggest that ‘an individual’s motivation to resist comes from the presentation of “self as other”’ (p. 690), such as when women academics presented an alternative self who was critical with the masculinist and competitive university. Having said this, the presence of resistance also depends on the circumstances and career options that university institutions enable to academics (Thomas & Davies, 2002). In our Spanish research centres, with this second gendered turn, we illustrate that tensions become an effective way to prevent any attempt to imagine alternative subjectivities aiming to change the system. We suggest that this occurs especially when tensions come from ‘the other’ in science, those who have joined academia recently (Archer, 2008a; Thomas & Davies, 2002). Being reflexively occupied in maintaining a strong and constant critical attention to themselves, through self-monitoring and self-control, results in them being dislocated from the exterior, the public and political sphere. In other words, this depoliticizes any movement of resistance, reinforcing the gaze inside the limits of the self.

In this sense, our contribution shows the gendered ways in which neoliberal governmentality performs and how resistance is prevented in these centres. In the same way that forms of governance are not static (Butler, 1997), our study highlights that the prevention of the emergence of ‘other’ scientific subjectivities is always active and productive.

6 | CONCLUSIONS

In this study we have focused on scientific subjectivation processes in order to shed light on how neoliberal governmentality forms us and constrains us (Davies & Petersen, 2005b) and how this is entrenched with gender, in an institution characterized by excellence and international competitiveness. We have shown that these centres are spaces which provide the conditions of possibility – not through coercion but through seduction (Rose, 1999) – to develop a scientific entrepreneurial self, excluding ‘other’ scientific subjectivities.

With our exploration of the subjectivation processes we have identified two mechanisms of subjection – a ‘turn on oneself’ and a ‘gendered turn on oneself’ – that can act simultaneously, the second reinforcing the first. Both exemplify ‘the psychic life of neoliberalism’ (Scharff, 2016; see also Butler, 1997) in these centres. By distinguishing between these two turns, we help to illustrate in particular how the process of subjectivation–subjection is produced from a gender analysis, where we have found an absence of resistance in a transformative sense of subjectivity. This has allowed us to make visible how the prevention of resistance is gendered. It is our view that when the position of ‘the other’ of science is assumed, two things can happen: either this position is politicized as an alternative academic position, albeit with a price being paid by those who assume it (Thomas & Davies, 2002, 2005), or, as in our case, it leads to a double task of reflection and control over oneself, resulting in an even more insidious turn on oneself. This task is noticed by ‘other’ subjects since it is made visible through critical and reflexive attention. However, despite this, they fail to identify this task as part of a process of subjection to scientific subjectivity.

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ENDNOTES

¹We use the expression 'scientific subjectivity' to refer to the exclusive focus on research in these types of centres, instead of using academic subjectivity as is often used by literature focusing on subjectivation processes, which base their work mainly on universities and academia in general.

²We understand 'subjectivation' following the definition from Gómez and Jódar (2013), as a process 'by which we turn ourselves into subjects, which is to say the process whereby our subjectivity is constituted on the basis of discursive and non-discursive historical practices (Foucault, 1994). Consequently, the term subjectivity refers to the ways in which we think and relate to ourselves at a specific moment in history' (p. 83).

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**5. “CARE, TIME AND GENDER
IN NEW MANAGERIAL
SCIENCE AND ACADEMIA.
EXPLORING A FEMINIST
CARE APPROACH TOWARDS
CARING TEMPORALITIES”**

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Care, time and gender in new managerial science and academia. Exploring a feminist care approach towards caring temporalities.^{1 2}

Ester Conesa Carpintero

Abstract

This chapter constitutes an attempt to explore the application of the notion of care and care time in labour and organizational aspects of contemporary science and academia. Some recent studies have reflected on and analysed adverse aspects of time and acceleration in contemporary academic work related to new managerial dynamics in scientific organization (Ylijoki and Mäntila, 2003; Walker, 2009; 2014; Müller, 2014; Vostal, 2015a, 2015b; Felt, 2017), the detrimental effects of audit culture on evaluation and epistemic practices (Anderson et al., 2007; Burrows, 2012; Fochler et al., 2016; Horbach and Halfman, 2019, among others) and on academics' embodied and affective states (Morley 2005, Sparkes, 2007; Gill, 2009; Burrows, 2012; Mountz et al., 2015; Conesa and González, 2018b). While this regime of science seeks supposedly *objective* measures to promote excellence and fair practices, there seems to be a neglect of important aspects in contemporary scientific ethos connected to care and time needed to sustain and maintain healthy, rich and diverse academic life producing exclusionary effects in relation to gender. A few works have touched on some specific aspects of care in science (Heijstra et al., 2017; Ivancheva et al., 2019) and a few accounts, too, have approached care more transversally (Lynch, 2010; Mountz et al., 2015). I theoretically build on the concepts of *care* from Fisher and Tronto (1991) and Tronto (1993) and *care time* from Puig de la Bellacasa's work in productivist technoscientific endeavours (2011, 2015), to develop a framework that takes in relation care and time to understand and apply it, with an explorative

¹ I wish to acknowledge the revision of and comments regarding a first and final version of this chapter from Professor Emerita Joan Tronto (University of Minnesota).

² An earlier and shorter version of this chapter was presented at the 18th Annual STS Conference Graz 2019. Critical Issues in Science, Technology and Society Studies (May 6-7, 2019) Graz, Austria, and published in peer-reviewed conference proceedings: Conesa, Ester (2019). Temporalities and Care: Gendered Tensions in Scientific Practices (reachable here <https://doi.org/10.3217/978-3-85125-668-0-03> or in the Annex III of this thesis). I appreciate the comments received at the time by Associate Professor Maximilian Fochler (University of Vienna).

end, to different aspects of contemporary academic and scientific organization, practices and lives. Fieldwork consists in 25 biographical interviews of academics from different fields of knowledge and three focus groups with a total of 10 participants on selection and evaluation processes from two STEM research centres and one SSH university department. A second set of data derives from European reports, documentation and observations from scientific-academic institutions. Additionally, I include an informal focus group on maternity and academia. Using content analysis applying the developed approach I systematize the results in six different levels: science discourses, funding practices, evaluating practices, knowledge practices, colleagues' relationships and personal lives where productivity neglects care and care time aspects needed for a sustainable academic and scientific life maintaining and creating gendered inequities. As such, this work seeks to contribute to the analysis of academia and science offering a feminist care framework to shed light on the complex relationships of care, gender, time and productivity and its exclusionary effects. It pretends to promote a more inclusive science model in terms of gender, fairness and diversity in the practices, in the organization and in the academics and scientists collective and personal lives by proposing the idea of caring temporalities.

PART I

0. Introduction

This chapter constitutes an attempt to explore the application of the notions of care and care time in labour and organizational aspects of contemporary science and academia. Some recent studies have reflected on and analysed adverse aspects of time and acceleration in contemporary academic work (Ylijoki and Mäntila, 2003; Walker, 2009; 2014; Müller, 2014; Vostal, 2015a, 2015b; Felt, 2017). Others have delved into the detrimental effects of new managerial and audit culture on evaluation and epistemic practices (Anderson et al., 2007; Burrows, 2012; Fochler et al., 2016; Horbach and Halffman, 2019, among others) or on academics' embodied and affective states (Morley 2005, Sparkes, 2008; Gill, 2009; Burrows, 2012; Mountz et al., 2015; Conesa and González, 2018b). While this regime of science seeks supposedly *objective* measures to promote excellence and fair practices, there seems to be a neglect of important aspects in contemporary scientific ethos connected to care and time needed to sustain and maintain healthy, rich and diverse academic life producing exclusionary and *othering* effects related to gender.

Some works have touched on specific care issues in science like *academic housework* (Heijstra et al., 2017) and *care-led affective precarity* (Ivancheva et al., 2019), or have briefly mentioned them (Fochler et al., 2016) but only a few accounts have approached care transversally, through a reflexive (Lynch, 2010) or collective autoethnographic approaches (Mountz et al., 2015) highlighting (neoliberal) academia as a careless regime and calling for an ethics of care (Lynch, 2010; Mountz et al., 2015). The temporal aspect connected to care is usually not mentioned or weakly developed. Thus, it is interesting to delve more in the concepts of care, time and care time as elements of analysis throughout scientific organizational and working practices.

While slow science manifestos, initiatives and reflections (The Slow Science Academy, 2010 Lutz, 2012; Gosselain, 2011, among others) have a compelling effect and the potential to disrupt accelerated science regimes (Conesa, 2017; Müller, 2014), they form a heterogeneous corpus, some of which do not acknowledge the complexity of other hidden power relations and social variables behind time-pressure, as Martell (2014) and Mendick (2014) note, such as those related to gender and care, with the exception of Mountz et al. (2015). Care, from a feminist perspective, seems to be an appropriate concept to scrutinize relationships of temporality and

gender in the academic and scientific organization - an organization that still promotes exclusionary practices in terms of gender, social class, age or race.

Fisher and Tronto (1991) and Tronto (1993) developed a broad definition of the concept of care beyond dyadic relationships and, more recently, Puig de la Bellacasa (2011, 2015) applied the concept to science, linking care and time in productivist technoscientific endeavours through a case study of soil science. In this chapter I theoretically build on their work on *care* and *care time* to develop a framework that pretends to be helpful to analyse and understand different aspects of contemporary academic and scientific organization, practices and lives with an explorative end.

Fieldwork consists in 25 biographical interviews of academics from different fields of knowledge and three focus groups with a total of 10 participants on selection and evaluation processes from two STEM research centres and one SSH university department. A second set of data derives from European reports on science and observations and documentation from scientific-academic institutions. Additionally, I include an informal focus group on maternity and academia. Using content analysis, a productivist pattern appears connected to neglected care and care time aspects in academia. Results are shown and systematized at six different levels: science discourses, funding practices, evaluating practices, knowledge practices, colleagues' relationships and personal lives. As such, this work seeks to contribute to the analysis of academia and science offering a feminist care framework to shed light on the complex relationships of care, gender, time and productivity. This framework helps us to understand how dominant time regimes undermine and threaten care values and practices that are crucial to maintaining and sustaining our academic environment, and that a more inclusive science model in terms of gender, fairness and diversity, with scientific practices more attentive to their societal consequences, may be warranted through contemplating diverse caring temporalities and rebalancing power relations inside them.

In the first part of the chapter I introduce the concept of time and its relationship with science and productivity (first section) to then present a state of the art on knowledge practices and academics lives (second section). The third section introduces care, (relationships of care, time, work and gender and the care crisis) to build then on a theoretical framework based on care, care time and its application in science. A bibliographic revision of the application of care in scientific issues is then shown. Fourth and fifth section concerns context and methods. Findings, in the sixth section, are laid out in six sub-sections corresponding to the different dimensions before mentioned. Then I finish with discussion and conclusion.

1. Time and science

Time is at once a social and natural phenomenon connected to materiality (Adam, 1990). As embedded in a *natureculture* world (Barad, 2007; Haraway, 1991), the way societies understand and embody time is crucial for our lives and means of organization (Adam, 2004). Our task as social scientists – as Adam argues – needs to pursue analyses that address “the disconcerting messiness of complexity”, and “to understand as inseparable the relations of time and their socio-environmental impacts, underlying assumptions and their material expressions, institutional processes and recipients’ experiences, hidden agendas and power relations, unquestioned time politics and *othering* practices” (p. 128).

In contemporary Western societies, time has been transformed into an exchange value in order to be controlled and instrumentalized, linked to economic gain and social advantage (Adam, 2004). Time commodification – the “time is money” mantra – is deeply embedded in our way of life (Adam, 2004, p. 125) albeit in some areas or institutions more than in others. Following this logic, to take advantage of time or, in other words, time compression and acceleration, is “an unquestioned economic and political goal as it increases profit” (Adam, 2004, p. 128-129). Speed is seen “as the prime condition for economic growth and prosperity”, and speed of change a self-evident good connected with dynamism and linked to positive connotations of progress although, at the same time, “integral to the insistent sense of time pressure” (Wajcman, 2014, p. 44; see also Tomlinson, 2007). These values together divide what is ‘modern’, ‘progressive’ or ‘civilized’ from what is backwards, lazy or (as yet) uncivilized, reproducing colonialist dynamics (Adam, 2004; Shahjahan, 2015): “Using this temporal logic, anything or anyone not aligned with history in forward motion must be converted, saved, developed, or improved” (Shahjahan, 2015, p. 491). Indeed, time as economic gain and its link to current notions of progress generate power relations resulting in social inequalities. Similarly, Adam (2004) argues: “As long as the commodification of time functions as a taken-for-granted feature of our lives the associated inequities remain invisible” (p. 125).

In this context, science (and technology), inserted into and “leading” the modern Western positivist knowledge tradition (Lynch, 2010), carries, according to Puig de la Bellacasa (2015) “an ethico-political imperative to ‘advance’ that remains solidly the orientation of linear, ‘progressivist’, timelines” (p. 694) under a productivist ethos that follows a “restless mode of futurity”:

Perhaps more than any other modern social practice, science is actively and performatively embedded in the dominant progressive, promissory, productivist epochal timescape. In particular, modern science's inherent progressivism reacts against any suspicion of 'turning back the clock'. (Puig de la Bellacasa, p. 697)

It can be argued that speed and 'advancement' provides cosmopolitanism and social dynamism (Wajcman, 2010 alluding to Connolly, 2009). However, is speed a value in itself, or it is better understood as a value inserted into the dominant ideology (or even ontology) of productivism? Following Barbara Adam, the objectified and utilitarian form that time takes in Western societies renders the future the "object of colonization for science" with important consequences at local levels: "The effects of the economic and scientific colonizing practices, are felt at the lived level of embedded time as intergenerational inequity, environmental disasters and cultural destruction" (Adam, 2004, p. 139; see also Adam, 1990). In her case study, Puig de la Bellacasa (2015) analyses the relationships of time and scientific futurity in soil science to show complex temporalities that cannot be reduced to a mere productivity of soil leaving it exhausted and wasted. Modified food crops or other genetic manipulations are further examples of this "(...) productivist ethos, increasingly committed to the speculative extraction of future economic value" (Puig de la Bellacasa p. 694; Adam, 2004; Stengers, 2011).

Stengers (2011) characterises contemporary science as "disembedded and disembedding knowledge and strategies, abstracted from the messy complications of this world" in a supposedly objectivist science used for market purposes (p. 10). She also points to the unsustainable progress that brings our model of scientific research led by a "symbiosis of fast science and industry", "in the name of the market, competition and benchmarking evaluation" that "made us too sick" to counteract it (p. 10). Indeed, at an organizational level this model of science is translated into new management regimes with narrow evaluation norms that "may segregate academic science from other societal values and concerns" (Fochler et al., 2016, p. 198). Fochler et al. (2016) highlight the need for further research in this sense, also pointing at the role of gender (among others) deserving deeper exploration. In the next sections I will characterise this new management regime and review some of its consequences in our scientific and academic practices and in our working lives in connection with time and gender issues.

2. Time and acceleration in academia

2.1. Time-compression and competition

Compression (gaining time) promotes acceleration by implying that rational reduction of information, emotions, and alternatives is necessary to reach organizational and individual goals (Sabelis, 2002 p. 102)

Time has been transformed into a crucial element in contemporary academia (Walker, 2009; Vostal, 2015a, 2015b; Shahjahan, 2019). Quantitative outputs are pushed to the fore by applying audit culture through new managerial norms (Shore and Wright, 2000; Deem, 1998, 2001) in such a way that an academic career is now like a race for more products in shorter periods of time (Müller, 2014; Fochler et al., 2016). Publications in high impact journals enact academic value and are the most valued items in science at present (Burrows, 2012), with journals owned by major publishers with huge revenues (Larivière et al., 2015). The rise of these expectations together with requirements to achieve funding through research projects – increasingly sustaining academics wages –, teaching and administrative loads, in addition to innumerable forms of monitoring all academic activities, and continuously changing guidelines, result in work intensification and time-pressures (Walker 2009; Vostal, 2015a, 2015b; Shahjahan, 2015; Mountz et al., 2015; Conesa and González, 2018b).

According to Sabelis' (2002) analysis in her work on management, “compression implies pressure on and within time frames and other temporal aspects with implications both within and outside organizations” (p. 93). Time compression or working under time-pressures may lead to a “reduction or condensation of tasks within a time frame” or “doing more in less time” (p. 90). This may lead to put the focus on fundamentals, yet also to leave aside complexities owing to a lack of in-depth analysis, working at a more superficial level or ‘doing things less well’ (Sabelis, 2002). This may cause *losses*, collateral and side effects usually invisible in the short term that later on may need time to be resolved, or that provoke unintended consequences at different levels, possibly affecting different groups unequally (Sabelis, 2000; Adam, 2004). In his analysis of academia, Vostal (2015a) describes how research activity becomes resented:

In particular, the majority of respondents highlighted that long-term character of research activities is dramatically incompatible with compression of action, multitasking and hurry. Unrushed and (ideally) stress-free activities of conducting research (including

reading, writing, revising, making notes, experimenting, measuring and the like) were often referred to as ‘disappearing’ in the conditions of contemporary academia (p. 301).

Under time-pressure academics become more instrumental and pragmatic regarding outputs and impact, which results in the detriment of scientific practices and “loss of intellectualism” or “epistemic depth” (Parker and Jary, 1995, p. 1875; Clarke and Knights, 2015; Fochler et al., 2016; Sparkes, 2007). Lack of time leads, for example, to avoiding reading books, as one of Vostal respondents explains – and we often hear around us – and other displacing strategies to cope with daily life: “I am cutting corners, doing things as quickly as possible, reading things as quickly as possible ... it is superficial and I am unsatisfied with my engagement with the scholarship” (Vostal, 2015a, p. 302). In terms of research content, Müller (2014) and Fochler et al. (2016) show epistemic implications when postdocs make meticulous time investment calculations in order to choose projects, topics or methods that can guarantee results in a determined period of time:

For postdocs, epistemic risk is defined through the relationships between the expected data quality (ideally expressed through the impact factor level of the journal that accepts one’s publication), the expected time needed to produce these results and the perceived likelihood that a particular project will fail. (...) Epistemic risk is nearly synonymous with career risk, as an unwise epistemic investment is seen as almost inevitably leading to losing out in international competition. (Fochler et al., 2016, p. 194)

This fierce competition in academia can also promote practices in knowledge such as text recycling or self-plagiarism, that for some “arguably serves little other purpose than to boost one’s publication record” (Horbach and Halffman, 2017, p. 500). In fact, while many academics see this situation as frustrating or uneasy, others engage in an individualist and competitive ethos (Clarke and Knights, 2015; Sparkes, 2007; Vayreda et al., 2019). Research by Anderson et al. (2007), found academic misconduct such as secrecy and sabotage, twisting of relationships with colleagues in the same field, interferences in peer-review, exploitation of junior scholars and flawed practices in research, among others, to be consequences of competition dynamics. A meta-analysis by Fanelli (2009) shows a compilation of different questionable practices ranging from falsification or modification of data to modifying the design, methods or results of research to fit the pressures of funders.

2.2. Acceleration and precariousness in academics' lives

The aforementioned model of science also has consequences in academics lives and experiences at other levels, as a result of the acceleration of the pace of work (Vostal, 2015a, 2015b; Müller, 2014; Ylijoki and Mäntilä, 2003). Although acceleration does not affect everyone in the same way (Vostal, 2015a, 2015b), evidences report that many academics experience it as constraining (Ylijoki and Mäntilä, 2003; Gill 2009; Vostal, 2015a, 2015b; Sparkes, 2007; Conesa and González, 2018b).

Many academics lack time for their personal lives in a now normalised *long hours culture* (Ylijoki and Mäntilä, 2003; Conesa and González, 2018b). Outsmarting time in every process and activity in order to obtain the maximum output means too that who has more time has a greater chance of *winning the race* (Walker, 2009, 2014; Conesa and González, 2018b), following a time commodification logic. As seen before, survival strategies imply game-playing transformed into individualism and careerism that some manage with more entrepreneurial and competitive roles, while for others it brings tensions, moral dilemmas and a loss of job satisfaction (Clarke and Knights 2015; Knights and Clarke, 2014; Müller, 2014; Sparkes, 2007; Vayreda et al., 2019). Announcing these changes in English academic environments at mid-nineties, Parker and Jary already stated: “More competition to publish, more teaching, more administration combined with less personalized relationships with students are common experiences and a source of demoralization for many” (Parker and Jary, 1995, p. 328). Teaching becomes undervalued – even though it provides the majority of financial inputs to universities (Conesa and González, 2018a) – when not separated from research, as they predicted, transforming research into an “equivalent of an ‘ivy league’” (Parker and Jary, 1995, p. 331).

This is especially hard for academics in precarious positions such as temporary, short-term, part-time contracts (Ylijoki and Mäntilä, 2003; Conesa and González, 2018b; Heijstra et al., 2017; Bozzon et al., 2017; Shahjahan, 2019), which means, for example, having to combine these positions with other precarious jobs and/or lacking time and resources to develop research while also struggling to find time to prepare or improve the subjects (Conesa and González, 2018b; Shahjahan, 2019). This situation is intensified by uncertain future prospects, as positions are scarce and career steps unclear, promoting states of *hypercompetition* (Fochler et al., 2016; Conesa and González, 2018b). Academic systems hit hard by austerity measures have been the most affected – such as Spain, Greece, Italy, Iceland, Hungary and Croatia, among others (EUA, 2015; Conesa and González, 2018a) – and this trend, for example in Spain, has still not been redressed (Conferencia de Rectores de las Universidades Españolas, 2018).

Many initiatives under the slow science epithet have produced manifestos, articles, lectures, and comments, contesting the fast rhythm of science, although constituting quite heterogeneous voices (for a revision see Conesa, 2017, 2018). Some call for more time to think and read in what seems a disembodied model of the “ivory tower” for “selected brains” (The Slow Science Academy, 2010, p. 2). Some others have pointed to scientific overproduction, irreproducible results and salami-slicing strategies (Lutz, 2012). Others focus on teaching overload and work intensification as affecting both permanent and more precarious faculty and the lack of time for critical thinking and debate (Hartman and Darab, 2012; Berg and Seeber, 2013; O’Neill, 2014). Other, more critical accounts are “La Désexcellence” (Gosselain, 2011), mentions to fast science by Rosalind Gill (2009) or Isabelle Stengers’ public lecture constituting “A Plea for Slow Science” (2011). However, power relations and social variables behind time-pressure are (usually) not tackled in depth, as Martell (2014) and Mendick (2014) point out, such as those related to gender and care, with the exception of Mountz et al. (2015).

Indeed, gender plays an important role, as it still marks distribution and hierarchies of tasks and time, as we will see in the following sections. In academia those who bear the weight of care and other responsibilities are at a disadvantage compared to those who can - and are socialized to - devote all their time to work (Benschop and Brouns, 2003; Conesa and González, 2018b). Besides this, frontiers of personal and working life have become blurred, with experiences of acceleration and stress augmented by the need to be connected at all times (Menzies and Newson, 2008; Vostal, 2015a; Conesa and González, 2018b; Shahjahan, 2015; Mountz et al. 2015). Some studies on neoliberal academia have already drawn attention to embodied pressures, especially affecting women, which lead to sleeplessness, anxieties, fear, isolation, or guilt among other kinds of distress, as well as affecting life plans in important ways (Acker and Armenti, 2004; Mountz et al., 2015; Gill, 2009; Conesa and González, 2018b; Bozzon et al., 2017).

In the next section we are going to review these relationships between gender, time, care and work, to then develop a theoretical care framework that serves us as a lens for science and academia.

3. Care

3.1. A care crisis: care and work; gender and time

A broad corpus of literature has delved into the relationships of work, gender, care and time in the last decades (i.e. Folbre, 1994; Folbre and Bittman, 2004; Hochschild, 1997; 2000; Federici, 2013, among others). In “The Time Bind” (1997), Hochschild explores the tensions caused by the increase in working hours in organizations due to the growth of global competition. Together with the increasing participation of women in the labour market, she discusses the lack of time and motivation to perform domestic and caring activities which entail deep involvement and duration, due to work centrality. To this situation we should add the extended precarization of working conditions such as flexibilization, casualization or informalization hindering *conciliation* (Southerton and Tomlinson, 2005). Work intensification in a globalized labour world is linked to staff and budget reduction, demanding more from workers with worse labour conditions, taking the form of organizational commitment and fidelity and constituting an indirect form of gender inequality (Southern and Tomlinson, 2005; Rutherford 2001; Pérez Zapata et al., 2017).

In an analysis and debate about the role of new technologies in time pressure, Judy Wajcman (2008; 2010; 2014) concludes that, although there is much abstract discussion about the relationship between temporality and technological innovations, as socio-material practices, technologies are connected to cultural practices already existent, where the sense of social acceleration and time scarcity has more to do with work intensification and gender relations than with technology *per se* (cf. Hassan, 2010). Specifically, Wajcman (2014) stresses that time pressure is mainly experienced in accordance with dual-earner (heterosexual) families where women still hold a disproportionate load of housework and caring tasks. Although men are slowly increasing their time dedication at home (as seen in some time surveys), there is still a gendered distribution of chores that generate uneven situations: men do not bear the weight and responsibility of daily familiar and domestic organization (i.e. monitoring medical familial appointments, daily organization of clothes or food, etc.), they are usually devoted to more rewarding tasks that start and finish (i.e. bricolage, non-routine outdoor activities), and there are significant differences in the quality of time devoted (i.e. watching TV when taking care of children) (Wajcman, 2014). Indeed, the cognitive load of this organizational aspect has been recently raised in the literature as an important source of inequality (Daminger, 2019). In contrast, “lesbian families have a high level of shared housework and child care” (Wajcman,

2014, p. 195). In scientific and academic environments, men might be improving their participation at home, but women still bear the weight of responsibility (González, 2014; Conesa and González, 2018a).

Time density – “meaning the density of practices allocated within time frames” – is also an important dimension for women who usually describe experiences of multitasking and juggling while having less restorative time to recover from exhaustion (Southerton and Tomlinson, 2005, p. 235; Wacjman, 2014). Familiar responsibilities include not only the younger members but also the elder relatives or significant others in situation of dependency who are usually cared for by the women around them, meaning that caring needs rely mostly on feminized circles, thus entailing many difficulties and conflicts (Carrasco, 2001; Pérez Orozco, 2014).

To deal with this situation, care work has been *externalized*. Partially and not sufficiently taken on by public services (according to the country), care has come under the auspices of private health care (only affordable to a few) or been extended to migrant workforces, producing the so-called *global chains of care* (Parreñas, 2001; Hochschild, 2000; Pérez Orozco, 2014). Poor working conditions and, too often, even no contracts, affect (mostly) women with migrant background – leading to abuses and extreme difficulties related to legal status in many cases –, that leave their families in their countries of origin to care for dependents of white middle and upper-class families that devote their time to contractual work. More recently, there has been a tendency in middle-class families to devote more time to childcare, especially for highly educated women (Wajcman, 2014), though long hours culture and a lack of care-focused policy hinder this possibility.

All this situation generates a crisis of care (Beneria, 2008; Pérez Orozco, 2014), highlighting that care, being in the form of a labour activity, being an imposition or being a decision, is necessary to sustain life but undervalued and invisible generating social inequalities. Its consequences are clearly summarised in this quotation “(...) patriarchal capitalism in the global level exploits the work of care and makes use of its relegation to the domestic sphere, of its gratuity and its precarization” (Ortiz Monera, 2017, p. 257).

This literature centred on care, work and family relationships is paralleled in broader ethical and political terms by a feminist care approach that will help us to create a theoretical framework to shed light on issues of time and productivity in the scientific and academic sphere.

3.2. A feminist care approach

Since the work of Carol Gilligan (1982), a study of the different perceived moral sense in girls³, several understandings of care have been developed, most of them concerning individuals' needs and relationships, often dyadic situations involving a person in a need of care and a carer (Noddings, 1984), debates on ethics, justice and/or citizenship (Tronto, 1993, 2013; Held, 2006; Engster, 2007), and extended debates within or connected to disability studies in more theoretical and/or practical ways (Kittay 2011; Hughes et al. 2005; Winance, 2010), among others (see for example Tronto's revision, 2013, p. 19-21 and Tronto, 2017, notes 3 and 11). In 1991, Berenice Fisher and Joan Tronto created a wide definition of 'care':

On the most general level, we suggest that caring be viewed as a species activity that includes everything that we do to maintain, continue, and repair our 'world' so that we can live in it as well as possible [sic]. That world includes our bodies, our selves, and our environment, all of which we seek to interweave in a complex, life-sustaining web (p. 40).

This opening up of care in more-than-dyadic and also more-than-human relationships, not only decentralises the essentialist idea of feminized care, but also expands the possibility of applying it in different ways, referring to the idea of entangled elements in our world that sustain life in order to make life liveable (Carrasco, 2001, Pérez Orozco, 2014; Butler, 2004, 2018) and existence possible (Mora, 2018). This definition also reminds us that *we all* need care throughout our lives – in many different ways, some more than others, at some stage of life more than others, in some areas more than others – to support ourselves and the world around us, and it is, therefore, a basic need (Tronto, 1993; Kittay, 2011).

However, care is usually undermined and invisible, seen as a private practice, mostly developed by people marked by gender, race and class (Tronto, 1993; Hochschild, 2000). In this context of power relations, caring practices are devalued, and care work is unpaid or undertaken in poor working conditions, as previously argued, and seen as unproductive in a Western profit-centred world. With this feminist approach, care is projected as a political and philosophical notion that destabilizes the individualist, masculine and modern value of autonomy (the self-made man) (Tronto, 1993) – inherited from and still based on gendered and raced neoliberal economies,

³ For a discussion of this idea see Joan C. Tronto (1987). "Beyond Gender Difference to a Theory of Care", in *Signs: Journal of Women in Culture and Society*, vol. 12, University of Chicago.

colonial logics of extractivism, exploitation and slavery (Mora, 2018; Murphy, 2015), such as normalised global care chains –, in favour of the idea of interdependency. It is in this sense that an integral and political understanding of care works against “(...) current fragmented conceptions of care [that] operate as they do to perpetuate gender, class, racial structures of power and privilege through the construction of ‘otherness’” (Tronto, 1993, p. 101). Some care approaches, thus, call for care to be moved from the periphery and private space to the centre of our lives as a potential agent in reframing our taken-for-granted imaginaries (Tronto, 1993; 2017; Pérez Orozco, 2014).

3.3. Care and time

The politics of time has been at the heart of feminism
and its challenge to the boundaries between public and private life.
Perhaps it is time to contest the hegemonic allure of speed.
(Wajcman, 2010, p. 380).

Care has a strong connection with time, since care needs time. Although it has different temporalities, usually “care requires patience and time” (Winance, 2010, p. 111). As long as care is unvalued, the time devoted to care is invisible. Time in Western terms has been and still is a colonizing tool imposed to organize societies, and resistance is difficult not only due to unquestioned commodified time and the negative connotations of deviation from the norm (backward, lazy, slow), as seen in the beginning of the chapter, but also because there is “a price to pay” in the norm of global competitiveness (Adam, 2004, p. 137). What it is rendered hidden is, however, the “price to pay” imposed on those who are not in power or the *unlistened*, marked by gender, age, class or colonial relations (Adam, 2004). Rita Segato, for example, talks about the ‘sacking of time’ when she refers to the practices carried out on American indigenous communities (Segato, 2018).

In this “hierarchy of temporal relations” where ‘time is money’ and speed means progress, a totally embedded and taken-for-granted idea, the time of those who care is considered ‘worthless’ and unproductive (Tronto, 1993; Adam, 2004). In this sense, time to care or care time appears as distanced from or even opposed to neoliberal logics, as it does not fit with the imperative of productivity and competitiveness. Tronto argues: “One of the archaic meanings of care is ‘burden’: when one needs always to be ready to take advantage of time, the burden of

care for others becomes more onerous” (Tronto, 2003, p. 125). Moreover, Tronto argues that care is not easily reducible to standards of speed:

(...) little in caring can be enhanced by being ‘forced’ in a time/space compression: not learning, healing, reflecting on one’s experiences, dying. While the compression of time–space might make capitalists richer; it makes human lives of care poorer. This is not to say that there are no attempts to commodify care. (Tronto, 2003, p. 121-122).

Indeed, Tronto (2017) states that neoliberalism captures care in different forms: individualized self-care, care reliant on the (nuclear and heterosexual) family and/or market solutions only affordable to some, which entails important failures and limitations (see Tronto, 2017). In a way, co-opted neoliberal care changes the meaning and potential of care itself. Conversely, many authors argue for the potential of care (and the ethics of care) to disrupt neoliberalism. Indeed, to place care at the centre of our social and political life (Tronto, 1993) – or to *place life at the centre*, as feminist Spanish economists prefer to say (Pérez Orozco, 2014; Carrasco, 2001) – is to seek to displace a profit-centred world. It endorses a relational ontology in which care is a collective act (Tronto 2017, p. 32), a distributable shared activity and an ethical value. Other authors argue in similar directions: Ivancheva, Lynch and Keating (2019, p. 2) clearly posit how neoliberalism collides with care, citing other feminist thinkers:

As it endorses a form of entrepreneurial individualism that is highly competitive and self-interested, and as it regards these traits as natural and desirable (Friedman, 2002), neoliberalism is antithetical to care in deep and profound ways (Federici, 2012; Fraser, 2016; Oksala, 2016).

Similarly, the Spanish sociologist, María Ángeles Durán, also states that care is hardly compatible with capitalism (Durán, 2019), not only in ethical terms but also according to current economic forms of organization (Durán, 2002, 2017).

A closer inspection of care, time and gender tells us that there is no neutrality in the way in which we experience our temporalities, since “decisions about time are decisions about values” (Daly, 1996, p. 211 cited in Tronto, 2003, p. 124). For example, priorities and ideologies can be seen in working long hours “to gain advantage over others in the advancement of their career” (Southerton and Tomlinson, 2005, p. 232) while leaving less or no time for caring tasks or other responsibilities. “This raises issues of what constitutes ‘need’ and whether some groups are ‘pressed for time’ because they place greater value on certain practices that other groups regard as less ‘necessary’” (Southerton and Tomlinson, 2005, p. 232). The notion of ‘privileged

irresponsibility' (Tronto, 1993) describes this dynamic well: those who do not embody care responsibilities due to values ascribed to social groups can "ignore hardships they do not face dividing up responsibilities" (1993, p. 121).

However, long working hours are increasingly a survival strategy - more than a *decision* - in (increasingly normalized) precarious and exiguous environments, more readily naturalised for men subjectivated in the breadwinner model, and more recently, in the entrepreneurial self (Foucault, 1979 [2008]; Bröckling, 2005) and a source of many tensions for women, who enact multiple and clashing discourses and subjectivities (Vayreda et al., 2019; Conesa and González, 2018b). When total time devotion to work in precarious labour contexts is normalized, we can state that neoliberal time weakened our bonds, not only stealing our time to care for our intimate relations, but also the care and support needed in our relational support networks, as well as in our larger disparate social, environmental and global uneven situations (Conesa, 2017).

Nevertheless, care is not an unproblematic nor an innocent category (Puig de la Bellacasa, 2015, 2012; Murphy, 2015; Pérez Orozco, 2014), and as such we need to be aware that care is not exempt from power relations. Sometimes, and due to its traditional significance, it is (mis)understood as a reactionary ethics that reinforces the idea of women as the bearer, responsible for and sacrificed to the care of others (and to the *being for* others) in an essentialized, gendered and heteronormative paradigm (Pérez Orozco, 2014, p. 171)⁴. Moreover, unvalued and unpaid care work, as well as paid affective labour are two different sides of gendered power relations (Murphy, 2015). It is further problematized within Disability Studies and the Disability Movement by those who receive care while calling for a basic autonomy and pointing to power relations that can become oppressive or paternalistic (Hughes et al., 2005; Winance, 2010). Notwithstanding that *to care* could be taken to mean "(...) to enable, to open up new possibilities of action for the person" (Winance, 2010, p. 105). It can also be co-opted in a neoliberal way as in health care (Tronto, 2017) as previously discussed.

Indeed, care takes place within "existing practices [that] are usually embedded in unsatisfactory contexts of domination" (Held, 2006, p. 4) that cannot be ignored. However, and precisely because of that, feminist care, as problematized here, has strong political and analytical potential in that it seeks to disrupt historical racialized, patriarchal and colonial logics – a difficult challenge as it touches on many elements of the structure of global and local economic relations

⁴ This is the reason why Spanish feminist economists prefer to talk about *processes that sustain life*, that make life liveable, or about *sustainability of life* (Pérez Orozco, 2014; Carrasco, 2001).

(i.e. global chains of care). Care, in this sense, is contrary to individualist formulations of the self-equated with affection or happiness, linked to entrepreneurial relationships embedded in neoliberalism, as Murphy exemplifies in her critique of the politics of health care entangled with neoliberal and colonial dynamics (Murphy, 2015). We nevertheless have to take into account that “The work of affect in general, and the responsabilization of care in particular, has complex and fraught circulations, which stretch transnationally into racial formations, new and old colonialisms and capitalist logics that cannot be let off the hook of critical work.” (Murphy, 2015, p. 731).

3.4. Care and care time in Science & Technology

The concept of care has taken on a life of its own, although some might argue that applying care to broader fields beyond local relationships can twist the meaning of care itself (Noddings, 2015). In Spain, for example, it is a concept long used and widely applied by feminist activists (Colectivo Precarias a la Deriva, 2003).

It has also been recently reinvigorated by feminist scholars in the field of Science and Technology Studies (STS) (see Suchman, 2007; Mol, 2008, Mol et al., 2010; Puig de la Bellacasa, 2011, 2012, 2015, among others). In one of her elaborations, Maria Puig de la Bellacasa (2011), drawing on Fisher and Tronto’s (1991) broad definition, proposes the term ‘matters of care’ for knowledge politics in a discussion of ‘matters of concern’ and ‘matters of fact’ or ‘interests’ as coined by Bruno Latour (2004) in the STS knowledge debate. She reflects on the significance of care for knowledge politics and encourages an ethos of care in STS as a way of engaging with a “speculative commitment to neglected things” (2011 p. 85) thickening the signification of caring (p. 92). As Puig de la Bellacasa explains, care connotes attention to devalued practices (such as care labour) as well as “attention and worry for those who can be harmed by an assemblage but whose voices are less valued, as are their concerns and need for care” (2011, p. 92). With a proposition to engage with care in our knowledge epistemologies she reminds us that “A feminist vision of care (...) engages with persistent forms of exclusion, power and domination in science and technology” (2011, p. 91).

In her aforementioned study of soil science and productionism⁵ (in section 1 of this chapter) she analyses temporalities and care in technoscience (2015). Dominant productivist and

⁵ In this article, Puig de la Bellacasa uses both formulations: *productionism* (name) and *productionist* (adjective).

progressivist timelines in scientific endeavours leave important lively elements (human and non-human), such as soil, exhausted by a lack of care and care time. Her feminist approach “engages with care as a way to draw attention to the significance of practices and experiences made invisible or marginalized by dominant, ‘successful’, forms of technoscientific mobilization” (p. 692). She also argues that “Care time is also irreducible to productionist time” (p. 707) and that “(...) Against this [productionism], a politics of care exposes the importance of the work of care for creating liveable and lively worlds.” (p. 708). The way Puig de la Bellacasa discusses and applies the care notion and the idea of care time in science and technology, informed by feminist theoretical backgrounds is key for the present chapter. On discussing the reduction of care to *purely* economic terms she states: “Rather than focusing on demonstrating the productive character of activities of care, affirming the importance of care time means drawing attention to, and making time for, a range of vital practices and experiences that are discounted, or crushed, by the productionist ethos” (p. 708). She concludes that to disrupt dominant timescales in soil science is to draw attention to multiple interdependent temporalities by making care time which “offer glimpses into a diversity of timelines that, despite being made invisible or marginalized in the dominant timescape, can challenge traditional notions of technoscientific innovation” (p. 692). A diversity of temporalities (or temporal diversity) emerges from her argumentation, in which she also discusses the idea of slowness: “making care time is therefore not so much about a slowing or redirection of timelines but an invitation to rearrange and rebalance the relations between a diversity of coexisting temporalities” (p. 709).

For our study of science and academia we can think of care as those practices and values neglected under an increasingly productivist character of science, and those considered superfluous and invisible that, nevertheless, are indispensable for the everyday ‘sustainability of life’ of academics and their scientific endeavours. From the general direction of science (what we care for in scientific milieus) to invisible and taken-for-granted practices and norms that threaten care in different dimensions of the daily organization of science. Within this we might include what we research and teach, how we engage with and develop our scientific and academic practices and why/for whom. How we engage and care for ourselves within the academic community (and what alliances we build), and what conditions scientists or academics experience inside and outside work from a feminist care perspective. While some studies, as we have seen in previous sections, have analysed some of those issues through the gaze of time studies or evaluation studies, only a few have used a feminist care approach as a lens through which to contemplate these phenomena. A care approach might contribute to bring light to relationships of gender, time and productivity. It might entail continuously enquiring, ‘what do

we see under a care lens?’ and asking ourselves, ‘what are we really caring for in science?’. Before moving on to our context and methods section, I will now review accounts of care applied in science and academia.

3.5. Literature review including care in science and academia

Few studies have directly or explicitly focused on the relationships of care in science and academia and few of them have included temporal aspects. In her theoretical article, “Carelessness”, Lynch (2010) analyses and describes new academia as a “highly individualized entrepreneurialism” that “has allowed a particular ‘care-less’ form of competitive individualism to flourish” (p. 57). Lynch refers also to a care ceiling, affecting more women since “men can rely on the moral imperative on women to care” (p. 57-58). Moreover, “not all caring can be delegated without being transformed (Lynch, 2007; Lynch et al., 2009), those who have non-transferable dependency demands on their time and energy either cannot write, or cannot write much” (Lynch, 2010, p. 60). Other requirements imply time as well: internationalization and networking mean time for travelling, creating and maintaining contacts, while self-marketization through being active in social media is also a time drain (Lynch, 2010).

Ivancheva, Lynch and Keating (2019) focus on care-led affective precarity as the threat of or sacrifice to those material aspects of care that “constitute people mentally, emotionally, physically and socially” (Ivancheva et al., 2019, p. 3) yet precariousness “is not just an economic issue, it is also a care issue” (p. 10) having also “an affective relational dimension” (p. 3). In their empirical paper, they illustrate that “(...) women who take up flexible arrangements to do caring (i.e., part-time or temporary work) are at a disadvantage when it comes to taking up the same job they have left and securing permanent employment.” (p. 5). They also stress the expectation of globally mobile researchers and its gendered connotations in care processes: “(...) engaging in transnational mobility in the pursuit of security impacts on women's ability to have a family or become part of an affective community of solidarity, care and love” (Ivancheva et al., 2019, p.5) adding that although mobility may bring positive things “the purpose of career success also ignores the emotional costs of migration” (p. 10), a relational or affective preoccupation that men, they state, did not raise in their narratives.

Another aspect of care raised in the literature on work and organizations is what has recently been called “academic housework” (Heijstra et al., 2017), referring to those tasks which are not

valued or countable within the meritocratic system, but that are very important to sustaining academic life: “In our conceptualisation academic housework is gendered and includes tasks that relate to giving back to the community, various teaching and research-related activities, administrative work and gender equality initiatives” (p. 765). This work is usually invisible, undervalued, and time-consuming, which “tend[s] to impede academic career making”, and is mostly undertaken by junior scholars and academics marked by gender, as its domestic parallel suggests who more easily assume subordinated roles with the expectation of a more stable job and receiving the recognition of their superiors (Heijstra et al., 2017; Gill, 2009).

Although not centred on care itself, Fochler et al.’s research (2016) used the term when acknowledging differences between PhD and Postdoc researchers. They discuss “(...) a latent conflict between the regime of valuation based on care and collectivity [they encounter in PhD’s interviews] (...) and another regime focusing on individual productivity we will encounter in more detail particularly in our analysis of postdocs’ statements” (Fochler et al., 2016, p. 186) due to their career-oriented goals. Following them, care at a group level may be aligned with quality and prestige: “caring for others and helping their progress benefits everyone because it increases the quality of the collective work and hence the reputation of the laboratory, which may rub off on individuals as they apply for postdoc positions in other laboratories.” (p. 187).

In the conclusions of her dissertation, on questions of authorship and collaboration in life science postdocs, Müller (2012) relies on the concept of care informed by STS scholars and makes her case “to contribute to responding to the lack of value assigned to care in contemporary academic worlds from within, in order to remain responsible for its and our becomings” (p. 177), and claims “to strengthen individuals through caring connections in order to make resistance possible” (p. 187).

The collective and autoethnographic paper by the Great Lakes Feminist Geography Collective (Mountz et al., 2015) traces an explicit relationship between time and care, advocating for ‘slow scholarship’ and a feminist care ethics to overcome gendered, class-based and racialized exclusions. Time compression is brought by counting regimes that distort scholarship: “Neoliberal university time as imagined by these metrics-based regimes is compressed and all-encompassing. It is also fictitious, claiming to account for things that cannot be measured and ignoring other scholarship” (p. 1241)

They contrast this neoliberal time with relational ‘women’s time’ devoted to care: “This relational ‘women’s time’ (also known as social reproduction) is distinguished from the masculine domain of true creativity, innovation, and invention – i.e. valorised production and

productivity” (p. 1242) which is as well reproduced by “The managerial regimes of the neoliberal university [that] remake and reinforce academic subjectivities to serve institutional productivity in a way that entrenches the hierarchical valuation of “women’s time.” (p. 1242) eroding engagement with students, colleagues, research, teaching, friends and family. They call for a slow scholarship to counteract neoliberal hurried time enabling a feminist ethics of care: “working with care while also *caring for ourselves and others*” (p. 1253)

All of this previous research already points out some of the hotspots in which care is neglected in a competitive academic environment through focusing in different but isolated aspects of the academic work. Following the context and methods sections, I present the findings of the fieldwork applying the feminist care framework previously developed to look at and explore relationships of care, time, gender and productivity transversally, throughout different academic and scientific discourses and practices emerged in the fieldwork in six different levels, where some of these aspects will appear in a similar form, thus supporting this literature, and other new aspects will emerge through the lens of care and care time.

4. The Spanish context

In Spain, the scientific system is mainly constituted of public (and some private) universities and public and semi-public research centres. The access to academic and scientific positions is usually through an accreditation process, necessary to later apply to a public competition when a vacant position is published in a given department.

The ‘accreditation’ process was established in the first decade of the 2000s, led by national and *autonomic* (regional) quality agencies created at the end of the 90’ or beginning of 2000. As part of this process, academics collate all of their demonstrable achievements – from certificates of every conference attended, to each of their teaching subjects and their related student surveys– meticulously documenting them on a long form and physically submitting them for evaluation. Within these agencies, evaluation committees grouped by fields of knowledge assess candidates’ curriculums to decide if they achieve enough credits in each of the ranks submitted (González et al., 2018). These ranks were established by university laws (called LOU in 2001, modified to LOM/LOU in 2006) in accordance with new and old academic positions (some others disappeared or started an extinction path). The new positions corresponded to a new contractual type, equivalent to the tenured-track system (informally called *the labour way*), differentiated from but coexisting with civil servant positions. Adjunct teachers (known as *Asociados*) were maintained only as part-time positions and with the condition of holding another job outside of the university, and with no need for accreditation.

Very recently, The National Agency for Quality Assessment and Accreditation of Spain (ANECA)⁶, the state agency, was transformed into an autonomous (independent) organization, renewed its structure and toughened its criteria for access to academic positions in order to reach higher standards of ‘excellence’. Research, in the form of funding achieved and publications in indexed journals (especially, those of the Science Citation Index) became the centre of the evaluation in almost all the fields⁷.

⁶ For more information on ANECA, and its creation and development, see <http://www.aneca.es/ANECA/Desarrollo-marco/Cronologia>

⁷ Due to extensive protests and negotiations from academics and unions during 2017, some of these criteria were softened in certain fields (i.e. Social Sciences or Humanities). However, for a *Professor Titular* (equivalent to an Associate Professor, but with civil service accreditation) in, for example, biomedical sciences, the publication criteria consists of these two options: a minimum of 25 publications in the JCR, of which at least 12 have to be in the 1st tercile (T1), at least 10 in the 2nd tercile (T2), and first or last authorship of at least 12 (6 in T1); or a minimum of 15 publications in the JCR of which at least 10 are in the first decile (D1), and first or last authorship of at least 6 in T1 (see full criteria [here](#)).

After achieving accreditation, academics still have to wait for an open position in any given department, and prepare and defend their candidature in a public recruitment process with other candidates. Positions were frozen due to austerity cuts from 2009 to 2012 (Amoedo-Souto and Nogueira, 2013) and still today many university departments have large queues of *accredited* academics waiting for positions to open, sometimes waiting up to 10-15 years (Conesa and González, 2018a; Castillo and Moré, 2016). Early-career scholars' prospects are, thus, more than limited. In the period between 2004-2005 and 2014-2015, civil servant positions have decreased and only a few of them are opened (in some regions less than in others) and this tendency has not been compensated with the opening of career-based positions in the labour way (Conesa and González, 2018a)⁸. *Interins*, provisional positions in many departments until the vacant is formally opened, and Adjuncts cover an important part of the teaching demand with precarious working conditions, especially in the cases of so-called 'fake Adjuncts' (see Conesa and González, 2018a). They are not able to conduct research projects nor to access to funding resources, while being expected to have publications should they wish to pursue a better position, yet, in practice, Adjunct position is understood as the gateway to an academic career (see Moreno, 2015; Castillo and Moré, 2016; Conesa and González, 2018a). As for gender parity in Spanish academia, the evolution of the proportion of women from 2015-2016 to 2018-2019 is as follows: predoctoral women decreases from 49,9% to 47,6%; postdoctoral women maintains the same proportion (49,9% to 50%); middle positions have increased from 42,9% to 44,5%; and full-professor positions have grown too from 21% to 24% (Unidad de Mujeres y Ciencia [UMyC], 2021, p. 36), which although a little improvement, it is a situation that reproduces, year after year, the so-called scissors figure, and which for predoctoral women marks a worrying tendency. Besides, when looking specifically at grade A (full-professor positions) the growth of women is due to an increase in Humanities area while women have decreased in Engineering and Technology area (UMyC, 2021, p. 38), which means a rising tendency of horizontal segregation.

In the first decade of 2000, other research-based positions were also created through third party and competitive processes, the same as for access to research resources, which meant the end of block funding for research (Fochler et al., 2016). Most of them were PhD and Postdoc contracts but other regions have, nowadays, new positions designed exclusively for highly

⁸ At the end of this thesis some legal changes in terms of job stabilization have been introduced but it is still early to evaluate them (see Limitations section of Conclusions of this thesis).

qualified and internationally comparable academics, although with no offer of a permanent contract (see, for example, Serra Hunter position in Catalonia).

Additionally, many research centres were created at the end of the 1990s and beginning of the 2000s to develop more 'advanced' and cutting-edge research, mainly in STEM and related fields and mostly called centres of excellence. These semi-public research centres (privately managed) are based on research groups that generate their own salaries through projects carried out in competitive processes, having a high percentage of PhDs and Postdocs with no possibilities of contract renewal (only a few hold intermediate positions like Research Associate), following a pyramid system with a junior and/or senior research leader responsible for financially managing their group (see Vayreda et al., 2019). Only technical and administrative staff constitute stable positions offered by the centre. Women usually occupy half of the PhD positions, and are disproportionately present among administrative staff, being few and far between in leadership positions in this type of centres (see Vayreda et al., 2019).

Regarding the care situation in Spain, the so-called Dependency Law, approved in 2006, to facilitate the care of people in situations of dependency, was affected by government cuts which caused care responsibilities to fall on families (mostly feminized circles) in a country where familiar care is, to a certain extent, culturally integrated. As a reference, the proportion of unemployed women ranged from 58.6% in 2007 to 59.6% in 2017, while in a country like Germany it grew from 66.7% in 2007 to 75.2% in 2017 (Eurostat, 2019). Maternity leave extends to 4 months and only recently has the other parent been given, progressively, more time (up to 4 months by 2021, one month mandatory for both) which until 2019 was given only 15 days.

5. Methods

Field work was developed within the GENERA project which included ten case studies to be undertaken in different scientific centres or university departments in different regions of Spain, and taking in different academic fields. Each case, developed by different researchers of the project, included four to ten biographical interviews of men and women of each scientific/academic rank, one focus group recreating a selection process and analysis of diverse documents of the institutions. Another strategy of the project was to conduct discussions about 'identification of excellence and talent' with senior academics of different fields.

For this chapter I have used the following material, which corresponds to the fieldwork I myself conducted, comprising a total of 35 participants:

- One case study in a SSH department (public university) and another in STEM research centre of excellence (semi-public), that resulted in 16 biographical interviews of a balanced number of men and women (one of each rank from Adjuncts and Postdocs to Senior researchers or Full-professors), document analysis (i.e. statistics, recruitment policies, regulations of each institution) and two focus groups on recruitment processes.
- A third focus group was conducted in another STEM research centre (public) with an interdisciplinary focus discussing excellence with senior academics.

These three focus groups had a total of 10 participants and, together with the interviews, this fieldwork was conducted in 2015 and 2016. I completed this set of data with:

- Nine further biographical interviews of women academics from different fields and institutions, conducted in 2016 and 2017.
- Analysis of science reports, legislation and institutional messages (i.e. mottos, slogans, speeches).
- Additionally, I have used the notes taken in the Debate "University Life and Maternities" organized by an SSH department of a public university in 2019, in which I was invited to participate with 12 other women. After the rich debate that worked as an informal focus group I asked for permission to use my notes and I got the consent of their participants.

In the following table (fig. 1) I show a structured summary of this fieldwork.

25 biographical interviews	8 interviews in a SSH university department (4 women and 4 men of each rank) 8 interviews in a STEM research centre (4 women and 4 men of each rank) 9 interviews with women academics (Fields: Social Sciences, Humanities, Life Sciences and Engineering)	2015-2016 2016-2017
3 focus groups (10 participants)	2 focus groups on recruitment processes (simulation of a selection process) - In a SSH department - In a STEM research centre 1 focus group on 'identification of excellence and talent': - In an interdisciplinary STEM research centre (i-STEM).	2015-2016
Documentation/secondary sources	Spanish legislation concerning science and academia. Statistics, recruitment policies, regulations and institutional web content from institutions where case studies were conducted. Science reports, official documents and official websites of the European Commission and other research centres. Observations and notes taken on institutional meetings of different scientific and academic centres and universities.	2015-2019
1 informal focus group (12 women participants)	Notes taken at a debate on maternities and academia in a SSH university department which worked as an informal focus group.	2019

Fig. 1. Types of data gathered and period in which they were conducted.

In total, the 25 biographical semi-structured interviews took the form of an informal conversation on academic background and academic career steps, circumstances around each step, recruitment and promotion processes, personal life, future expectations and main obstacles in their career paths (following the GENERA script, which can be found in Annex V). Questions around scientific practices, temporal and care aspects or reflections about science usually appeared spontaneously during the conversation. Ages of the participants ranged from 28 to 67, with participants coming from different national backgrounds: 20 from 7 different Spanish territories, 3 European non-Spanish, and 4 non-European. Their views and experiences are not limited to Spanish science settings since most of them, internationally mobile, have lived in other countries. Interviews were audio-recorded and transcribed with the consent of the participants and with a guarantee of anonymity, and ranged from 60 to 180 minutes.

The units of the case studies were chosen based on diversity of fields (together with the 10 other case studies of the GENERA project), the characteristics of their composition (in this case both had a very low proportion of women at the time of the study), and possible access through a key

informant. Key informants provided us with access to the institutions and put us in contact with a superior manager or director of department/centre who we asked for permission to undertake the research, gave us access to documentation and helped us to contact possible researchers/academics comprising of one man and one woman of each rank present in the institution. All participants agreed to take part in the research after previously receiving a document with the goals and characteristics of the study, and our anonymity commitment.

For the first focus group simulating a selection process in STEM field we solicited to bring in three or four participants usually involved in recruitment practices. This group was composed of two head managers (one man and one woman) together with one junior and one senior group leader (both males), being the latter those who decide which candidates best suit the open positions for their groups. For the second focus group in the SSH department, we directly solicited the participation of two former heads of department and the current coordinator in the field (three male participants), positions usually implied in the selection process. Both focus groups lasted from forty-five minutes to one hour, and were audio-recorded and transcribed.

The GENERA strategy for these focus groups was to design two fictional curricula of one man and one woman in order to reproduce a recruitment process, to search for possible gender biases, inspired in other studies that found biases in favour of men in assessment and selection procedures (Steinpreis et al., 1999; Goldin and Rouse, 1997; Van den Brink and Benschop, 2012; among others). I constructed both curricula for both focus groups based on academic degrees, institutions, publications and journals existing in each field, with particular focus on the sub-disciplines of the researchers involved in the focus group. The few candidates' personal details given were their complete names (fake names of a man and a woman), if they were single or married and their date of birth. Some differences in origin (in STEM curriculum, the man studied his first degree in Switzerland) and age or experience (in STEM curriculum, the woman was 5 years older than the man and worked two years in a company) were designed together with the IP of the project on purpose so as to see if they caused any type of comment or discussion. An important difference in the SSH group was that the man's curriculum was constructed as an internal candidate working as an Adjunct, with a professional and teaching trajectory (no research) in more technological SSH, whereas the woman had a very good curriculum in research and publications in a more traditional area of knowledge, but with a newer feminist approach (see section 6.3). They had 3 years of difference from the period of their first university degree (she being 3 years older). All of the interviewees commented that the curriculums were credible

and the content recognisable which facilitated researchers to discuss about evaluation processes and criteria.

For the third discussion group on 'identification of excellence and talent', one key informant, a senior academic of the interdisciplinary STEM research centre (i-STEM), agreed to take part in the study and provided us with a publicly available webpage of names and email addresses of other senior academics from his institution. I contacted eleven from which five replied willing to participate, but only three could attend due to time schedules (one woman and two men). The duration of this focus group was about one hour and was conducted by me, accompanied by another senior researcher of the project, Nora Räthzel, as a secondary interviewer. The topics raised to foster discussion were excellence, evaluation processes, recommendations for early career researchers in their field, and gender (see in Annex V).

The other nine interviews were conducted with women from different fields following a snowball strategy from suggestions made by other academics of the project. The goal was to explore the experiences of woman in other fields different from the case studies, in depth and with more freedom (with no mediation from their institutions) in order to provide further diversity. The fields comprised Social Sciences (Psychology, Sociology, Pedagogy), Humanities (History), Life Sciences (Biology, Environmental Sciences) and Engineering (Civil Engineering), that I will resume in SSH and STEM fields for anonymity reasons.

Additionally, I was invited to participate in the Debate "University Life and Maternities" organized by and developed in an SSH public university department that worked similarly to a focus group. Participants were 12 women – no men attended – and it lasted around two hours. In this space all women explained their situation and difficulties working in academia and the majority, being mothers, sharing concerns and discussing the issues that most affected them (see section 6.6). My role in the group was to expose some of my previous research results after the intervention of all the participants, so I did not participate in the discussion. With the consent and willingness of the participants I have used some of the notes generated during the discussion, again with a guarantee of anonymity. I call this data an informal focus group on maternities and academia.

5.1. Analysis

A qualitative content analysis was applied to the full data set. Content analysis – "essentially thematic" analysis – "is a method for identifying, analysing and reporting patterns (themes)

within data (...) and interprets various aspects of the research topic” (Braun and Clarke, 2006, p. 79). In previous analysis of some of the interviews (and other interviews from other case studies) I detected key themes related to time, work intensification, precariousness, uncertainty, competitiveness, individualism and discrimination, among others, and their connections with gender (see Conesa and González, 2018b and Vayreda et al., 2019).

In another and more refined stage of the analysis, which included all primary and secondary data previously mentioned, an underlying thematic pattern related to the key themes emerged: productivity and productivism as a discourse present in scientific practices and academic lives covering questions of gendered care and time. It appears as fostered or normalised, sometimes rejected and at other times hidden in some practices, or obscured within individual distress. It is especially present in interviews and focus groups pertaining to STEM fields and in discursive secondary sources, and less present or reproduced differently in SSH interviews. In any case, detecting prevalence of a pattern is not the aim of this research, since it constitutes a qualitative and explorative study which seeks to capture important insights from a theoretical framework (Braun and Clarke, 2006), instead of representativeness or quantifiable results. Thus, in the subsequent phases of the analysis I have applied the theoretical feminist care framework as a lens through which to interpret and understand the relationships and effects of these productivist logics to care, time and gender issues with the hypothesis that behind productivist logics there seems to be a neglect of care practices leading to exclusions where time and gender are concerned. Yet, as I have explored previously, this feminist care perspective appears to be appropriate to scrutinize relationships of productivity, temporality and gender in the academic and scientific organization.

This work has been done repeatedly in a spiral process examining the data collected against the theoretical framework, and vice versa. As in other thematic analyses, some of the strategies in this process have been questioning, making comparisons, thinking about the various meanings of a word or expressions, looking at emotions, language, etc. (Corbin and Strauss, 1990/2015), pp. 89-101). Some of the questions asked of the field work have been, among others: what assumptions about time, care and care time are behind scientific discourses and practices? How does gender play a role in these assumptions? Do they take into account the care and time needed for sustainable academic settings and knowledge creation? What is important and what is left behind under a productivist vision of processes of funding, evaluation, knowledge creation, colleagues’ relationships, etc.? What consequences and what exclusions does this vision lead to? How does productivism affect personal lives and careers? What is left

unattended in productivist science under the feminist care perspective? Would an ethos of care in scientific organization and practices make things different?

There is a lack of empirical studies that use and apply an expanded theoretical care approach in different scientific and academic practices and settings, and which also considers the related temporal factor. As such, this research tries to see how scientific life would appear through a care lens, and explores whether and how productivism is displacing care and producing exclusionary dynamics in science and academia.

As a qualitative study, this research works with discursive sources (documents, interviews, focus groups) understood as available discourses of social life expressed from different enunciative positions by subjects that form part of a web of relations (Balasch and Montenegro, 2003). In this sense, the discourses analysed are not taken as merely comparable or as a reflection of an individual nor of truth, and may be dynamic, which does not mean that they are less valuable. Drawing on the work of Mikhail Bakhtin, language, as both constituted in a sociohistorical context and constitutive, reproduces normative and unifying meanings while also introducing innovation, diversity as well as multiplicity of voices (Balasch and Montenegro, 2003; Sisto, 2015).

Productivism and its effects on gender, care and time are present in different areas of science and academia, from discourses that guide science and gender politics to their presence in scientists' and academics' personal lives. Although these are not pure/closed categories, and some of them have no clear boundaries, for the purposes of clarity and systematization, I present the results in six different levels: institutional science discourses, funding practices, evaluation discourses, knowledge practices, colleagues' relationships, and personal lives.

PART II

6. Findings

6.1. Institutional discourses of science

In the 2000s the rhetoric of the knowledge economy began to be installed in the Lisbon Agenda with claims that stress that Europe needs to be transformed into “the most competitive and dynamic knowledge economy of the world” (European Parliament, 2000) in order to compete with other countries like United States or Japan over a 10-year future period. Later on, other communications launched by the European Commission normalize knowledge as “the currency of the new economy” (European Commission, 2012a, p. 2) where science, academia and knowledge itself form part of a “global R&I marketplace” (European Commission 2012b, p. 13). Horizon 2020, the “biggest EU Research and Innovation programme” covering the 2014-2020 period, is defined as “the financial instrument implementing the Innovation Union, a Europe 2020 flagship initiative aimed at securing Europe's global competitiveness” (European Commission, 2014, p. 1). It frames its main outline by stating “It promises more breakthroughs, discoveries and world-firsts by taking great ideas from the lab to the market”, and finishes “(...) to create a genuine single market for knowledge, research and innovation”. Knowledge itself is presented as an exchange product (to be) inserted in the international market competing with other world economies far from being understood as a common good not necessarily inside economic relations. This type of discourse, very present in EU institutional reports and politics implements, fosters and normalises productivism. It also contains a promissory, speculative and inflated narrative, in the line with Puig de la Bellacasa (2015) analysis of science dominant timescape, marking the direction of science as a purely and inescapably commercialised product.

Semi-public centres of excellence, created to enhance cutting-edge research in STEM fields by way of ‘breakthroughs’ and ‘world-firsts’, prestigious publications and connections to the productive sector (Conesa and González, 2018a; Vayreda et al., 2019) display a correlative language. Their websites use futuristic, promissory and magnifying maxims and mottos, such as “the science of the future”, “research at the frontiers of...”, “expanding the limits of...”, “knowledge of the future”, “accelerating science”, “beyond the limits of...” or “pushing frontiers

of..."⁹. These discourses link future-led science with speed and adventure, a very attractive imaginary that seems to justify efforts to participate in the race for ever-greater productivity. This pretentious prophetic rhetoric, also materialized in modern buildings with bright lights, ostentatious food service and coloured web pages, common in many of these new centres (Piga and Lampo, 2018), contrasts with the precarious working conditions and very limited possibilities of stabilization for researchers – following a model of *efficiency* and *flexibility* based on rotation of researchers (see Vayreda et al., 2019). Speed and productivist discourses also go hand in hand in motivational speeches found in these kind of research institutions, while (exhausted) researchers deal with several projects at the same time in order to support their wages. Notes taken on the field in an institutional meeting register sentences pronounced from top positions ranging from the insistent “Run as fast as you can” to a vehement “You have to be the best in your field” that are accompanied by the indicators’ mantra and the importance of increasing output¹⁰.

To a certain extent we can see how these productivist scientific discourses are linked with speed and progress with a futuristic and speculative drive that reproduces the neoliberal paradigm based on the time-is-money premise, a temporal dominant construction where speed means greater productivity as an unquestioned economic goal (Adam, 1990). Moreover, this can only be materialised through an individualist perspective of being the best in competition with others. Time devoted to science outside the logics of the market or perhaps a type of care time “irreducible to productionist time” (Puig de la Bellacasa, 2015, p. 707) is not present in these logics.

The fight for more women in science and academia also falls within the productivist logic. The discourse of the European Commission to foster gender equality uses profit-sector language and economic arguments: women are seen (like men) as “human capital” that will offer “an important competitive advantage”; they will create “new markets” and increase “international competitiveness” (European Commission 2012b, p. 13). Women are also in need to be “advanced”, like some analysis read¹¹, because they are deemed *slow* or *delayed* in the scientific productivist race. Other European discourses on gender equality in science stress the aim of “getting more women to the top in research” (European Commission, 2008), again in economic

⁹ Some of these expressions have been slightly altered in order to avoid particular identification. Although it is a public discourse, I consider this to be a respectful research practice.

¹⁰ Due to anonymity and ethical reasons, I do not acknowledge the institution nor the persons involved in these discourses.

¹¹ See for example <https://www.springer.com/gp/book/9783319086286>

terms: “The low numbers of women in decision making positions throughout the science and technology system is a waste of talent that European economies cannot afford” (European Commission 2012b, p. 13). Though all of these publications contain very important and valuable analyses and research on the low representation of women in positions of power, we should ask ourselves what this productivist vision really entails for gender equality. A vision that stresses women as part of the competitive engine, with just a few mentions of social justice, and where a reflection on the care ceiling (Lynch, 2010) or time for care is absent. The following sections pretend to shed some light on this question.

6.2. Funding practices

Funding practices are also embedded in this discourse of accelerated productivism. We can observe this, for example, in new regulation determining temporal limitations for doctoral dissertations or in the way labs or research groups have to deal with projects and collaborations.

Time compression is seen for example in standards issued in 2011 for PhD regulation (Royal Decree, 2011) which, among other matters, determine the legal time required to submit a doctoral thesis. Full-time doctoral studies (the ones provided with funds) must have a legal maximum of three years. Only after these three years can a one-year extension be authorised by the doctoral programme, and only exceptionally is another year possible. Looking at the statistics of the Spanish Ministry, the average duration of the PhD has decreased from 7 years in 2010 to 4.4 years in 2017 (MICIU, 2019). However, according to these statistics, in 2017 only 14.6% of doctoral students finished in three years, 25.6% in four years and 26.8% in five years (MICIU, 2019). This likely means that exceptions to the norm imposed from 2011 are the more common situation. As Müller reminds, it is a period supposedly devoted to learn, where mistakes and trials are part of the process, too (Müller, 2012) but the tendency of fostering more products in shorter periods of time is now applied in the first step of the career. Necessary time to care for knowledge and students process through learning or failing might be under threat following time rationalisation supposedly needed to reach organizational goals (Sabelis, 2002).

Competitive projects also have a fixed term duration (usually three years aligned with doctoral positions) which ends in standardization (Felt, 2017) and requires high amounts of time preparation despite low success rates (see Conesa and González, 2018b). This is usually difficult to fit in a myriad of circumstances that vary in each situation, such as size and resources of the group, department or university, characteristics of the group, type of research (i.e. long

experiments or ethnographies), etc. neglecting diversity of temporalities while normalizing a dominant temporalization (Puig de la Bellacasa, 2015). Even a very successful lab has to deal with temporal resources and make complex temporal calculations in preparing many projects at the same time, in order to obtain funding and ensure that the lab and its members can survive on the money and grants acquired: “Out of thirty proposals we have written, twenty are nos, and ten are yeses, so we develop these ten” a top senior male researcher states (1_S_6m). Group leaders become managers that deal, on the one hand, with decisions on knowledge, and on the other, with temporal and economic resources that have to fit into pre-established lines of funding. Senior leaders in the STEM research centre acknowledge, in different ways, how they lack time and miss direct contact with the everyday practice of science: “I only supervise one student” (1_S_6m) or, “I still try to be in the lab” (2_S_5w).

The need to adapt to (usually mainstream) lines of funding established at superior levels means that many other areas of research will be left behind, under researched or developed in more precarious conditions. This early career researcher comments:

This is something that worries me if I want to keep on doing basic research. My situation is better because I work in [topic], it is always flashy, it is easy to attract funding. But there is a lot of basic research, very relevant, that is producing its fruits now, but 20 years ago nobody would have found relevant (...) We cannot predict where knowledge comes from and the thing is that science is becoming a business where I, as an agency that provides funding, give you money and want you to give me outputs, and I’m going to measure this performance in articles in high impact journals. (5_EC_3m)

Funding is increasingly given over to that which is more likely to fit into market dynamics following the “time is money” logic (Adam, 2004) neglecting other knowledges that can constitute a collective contribution to science throughout years or decades. In fact, science is a historical multiple contribution. The view and experience of this senior woman researcher on relationships of productivity with funding also contrasts with the logic of accelerated productivism:

Now it’s all [reproducing an imaginary dialogue:] ‘If you don’t have a *Nature* we won’t give you an *ERC*, and if we don’t give you an *ERC* we won’t give you an *A+*, and so we’ll give you less money’. But what are you talking about? This is nonsense you’re making up as you go along. (...) The content of *Nature* is not what drives science forward, it’s the knowledge we all contribute. This is what society can benefit from, not your personal success. (2_S_5w)

Here there is also a contrast between science as a collective contribution directed to social benefit and science following an accumulation logic in the form of personal success and

breakthroughs. Similar as in PhD researchers of Fochler et al. (2016) study, it might constitute a care vision for scientific development in front of a rejected productivism, now voiced from a senior researcher. Personal success may become an ego trap (as in “being the best” discourse) to use (and confuse) individualist goals with neoliberal productivist purposes.

Transference to society or social impact, usually read in reports and guidelines, might easily become a beautiful euphemism of economic profit, whether it is transformed into a product or service to be sold or a business relationship. Fields such as social sciences or humanities are usually disregarded or given less funds because they are less *profitable* in economic terms, though they contribute to society in very different ways. This researcher from a STEM interdisciplinary field explains by way of example:

We just came from this meeting of research groups of the university and there were several comments from Humanities saying that their social contribution was not considered because it was not valued in money. One of the selection criteria for groups [which will determine funding for the group] is the money you put in from trade agreements [*convenios*]. They argued that their *convenios* have genuine social impact, for example of free software. (...) I think it's a question of values. In this case the institution, the Public Administration does not recognize this work the same way as... as it does the influx of money. (24_S_5m).

This type of funding criteria moves away from an ethos of care in science (Puig de la Bellacasa, 2011) since research and collaborations not linked to profit are not considered in the time commodification logic of productivity – and thus become underfunded and marginalised, devalued. In consequence knowledge processes in benefit of society outside the market, as care practices in science, might tend to decrease.

6.3. Evaluation criteria

Previous examples were connected with criteria used in evaluation processes. In this section I will analyse the three focus groups conducted around recruitment and evaluation practices. Two of them simulated a selection procedure through two fictional curriculums of a man and a woman seeking a second postdoctoral position, the first (namely, group 1) in a semi-public STEM research centre and the second (namely, group 2) in a SSH university department. The third (namely, group 3), developed in an interdisciplinary STEM (i-STEM) public research centre, discussed excellence and assessment procedures (see methods section).

The three focus groups, with their different strategies, allowed participants to discuss evaluation and recruitment processes, and allowed us to examine how they talk about either formal or informal criteria. As such, I do not treat these discourses as the truth or as totally comparable (especially for group 3, given its distinctness), but as available discourses from social life (see methods section). The richness within these discussions has contributed to the length of this sub-section.

6.3.1. First insights: productivity, time and excellence

The importance of publications and productivity ‘on time’ is crucial in Group 1 (STEM) from the beginning of the discussion. They started mentioning that both candidates had good curriculums and later by focusing on the number of papers published and in which journals (with their impact factors) together with the time spans between publications and academic contracts or grants. This was made to check if there were publications in all of the periods “then I don’t believe in coincidences” (10_S_6m), meaning it is a “solid” curriculum. In other words, a way to ensure productivity within a desirable temporality.

Group 2 (SSH) also stressed that both candidates have made good trajectories but there were no explicit comments on the time of achievement of merits, nor mention of quantitative criteria such as impact indexes or prestigious journals, despite their importance in the field is increasing. They state they would hypothetically hire someone depending on the teaching needs of the department and economic resources available. They stress the need to have the approved accreditation, which is obligatory in university hiring processes to assure sufficient merit (see methods section), but they note it is not mentioned in the curricula provided.

Participants of Group 3 (i-STEM), were firstly asked what they understand as excellence (see methods section). Their institution had been awarded an important funding programme and they decided to discuss in a collegial way how to distribute the funds directed to hire doctoral and postdoctoral researchers. The female researcher (A), scientific head of the programme, answers: “We have an excellence of the quality, of honesty and... of impact...” (24_S_5w). Male senior researcher (B) mentions values and results, stressing ethics and hard work, questioning journal impact indexes:

B: I can have a doctoral student [who is] totally motivated, working hard at an excellent quality, with an outstanding integrity, but these results will not end up as something

that is recognized as impact because of the journal in which it is published, (...) but it could also be of excellence, couldn't it? (25_S_5m)

After this quite open and critical vision of excellence in which researcher A considers considering experiences ultimately made invisible, however, researcher A continues saying that "(...) it is right that we have a quantitative evaluation of excellence", listing items such as journal, quartile, number of citations, number of projects, volume of funding attracted, and added "(...) you have positive and negative sides, but... these... these are the criteria, right?". A mix of acceptance and questioning of excellence understood as an accumulation of products is exposed here.

The three groups include normative criteria in their comments, but in very different ways: a productivist vision considering timely outputs, a more relaxed way to check both curriculums without checking any temporal factor, and a more careful reflection on excellence based on normative criteria, but with acceptance of productivist norms.

6.3.2. Taking advantage of time: problematizing stability, age and gender

When continuing the discussion, Group 1 (STEM) realized the woman candidate had a "dilated profile" due to a two-year contract between her Master and her PhD in a company as a support assistant in the same field as her studies. Male senior group leader (B) commented that he would like to know if she had children or not, and by extension maternity leave: "men can also have children but usually they don't take paternity leave", adding "later we'll see how I value this" (10_S_6m). Male junior group leader (A), after stating female candidate holds better publications and mobility, focuses on age – there is a 5 years difference between the candidates:

A: She is older. And I would have to take this into account. (...) In general, I look for a young person, that can come here with a lot of drive and motivation, and that has a lot of ambition. I look for this in the interview. I don't know if she is... has a profile more..., considering age and mobility and that she has worked in a company perhaps she wants a more stable position... If she is someone already married, that wants stability... That isn't the powerful and intense drive of a postdoc that wishes to become a PI. (9_S_4m)

Researcher B replied that maternity is not a problem for him as long as the woman wants to achieve a higher position or become a PI, in which case he would be willing "to help her". He characterises this possible profile and later researcher A replies:

B: "I mean, a very aggressive person that really wants to have a first-line scientific career, become a group leader, etc., but that besides that has wanted to be a mother, has a couple of children

etc., etc., it is normal that she appears with this curriculum with a 4 year's lag". (10_S_6m)

A: Sure!

(...)

A: Yes, I would specifically ask about this in the case that the person had a dilated career history due to these circumstances but wants to become a PI. Then the laboratory could put the means at the disposal of this person to be able to... (...) I have four women who are pregnant or have children. They leave at 17:00 while a man can stay until 23:00. The dynamic is very different. This is how it is. It is a reality. Therefore, the type of help I can provide to this person in my laboratory... (...) He can do it alone staying until eleven, right? Instead, she perhaps can have a technician, eh..., Phd Students working with her... (...) If they want a stable position there are not many chances. (9_S_4m)

Issues of temporality appear constantly in their discourse, and appear related to productivity, age and gendered patterns. Two years in a company, even if it is related to one's scientific interest, is seen as a "delay" (or "a 4-year lag", adding more years), which, connected to age and productivity, is interpreted as a loss. Maternity is *spontaneously* raised when they discuss the female candidate although not paternity in the case of the male candidate, supposedly for age reasons (only 5 years difference) or because she is married (this appears on her curriculum; the male candidate is listed as "single") and has worked at that company. Presented as opposites, a "young person" is seen as a synonymous with drive and total devotion, in other words, as being productive. This stereotypical vision constitutes a discriminative position which denies equal opportunities on grounds of age (as though experience would preclude positive contributions or motivation).

Stability, as a temporal condition that adds security to life, is seen as undesirable, and attributed again to the female candidate and, it seems, extended to all women, as if men were not concerned about permanent employment. Instability, a precarious working condition, would here seem to be an ally of hard work. Similarly, the ambition to climb up positions (aggressiveness) would ensure daily tireless effort and future productivity.

After stating the type of 'help' he could provide, researcher A starts to waver, and what would appear a politically correct comprehensive vision with women seems to falter:

A: What happens in the lab... from my perspective... the lab can establish mechanisms to help this person, right? But now, I'll tell you something, if I'm interviewing PhD students, I don't really care if they are women or men. If they are 23 years old, I don't care if they are a boy or a girl, they can... they can have children too at that age but the probability is so low that... I don't pay it any heed. (9_S_4m)

With the last intervention, it become clear that being a woman is definitely problematic insofar as the possibility of parenthood and attached responsibilities, whether ultimately real or not, falls on the shoulders of the women. Young women are not a problem, yet, given that they can be more 'productive', work longer hours, and do not pursue stability (which, additionally, perhaps means not laying claim to their working rights). Care work that parenthood entails is not only gendered but considered a problem as it 'steals' time in the time commodification logic (Adam, 2004; Tronto, 2003), even in non-legal long working hours ("a man can stay until 23:00"). It is seen as a burden "when one needs always to be ready to take advantage of time" (Tronto, 2003, p. 125). Further, this example shows how privileged irresponsibility (Tronto 1993) functions for those who do not embody the sense of responsibility that caring practices bring by way of ignorance. In this way, care and care time become obscured and neglected, fostering a dominant patriarchal temporality in science, where changing the working culture through redistribution of care is unthinkable.

Group 2, in SSH area, do not mention age issues or raise gendered comments. Motherhood or parenthood is not a topic, and neither is stability. If these SSH academics point out something is that they would like to have the economic resources to hire both candidates, given the quality of their respective curriculums: "It is such a long time ago that we cannot offer [positions] that we even should have to read again the process!" (21_M_5m), referring to the process of developing public concursos, a situation that is not possible due to a hangover from austerity cutbacks that had still not been resolved. The use of the language is quite different: words such as aggressiveness, ambition or powerful drive are absent here, and temporal aspects are not raised (i.e. working hours or ages¹²).

Curiously in the discussion of Group 3 (i-STEM), the topic of stability appears specifically related to mobility when they are asked about recommendations for early career researchers. They mention being flexible to move, and researcher C adds the following as for those that pursue a stable life in academia:

C: I understand it and respect it (...) but I always say, 'if you make this decision then you have to be flexible about not working in academia'. Because I think that to say 'I want to stay here, or I want a stable life in a place and I also want an academic career', I think it is impossible nowadays. So you have to be... If you are ready to move there are opportunities. For example, you have to be ready to go to Switzerland, Norway, then to the United States, so you apply, apply, apply. But

¹² Date of birth is not explicitly mentioned in these curriculums but years from the university graduation have been expressly written three years later for the female curriculum.

this creates a very liquid life, right? and I can understand people that can't put up with that once they reach a certain age. It is difficult, but... (26_S_4m)

Similarly to Group 1 (STEM), stability is seen as not compatible with being a scientist. Here is focalised in 'mandatory' continuous mobility. Even researcher C is being critical, using concepts such as liquid life from Bauman sociologist, acceptance of science norms prevails understanding that there are no alternatives. Being mobile could be an option favoured by some programs that foster periods of exchange throughout countries while maintaining a stable contract in a given place. However, mobility and 'rotation of researchers' are star products of new science politics, becoming a synonym of excellence while hiding precarious working conditions (Vayreda et al., 2019; Murgia and Poggio, 2019; Conesa and González, 2018a). Mobile researchers and their temporal resources may be only focused on work, disconnected from their always changing social context (Müller, 2014). A *homo oeconomicus* being always ready to move, as an entrepreneur of themselves working continuously in their own assets (Foucault, [1979] 2008; Scharff, 2016; Vayreda et al., 2019), which caring needs are neglected (Ivancheva et al., 2019), always applying, searching a stable position that rarely will arrive and that, at a "certain age", will be a problem. Following the words of Puig de la Bellacasa (2015), they are living in a timescape "embedded in practices paced to a productivist ethos", experiencing an "embodied time of restless futurity" (p. 694) which are away from an ethos of care, a vision that does not enable possibilities for those who do not fit.

6.3.3. But... what is needed to be a scientist?

We have already seen in Group 1 (STEM) the characteristics of this profile: a young, highly motivated and powerful person, not searching for a stable job but willing to arrive to the top, without caring responsibilities. A profile with masculine traditional attributes updated to new late capitalism norms.

At the end of the discussion the participants comment again on the importance of the interview and the attitude, now to check that, while some postdocs have already succeeded "they sometimes arrive here burned out":

A: They arrive burned out! And they don't have the strength... I mean, they have worked like crazy during the first postdoc and what you want is that they keep on working with the same intensity. And they don't have that motivation, that drive and that strength to keep on working in a second postdoc like this. And this is what you have to check for. (9_S_4m)

(...)

B: If what they want is to come back because 'I have a family, I'm tired of being in the United States'... (10_S_6m)

A: [interrupts B] Exactly, then no.

B: [continues] ...I might be interested. That is, if I don't have someone else and this person knows how to do what I need. But this is not usually what we are looking for.

A: Exactly, exactly. In my case I wouldn't usually hire this person. And it's very easy to tell. When they come to me saying 'I want to do a postdoc because I have all this drive and energy', or someone that shows up because 'What I want is to come home' [all participants laugh]. You perceive it very easily. And in that case, no.

Burning out appears as a topic that could foster a debate on the conditions science pose to researchers. However, it stays as something individual, a problem this person has while working "like crazy", as if nothing is wrong in science. Sabelis (2002) points that "There is a limit to which people, objects, time frames, or work processes can be compressed" and follows "(...) if time pressure increases too much, people too can 'crack'." (p. 93). There are increasing examples of burn out in science (see Conesa and González, 2018b; Ylijoki and Mäntila, 2003; Levecque et al., 2015) but a never-ending energy with continuous intensity, drive and strength, without consequences, is what these researchers look for. Dominant temporality of the productivist ethos in science appears here taken for granted, interiorised and reproduced while interdependency or vulnerability are again disregarded. Care appears as displaced from the centre and posed not only to the periphery but out of the picture. Having a family and wanting to come back, is explicitly seen now as negative, it means a "no" and "is not usually what we are looking for". It is, moreover, perceived "easily" and a motive for laughs of all respondents, what curiously contrasts with the fact that all of them have quite stable jobs because of their positions. This account shows an exercise of power constructing an exclusionary profile: a disembodied care-less hero(ine)-machine.

For Group 2 (SSH), candidates curriculums have been designed for female as a research-based profile of a Postdoc, and for male as a teaching profile of an Adjunct, to adjust to university reality (see methods section). Apart from the need of accreditation, they later stress that "a university professor should have both sides", referring to teaching and research, and realising that each of them lacks one side. In fact, as the discussion continues, they acknowledge that an Adjunct with no research experience cannot reach the minimums for the accreditation. Thus, depending on the teaching needs they have, they could still maintain him in the temporary position of an Adjunct, for which accreditation is not needed. If having the resources for career-based positions, they would hire the female candidate. In this way they value both curriculums

in relation to the needs of the department and resources available: in the first case, they state, he could add a versatile experience that could fit to different teaching subjects and it is easier as it is an internal candidate; in the last case, they later comment that her research experience would help to get 'points' when asking for research projects, and another possibility for her would be to access to another research position through third-part competitive process. They state that both have interesting and innovative perspectives to offer (he a more technological profile, she adds the gender perspective to historical subjects). Thus, they weigh the interest for the department in productivist terms but also the different possibilities for each and their qualitative contributions.

Another element they mention apart from to call somebody in order to find out more information about the candidates, which, jointly with the importance of the reference letter, has been raised also in Group 1, is the importance to see that person. Professor C highlights that it is necessary to check if that person is easy to work with, especially for reaching accordance:

C: It is very convenient to see the person. How easy is this person to work with, because, at the end, we have to work together and we all have our own things and ways of doing them, it is normal. (...) Yes, at least when we have meetings and need to decide things there should be the ability to reach an agreement. (23_M_5m)

The question of agreements and easiness might appear as a protectionist method for the continuity of the culture of the department and perhaps for the established roles of power which shows that a characteristic of a possible profile would be fitting in with and adaptability. An accelerated productivist ethos is clearly not a main issue in criteria raised in Group 2. If so, it comes from external norms concerning mandatory accreditation or points for research projects. Their considerations are mainly made valuing the candidates' respective curriculums in terms of their academic contributions. This does not reflect, however, an explicit ethos of care.

For Group 3 (i-STEM), discussion on excellence, profile is indirectly raised towards the end of the interview, when, as commented before, they are asked about recommendations for early career researchers that want to pursue a scientific career. Apart from flexibility to move they point the following:

A (...) To work with good groups, productive ones, because, of course, it's a very competitive world. In the end, when we receive an application, we look at the university, the group, the publications, the projects, what has been done, these are the criteria that we usually apply. A strong group, an active group, a group that can stimulate, where the person can grow scientifically, academically. (24_S_5w)

(...)

C: In my case, I don't necessarily agree but the game is like this. So I would say, the first is to publish, because all that counts now is publications and you have to be strategic, efficient, and try to publish as much as possible, to collaborate with other people in order to publish more. That is the first thing. The second, I would say, is to go to a prestigious university, because this is important in the evaluation processes here. (26_S_4m)

Despite the disagreement of researcher C, both recommendations are built again in the acceptance of a normative scientific profile in a “very competitive world” where good groups are equated with productive ones. Words not related to productivity are at least mentioned thinking in earlier researchers themselves, like stimulation and growth, but then efficiency and strategy are raised, and other's collaborations are presented as instrumental to achieve more publications, like in individualism as collaboration (Vayreda et al., 2019). Throughout all their recommendations, a temporal regime of accelerated productivity is a latent theme. An ethos of care is absent of the equation in favour of dominant productivist timelines that render other caring practices or caring temporalities in science invisible or improbable. Further, the access to a “prestigious university” has to do more with resources of each candidate (i.e. class background, access to information, mentorship, economic resources) than to choice, which reproduces structures of power and privilege, silencing *others* voices, in addition to the fact that *prestige* is usually established by quantitative measuring (i.e publications, funding attracted).

6.3.4. Counting versus caring?

As previously mentioned Group 3 (i-STEM) has a discussion about criteria to distribute funds. Precisely, the mix between acceptance and criticism generates debates that add complexity and deserve special attention. The normative idea of objective criteria for an ambiguous notion such as excellence is reproduced and put in question at the same time showing disagreement on what is objective and subjective.

Researcher C states that “objective criteria”, measured in publications, journals, projects and types of university, can be appreciated and applied differently, and therefore “it is subjective”: “(...) you see that each of us interprets the same data about the same person very differently. For example, someone thinks that one publication in a very good journal is more important than ten in lesser-valued ones” (26_S_4m). On the contrary for researcher B, criteria is not objective, but once it is agreed upon, it can be applied objectively:

B: Yes, well...the point is that to *objectivize* is seen as a positive factor, especially because in this country some years ago excellence was to be a full-professor. [...] So, one way to make it fairer was to *objectivize* it, right? (25_S_5m)

Here, the absence of fairness in old hierarchical university forms of organization announces the underlying problem, and to *objectivize* is seen as a solution. Similarly, norms of excellence through new managerial logics apparently pretend to modernize university from old and settled dynamics (Deem, 1998; Conesa and González, 2018a). But, what does it mean to objectivize and what constitutes a fairer system? Can excellence be translated to measurable standard criteria? Defining what excellence is constitutes the core of the discussion, and here researcher C raises his view:

C: Because there is this classical idea of excellence, isn't there? Someone that is smart, that can do things, that picks things up quickly, that can get by without much help, that can write very well... these are talents that not everyone has. But there are things that I value... someone who is a team player, that contributes to the whole group and not only to their own research, someone that values the things they do and does them not only to have one doctorate and to leave afterwards, but that wants to do things, to change things with their job. So there are many other things that I value, and I don't know if I would put them under the law of excellence. (26_S_4m).

Curiously, his discourse of excellence is not through quantitative criteria, but still a normative (classical) point of view: an intelligent person which will not 'steal' so much of one's time, which reflects an autonomous, self-made, person. However, in contrast, he raises alternative criteria connected to values which constitute an ethos of care away from an individualist and careerist ethos (Clarke and Knights, 2015; Vayreda et al., 2019), like interdependency. He refers to contributions inside the group as well as societal contributions, not measured – nor maybe measurable – by what excellence has become to be. Caring practices that require time, unvalued and non-productivist care time. We could name this intervention a care vision in scientific practices.

Senior B researcher replies being open enough to include these values in a discussion, as long as a solution translated to a counting system is reached:

B (...) So, I think the important thing is to debate these topics to obtain an agreement about these values and subjectivities, norms... To establish a numerical index is always subjective and afterwards we apply it objectively, right? But the first step is always subjective, so we need to agree what indexes we want to consider. We have a lot of discussions about this here. (25_S_5m)

Researcher C replies that differences on disciplines – yet they work in an interdisciplinary field – make comparisons problematic: “It’s difficult! (...) We tried different processes but all of them are a bit frustrating (...) We have ended up voting and each of us puts a grade. And in the end with the results everyone finds something that does not look rational, and this creates frustration”. Researcher A and researcher B try to embrace and acknowledge these differences insisting on finding the right solution:

A: Yes, Social Sciences and Experimental Sciences in the same panel is not easy. This is why we are doing a good thing now, which is to note the grade of knowledge of the field. (...) (24_S_5w)

B: (...) Yes, how familiar the topic is for us. So then I can give a very different grade for a Social Sciences candidate, but in the end I also recognize that I can’t... that I’m not familiar with this candidate. So then this will ultimately allow us...now we have to see what algorithm we create [laughs] to put it all into numbers. A semi-quantitative analysis. (25_S_5m)

They are still working on their own system, where quantification (through a complex algorithm) is still in the centre as the final solution to all the problems (although producing some laughs). In any case, time to discuss and talk, to deliberate together and to consider different viewpoints that will later have consequences on early career researchers’ lives (and furthermore, in science), is at least possible and encouraged. Considering that compression may diminish communication (Sabelis, 2002) this could be considered a caring practice in science politics that under productivism could be seen as a superfluous activity which wastes precious time. Further, this discussion is especially interesting since different academic cultures pose into question the (im)possibility to arrive to a consensus, which could reflect the problems that standardization in globalized science entail. Disciplines have not only their own historical tradition but values connected to them. Is quantification suitable to embrace these ‘other’ values linked to an ethos of care?

6.3.5. Gender and “voluntary” leaving

Networking, cultural resources, integration to new cultures when moving, and language issues emerged later in the discussion of Group 3 raising the issue of gender balance by themselves. This discussion gives space to ask the only woman in the group, scientific head of the programme (researcher A), to talk about her view. She acknowledged her experience of a very masculine and hierarchical academic culture, especially lived in The Netherlands: “the way of working, of communicating, everything was very bossy, top-down... and I don’t say this was in all of men

there but the stereotype of not discussing so much... and three or four were very dominant. (...) Here is much better.” This boosts the conversation around the dropping out of women as career steps advance. Then researcher B (man) shows his concerns on women abandoning science for, what he considers, personal reasons:

B: I... the students I have lost are women that choose, decided, for different reasons, to not continue their research career... Hmm... Personal reasons, eh? And I have never known what to do to prevent it. This for me is one of the biggest... I mean, they opted voluntarily to let it go, let's say, right? Hmm... and this is... I mean there's not a barrier anymore ...right? It would be the other way around from what we usually think, it is not marginalization, nor is it that they are not given the same opportunities as men, but, in fact, the opposite: they chose to leave. AND WHY... WHY DO YOU THINK THEY OPTED FOR THIS? I MEAN THE REASONS...

B: Well, one did not want to do a postdoc abroad and she wanted.... to have a family. That simple. And the other did not like the competitiveness that is common practice in the academic world. (25_S_5m)

Issues of care are constantly disregarded and invisibilized, and decisions cross-cut by gendered power relationships seen as neutral and even “voluntary”. Despite the nuanced debate on excellence, the participants again fail to see that *the personal is political* in a regime of competitiveness and productivity that is gendered and at the core of the care issues. Is it having a family really the problem in science? Is it really an individual decision to choose living a life out of competitive environments? Perhaps we should see both women's reasons as responses to a system that neglects care as a way to reinterpret, through a critical and feminist care lens, what tend to be seen as mistakes in some women's decisions. A system that seeks to promote more women to the top, as per institutional discourses (6.1 section), through narratives of competition and acceleration in economic terms, fostering a dominant temporal construction, leaves gendered organization untouched, producing invisible exclusionary effects.

This last intervention closes the circle of this gendered order in a patriarchal productivist system in which care and time for care are outside the picture. Time, gender and productivity have appeared linked frequently and, even in more critique and open discourses, there is a gender blindness throughout the groups. Productivism is accepted, normalised and reproduced to the extreme in Group 1, less present in Group 2 and only sometimes put in question or rejected by Group 3, which ends accepting its norms although having an open debate. In general, quality of the scientific content or the importance of reading the works of the candidates, has rarely been raised.

6.4. Knowledge practices

In this temporal regime, accelerated productivity and competitiveness also play an epistemic role for example in researchers choosing non-risky topics (Fochler et al., 2016), as seen in the revision. Similar situations can be interpreted as a threat to the necessary time to care for knowledge practices. Many scientists and academics struggle to produce timely attractive research in order to stand out in the academic race and find a job position. A male researcher in medium position in a research centre states: “You need to publish really good stuff in short periods of time. A more experienced researcher like me would perhaps conduct more complete experiments that require more time.” (3_M_3m)

This male scientist explains why he accepted a more technical but stable position:

The hypocrisy in the way to publish. If you don't publish in *Nature* or *Science* you're as good as dead. This is how it works in many science areas of certain level. You have to publish high up and this process is sometimes very painful.

If you have published in *Nature* or *Science* you have already done 50% of what you need to get a job. It's like the stamp. One can agree or not... One shouldn't agree. (...) And then they select not only on a basis of scientific quality but also on the 'fashion' factor, if what you do is 'sexy' or not. In that sense editors have an extremely strong power. I mean, this has consequences for your career, obviously, even if the work is very well done, rigorous, highly scientific... (...). This is not normal. This is the part of the science that I rejected. (7_RT_3m)

Many researchers criticise and have misgivings about this model of global competition for scarce resources, seen in the pressure and race to appear in a few highly prestigious publications where good and accurate content is not enough. Yet they subject themselves to the same stress in order to boost their career prospects. Grants, projects and institutions themselves depend on these on time specialised outputs and marketing standing out strategies away from an ethos of care for knowledge practices.

Similarly, certain knowledge is considered of lesser importance despite its quality, this also being related to which publications are attainable in a given field especially concerning local or national knowledges (Hicks et al., 2015). Styles of thought or writing over those topics produced in hegemonic English-speaking research communities where colonial backgrounds also play a role (Shahjahan, 2015; 2019; Zafra, 2017) raise tensions as well. In a report on Spanish science, knowledge relationships between Latin America and Spain were not considered international

enough (Conesa and González, 2018a). This female researcher in a SSH field acknowledges some of these tensions related to publications and language:

The rules of the economic academia are written by the hard sciences, and Humanities and Social Sciences we squeeze in as best we can (...) We all know that impact indexes in these areas are ridiculous. Sometimes a book written in a regional language read by 800 people has more impact [because] it revolutionizes how research is done in that part of the country. And more so than an article that's about nothing much at all but is very well written and is accepted in a first quartile. But these are the rules of the game and we're well aware of them. (17_M/EC_4w)

In the logics of time compression some knowledges and the space and time devoted to them (i.e. book versus article) become disregarded. Furthermore, there is the idea that Social Sciences and Humanities fall behind when compared to "Science" and that international curriculums are better than local ones. This appears connected to the fear of endogamy, a commonly shared preoccupation present in some interviews which also consider local knowledge production of lesser importance. However, this dynamic may result in no care for a diversity of knowledges and languages that become peripheral and marginalized, because they are not considered worthwhile under dominant scientific norms driven by the time commodification logic of productivism.

Ultimately, the race to publish is transformed into dubious knowledge practices affecting not only the researcher but their own colleagues as well. The researcher cited below also changed an uncertain scientific career for a stable technical position due to a bad experience abroad in a well-known centre, also having tired of moving from one part of the world to another. She explains that she was fired due to her opposition to signing off on an article in which the hypotheses had not been proven. The human resources department ultimately kept her on, afraid she could have made the case public:

When I got to that point it was because I was under so much pressure... (...) Everything started well, even idyllic, and then these things appeared and it was a case of 'No, and I mean, no. If hypotheses can't be demonstrated then that's it, no problem, we continue working'. And I said: 'No, we aren't going to publish this, not with my name on it', and all these fights started. (...) Well, I almost left science completely... it ended up very badly, I mean, she fired me... from a postdoc! Come on! (...) But finally Human Resources said to me 'Stay out of her office' and they paid me until the last day of my contract and offered me my next job here. Because they knew I was right and I could have taken legal action. Wow! My dream job! Look how it ended up! (8_RT_4w)

The productivity race transforms academics and scientists' subjectivities and practices, potentially blinding them to ethical (human and scientific) concerns. This researcher, like others,

also shared worries about her legal visa status when her boss decided to fire her: “(...) suddenly, from one day to another, I had a month to leave the country”. The lack of care in knowledge practices under productivist norms resonates with other unfair situations, threatening the sense of security and integrity of a person under heteronormative and colonial structures (for example, like in this case, for racialized and LGBTIQ academics).

Other researchers acknowledged additional questionable practices that they had become aware of from colleagues, such as reuse and re-edition of images from other studies. The worry of not being able to publish negative results was also informed by one early-career male researcher (5_EC_3m), which may lead to a loss of valuable knowledge (Fanelli, 2012). On the other hand, a senior female researcher detailed authorship issues related to an upcoming publication in a prestigious journal that she associates with a masculine drive:

They [men] try to sign the papers! (...) And we [women] don't have that aggressiveness (...) We are more... I mean, I don't have that many papers to my name. I have good papers. And they're oft-cited. But I don't have that many, only a few. But they are mine! And I can tell you what's in there. (...)

I remember with the second *Nature*, wow! There was a huge argument because one man wanted his name put on it. One guy, a Postdoctoral researcher. I had asked him to show me how to do some drawings he had done in a published paper, since I wanted to do a similar analysis. He was showing me how to do it, 'You can do this, and that...', 'Oh what a good idea!'. And I did it. And then I remember he came and said 'Hey, you don't know, but I have a daughter and I have to care for my family. And you have very good papers and you are going to publish this very well'. He said it just like this. And I remember I felt so offended. What are you talking about? We are talking about science. If you tell me 'I need money', sure! But this? (2_S_5w).

Beyond the judgement and offense she mentions, perhaps under a productivist and individualist vision, too, what is important here is that this regime of timely and narrow productivity which career continuity – and therefore, employability – depends on, constrains researchers for their own survival conducting to this kind of practices. As to the aggressiveness attributed to men who push for co-authorship, we might add that, while studies state that women still have less published papers (Van den Besselaar and Sandström, 2017), entrepreneurial and competitive attitudes towards productivity can also be performed by women under contextual productivist norms (Vayreda et al., 2019), since gender is dynamic and does not consist simply in pure separated categories. Ultimately, what we see in this section is that productivism in time-compressed rhythms brings scientific practices away from an ethos of care connected to fairer practices and relationships, engaging with forms of exclusion and power in science (Puig de la

Bellacasa, 2015). Making care time for science would mean to disrupt the time pressure to produce outputs while caring for our practices and relationships in science.

6.5. Relationships with colleagues

Focus on productivity, as we have seen in some of the aforementioned examples, directly or indirectly produces non-caring practices between colleagues, especially for those in lower positions.

The following situations show, comparatively, two different group dynamics. This female professor of a STEM field explained an example of Spanish departmental endogamy where the full professor of her department had several projects with companies that benefited him and his colleagues (friends and wife). In this dynamic they thwarted any attempt to use the laboratory to undertake experiments by her and a female colleague with whom she tried to ally and work:

We also tried to work together and we had a lot of problems with the full professor and his wife. (...) She was the head of the Lab, so [for her], the technicians *she had*, wouldn't have worked for them if they had worked for us. (...) There were constant problems, there was always an excuse to not use the machines. (...) When we could access the lab, we even had to go at weekends to check if the machines were still switched on. (30_M_4w)

This researcher describes an uncaring and competitive ethos. The lack of support of the full professor in submitting research projects, which would have been key to their approval, was also detrimental to her. She recalled her PhD period when she had many publications in prestigious journals and reflected on a possible connection between an episode of depression she suffered and her working environment:

And I think, if I had been in an environment such as the one in [her PhD], for example, with a research group that really does research, I don't know if I would have had depression. Because in that case, the working environment got added to all the tension that I brought. It didn't help me to succeed, quite the contrary. (30_M_4w)

A focus on productiveness in scientific and industrial relationships is here, following this researcher's experience, mixed with longstanding power dynamics crossed by endogamic practices, with care absent from the equation. An ethos of care in group dynamics could emerge here based on values such as collaboration, attentiveness, distribution of resources, time and

spaces, etc. In contrast, she later mentions being “the worst researcher”, and her feelings of shame when the public website of the university started to show productivity figures for each professor in each department. Some RRI (Responsible Research and Innovation) practices foster this focus on transparency but we should ask ourselves if transparency driven by productivity allows us to acknowledge all invisible issues happening in a microecosystem like a university department.

The second situation, on the contrary, shows a healthier relationship between a male senior group leader and a female researcher in an intermediate position in another STEM field. She explained how he “let her grow” by, for example, co-directing theses and research projects, which had a different impact in her motivation and even her productivity.

He [her boss] has always played this mentorship role. In a way we have been always... re-evaluating, you know? Whether or not we were both comfortable with the situation. With the working situation, I mean... If someone lets you grow, you feel comfortable. But if someone doesn't let you grow there is a moment when it really matters. So yes, we have been always re-evaluating and it has always been easy. Let you grow, care for you, mentor you... (4_M_4w)

This working dynamic indicates caring practices in colleague relationships in which she is listened to, can negotiate some of her needs and, as she says, grow. This is very important as they are in a very competitive work environment where the accepted schedule is to work 10 or more hours, a non-caring practice, and she has to combine it with a dependent person under her responsibility, living a fast-paced life. She expressly mentions the privilege of public care policies that her husband's secure public sector post allowed him to benefit from, which was possible just before cutbacks also applied in the so called Dependency Law. All these interweaving and complex care circumstances - in contrast to the previous example - help her to maintain her motivation in the scientific work she carries out.

Other experiences show how time pressure in competitive contexts opens the door to unbalanced and unfair situations on a basis of hierarchical and gendered power relationships. As such, this could be an example of how compression may affect different groups unequally (Sabelis, 2002; Adam, 2004). A female early career researcher in SSH explained that almost the entire duration of her three-year thesis grant-contract was devoted to doing work equivalent to that of a research assistant for the research group. She recalled the situation when she asked for time for her thesis in the last six months of the contract:

Let's see, I'm paid to work on my thesis (...) 'Until now, I've been helping you and I've always said yes. Always'. Until the moment you say 'No, now I need to concentrate on the thesis, for the next six months, and then I'll see if I can help you again or not. But right now, I can't because I want to finish my work'. And they didn't take it very well... Since then, our relationship has been tense, I mean our relationship is quite tense. (...) I felt very bad because they told me that I was missing out on opportunities and it sounded like a threat.

The fact that they didn't appreciate everything I've done until now, it's like, 'Come on, what's going on?!' (33_EC_3w)

Researchers in higher positions pass their work pressure onto others lower on the ladder in a way that makes them blind to considerations of ethical and equal treatment, using future job "opportunities" as an exchange mechanism. Consequently, temporal resources of those lower in the hierarchy are considered of lesser importance or to be taken advantage of, neglecting the time needs of those affected. The temporal regime of productivism, far from an ethos of care, obscures unfair situations in which old hierarchical and abusive practices not only do not lead to a supposedly modernized science with *objective* measures that should bring equality and transparency, but also foster a pressurized and more exploitative environment in which caring practices and care time for knowledge and researchers are continuously at risk.

Interviews also show experiences of pastoral care with students that demand many time resources. The same female professor in a very masculinised STEM field seen at the beginning of this findings section (30_M_4w) explained that caring tasks like listening to the students' problems, guiding and motivating them took up a lot of her time since students increasingly preferred her dedication to that of tough male professors. However, they also viewed her less seriously as a professor, which was added to the fact that this *affective* work was invisible for the institution. Indeed, caring practices, as devalued as they are, are also usually connected to weakness in its negative connotation, apart from being unequally distributed (Tronto, 1993), and their time dedication becomes unvalued care time. The dominant temporality of productivism in academia also establishes its hierarchical relations of time and with time, especially where *others'* time is concerned.

6.6. Personal lives

Productivism in science also has its effects on time and care in personal lives. The focus on women and maternity has already appeared in the focus group discourses. Now we are going to see its counterpart voiced in women from the informal focus group on academia and maternity.

First, a professor recalled a past situation where “We as professors had to be invisible as mothers” (36_M_5w). This old masculine air is still maintained as younger generations agreed that this had not changed so much: “It is made invisible and you also feel guilty for everything” (41_EC_3w), referring to the fact that it is difficult to meet all responsibilities as professors and as mothers, especially once the publication fever has been introduced in the university. Thus, old masculine power dynamics intersect with new masculine pressurised productivist worlds in a supposedly gender equal academia. They reflected on the fact that neoliberal discourse has relegated motherhood and that some feminist discourses have not helped either in neglecting this issue as if it was a taboo: “Childcare has been marginalized and trivialised” (36_M_5w).

Furthermore, some participants mentioned that even with co-responsible partners, who helped them to maintain their motivation, it is never enough, due to the intensive nature of the academic work (with some partners also working in academia): “I have a very involved husband, but I don’t sleep (...) Your colleagues amicably ask you about your production list. It should be public: I became mother” (42_EC_3w). Others acknowledged the lack of implication from their male partners at home, and the pressure and exhaustion brought by organizing all the domestic sphere while working in a very demanding profession, echoing the experience of time density and the mental load (Daminger, 2019; Wajcman, 2014). As seen in the last quotation, many participants coincided in the experience of being asked by colleagues about their lack of productivity back at the office after the maternity leave period, even after some of them had set up publications for this period: “I overproduced before in order to prevent a gap in the curriculum but even so, they still asked me, too”. (40_EC_4w)

The risk of reducing women to motherhood and considering being mother as problematic, as seen in the focus groups, do not help to raise these issues publicly. On the other hand, some well-intentioned feminist discourses still reproduce the idea that women are able “to have it all”, “to succeed” and “to reach the top” without consequences in temporal pressurised worlds. Indeed, women have to continuously demonstrate they can do everything, against *macho* discourses that characterise women as weak, while at the same time there is no change to an accelerated productivist system that neglects care within organizations.

At the same time, it is necessary to make other narratives visible of this academic temporal order away from an ethos of care, in order not to essentialise women as mothers. For example, and coming back to the individual interviews, a postdoctoral woman in SSH that had an active life in activism and artistic practices, explained that while undertaking her dissertation, she had to abandon all her interests due to a pressurised time regime. She recalled with anger her feelings of isolation, as well as a sense of emptiness when finishing her PhD since she had lost her social bonds: “Suddenly you go to nowhere. You are unemployed. You have no friends; you don’t have anything. It is the absolute emptiness because all your life was the thesis. This is very hard emotionally. You have lost your social life, your activist life” (29_EC_4w).

Other commitments such as caring for relatives have also appeared in the interviews, taken on by women and producing tensions especially when parents become older or infirm, and/or while living abroad. Partnership too, appear to suffer due to lack of time or long-term mobility, and this sometimes results in separation. In all of these situations, care time becomes marginalised and understood as a burden that prevents to take advantage of time in favour of normative productivism.

Temporal constraints experienced by male academics are less common or, perhaps, less visible, since on the one hand, masculinity scripts make it more difficult for them to articulate and express their tensions (Conesa, 2017). On the other hand, entrepreneurialism and competitiveness are part of masculine gender performativity, which explains why they experience academia in a more pleasant way (see Vayreda et al., 2019). And finally, because they do not usually share care responsibilities equally nor are they primary carers. However, some men have begun to explain and acknowledge their feelings of pressure, as shown in Conesa and González (2018b), which makes visible that the root of the problem does not revolve around women or/and motherhood in science.

Below are two examples – one detailed by a partner, and the other a first-hand account – that evince this temporal regime affecting men, especially those committed to home and family care work. A woman from SSH explained that her partner had his accreditation rejected due to his lack of international mobility connected with the fact that he participated equally in the raising of their children:

He devoted a significant part of his time, like me, to raising our children and this has penalized him in terms of obtaining the accreditation. (...) The type of curriculum they look for is very homogeneous and the issue of having children... of course... I mean, when they say you don’t have research stays abroad, it means they’re not taking into account that you have children.

Because if you have young children you... you cannot nor do you want to spend time abroad. That's besides the fact that in a globalized and technological world we can communicate without necessarily being there. And this results in total exclusivity in academic career models and a narrowly-defined trajectory. (34_RT_4w)

A tight career model also generates exclusionary practices for men who put care and time for care at the centre guided by fairness and co-responsibility. In other words, when men do not perform masculine scripts guided by competitiveness and total devotion to work. This does not mean that men that share their responsibilities in equal terms will suffer exactly the same unfair situations as women in science, since biases and discriminations operate in a normalised way in other spaces of the academic life, old boys' clubs being a clear example (Van den Brink and Benschop, 2012). However, it is important to show that there are also penalisations for men in equal relationships that will not help to advance gender equality in academia (Conesa and González, 2018b).

Below, a 34-year-old STEM researcher in a medium position explains that he spent several years in a research group largely training other lab members in a very specialised lab technique, which did not allow him to concentrate on publications. Now he regrets that he has a gap in his curriculum which, together with raising three children, causes him to feel "like a dead weight":

I have been very helpful to my boss during some years and we have a good relationship. But I know that I will be useless in a medium-term. That's life, isn't it? I mean, I gave all that I had to give him, now I am raising a three-child family. Therefore, I already cannot devote myself 'in body and soul'. I mean, I am still working as hard as I can, but I am not a guy who's just finished his PhD at 29-year-old and wants to 'conquer the world' having plenty of time. No, now I am a different person, although more experienced one. But I think bosses are more interested in 29-year-olds because they are more productive. (...) I think it is unavoidable to feel like a dead weight in my position. (...) I have been training people and now I am more focused on my own research (...) In the past, I was unique, now everyone knows how to do the work. (...) You need to publish really good stuff in short periods of time. A more experienced researcher like me would perhaps conduct more complete experiments that require more time. The system rewards the quickest research, from the youngest people. I mean, the post-doc thinking: 'I break my back for three years, I give it my all, and in the end I publish something very good'. Well, now, breaking my back is more difficult for me. I mean, I have three children: before, I was in the lab every weekend, but now only exceptionally¹³. (3_M_3m)

¹³ The last part of this quotation was also cited in Conesa and González (2018b). Two sentences of this quotation have been cited in 6.4 Knowledge practices of this chapter, too.

This constitutes a striking personal and confessional account, which may be understood as the utmost example of accelerated productivism in science embedded in a researcher's subjectivity. Expressions like "devote [myself] in body and soul" or "to break my back" become normalised, with other researchers in the same field having also used similar expressions in the interviews, discourses further reinforced by acceptance ("That's life, isn't it?"). Curiously, the body is alluded to in these expressions as the means for exploitative practices.

This quotation condenses what we have seen in other sections. The researcher embodied the myth of the hero devoting all of his time to science ("I gave all that I had to give him"; "I was in the lab every weekend") and that wants to "conquer the world" (denoting masculine aggressive ambition and drive) but shows now the limitations of maintaining this state of productivity, a state where time is "embedded in practices paced to a productivist ethos" (Puig de la Bellacasa, 2015, p. 694). Age, though he is only 34 years old, and children give him a different sense of himself ("now I'm a different person") and, although he values his experience, he cannot help but feel like a "dead weight", something that bothers and hampers him, and prevents him from feeling at ease, yet he is no longer following the rhythm marked by this time compressed productivist path. This regime of time is explicitly present in "the system [that] rewards the quickest research from the youngest people", which again, like in the first focus group discussion in STEM (6.3) and in the scientific discourses section (6.1), means that one must run as fast as possible, and the younger the better, no matter if this will result in burn-out later on. Even the value of the work done is rendered as invisible, which is to say, not productive. In a way, training in this researcher's case becomes an unvalued care practice not measured by the indicators game. In the reference to the time dedication "more complete experiments" would require, he acknowledges care for science and for knowledge practices. However, acceleration and competitiveness break with this ethos of care.

Ultimately, what the researcher posits is that a regime that rewards of ever-faster research is barely compatible with life, with the time devoted to care outside speed standards of productivism, the usual crossroads of the female experience. Men do not usually acknowledge this constraining tension; however, this example is worth highlighting, as more men will find themselves in this position, if we are to really push for gender equality.

The next and final quotation demonstrates this very clearly when, at the end of the interview, this female postdoctoral researcher from a STEM field was asked if she thought that there is gender discrimination in science:

B: Yes. What I don't know is whether it's active or by omission. But look, my [close relative], you'd have to interview her. She is a very successful woman at [a highly prestigious university]. And when you see her at home, she is crying at every turn (...). They make her give talks about being a successful woman in Science with a family. And when she tells you this she says 'But, are people daft or what? Can't they see that I'm turning up crying?', 'It's bullshit! You have one thing or the other, what can I do?'

But I don't think it's a job that's... it's like being a politician, in the sense that... it's not designed for having a family. But I don't know what can be changed, it should be the government, because the institution is not going to be the patsy that says 'I'm going to put in more money, which I don't have, in order to set up a childcare service'. (6_EC_3w)

The point is that it is not only a question of funding for a nursery (which could be a possible but partial solution), but of conceiving of a transformation of the whole system so that care is at the centre, redistributed among all actors, agents and structures, and time to care is not penalised but integrated or even celebrated, contemplating diverse temporalities and not only a dominant one. This is important in order for academics, their relationships, their knowledge practices and their dedication to flourish. This change needs to touch on the gendered distribution of work and time inside and outside organizations, and on the neoliberal productivist turn academia and science is taking, and of course, this is related to funding, too. Otherwise, science will continue to be exclusionary not only for women but for all those affected by colonial, classist, caregiving, ageist and ableist relations.

7. Main findings and discussion

In this chapter, I have initially looked at relationships of time, science and productivism in a more general sense, reviewing thereafter some of the effects that accelerated and competitive science has on knowledge practices and academics' lives. Time-compression in academic life exacerbates tensions between gendered care and work. After a literature revision on gender, work and time, I develop a theoretical elaboration of the approach of feminist care in connection with time and its application in scientific endeavours. This framework constitutes an analytical lens through which to transversally explore and disclose contemporary tensions and exclusions in science related to gender, care and time, since only a few accounts have as yet worked in this direction in a thoroughly way. Following the context and methods sections, I have analysed different aspects of the scientific and academic world that emerged in the field work through the lens of the care approach, which I have differentiated in six levels.

The approach of care and care time, mainly inspired by Joan Tronto (1993) and Maria Puig de la Bellacasa (2015), has helped us to analyse productivist dynamics found in the fieldwork and unveil its related dominant temporality and its effects on gender and caring practices, as well as to visibilize what is neglected and obscured under productivism which reproduces "(...) persistent forms of exclusion, power and domination in science and technology" (Puig de la Bellacasa, 2011, p. 91)".

Official scientific discourses analysed foster a language and worldview of science bound to the logics of the market far from a care ethos, in which speed means greater productivity, and profound inequalities (precariousness, gender imbalances, care ceiling) remain unattended. Funding practices, the material basis for science, are affected by these logics too, where there is a threat to and neglect of care for scientific developments that do not produce profitable knowledge in predetermined narrow timelines. Evaluation practices, seen in the three focus groups, follow this normative productivist vision and criteria to which some are more aligned (especially for the STEM focus group) and which others may still question but ultimately adopt: a regime of an accelerated temporality in which care and time for care are still gendered and placed in the periphery, generating exclusions. At the level of knowledge, productivist temporality promote careless scientific practices away from ethic concerns while constructing some knowledges as marginal, therefore constituting *other* knowledges. In other words, time spent on this knowledge is considered not worthwhile in productivist terms. At the level of colleagues' relationships, the pressurised temporality of productivism generates an uncaring

atmosphere and opens the door to abuses of power and on 'others' time' under hierarchical structures, especially as regards unvalued care tasks that require time which are otherwise fundamental for academic and scientific sustainability. Finally, this dominant temporality in science and academia provokes unsustainable situations in the personal lives of academics and scientists in which care time is under constant threat. At all six levels or dimensions, productivism and its dominant temporality displace practices of care in science, provoking exclusionary practices and effects such as loss of knowledge diversity, as well as loss of women and a diversity of people who cannot fit into these norms. We have seen reproduction but also criticism and rejection to this time-compressed productivism. However, transformation seems difficult, especially given precarious working conditions, with the risk that, insofar as they accept the status quo, scientists normalise and become blind to the inequalities this system brings, inequalities which can be only fought through collective action.

This work puts together some studies from gender and science literature and studies of science and technology, among others, which have already detected similar situations in science and academia, under the framework of feminist care, to unveil relationships between gender, time and care under productivist logics. Only Lynch's (2010) and Mountz et al.'s (2015) research constitutes a similar exercise in a more transversal application of the notion of care, the first of these through a reflexive-theoretical exercise, and in the latter through a collective autoethnographic activist account. Thus, this exploratory study seeks to lay out a framework that may serve as an innovative analytical tool applicable to empirical material and through which to continue exploring issues of productivism, time and care in academia as well as in other fields, while at the same time contributing new empirical results and confirming and reinforcing similarly dispersed findings from other studies.

Indeed, in this exploratory study, we see how a productivist ethos in science is fostering a dominant temporality in which care is not taken into account while, at the same time, care practices sustain science in invisible and unvalued ways, generating and reproducing structures of inequality (on the bases of gender, age, class, etc.). Excellence and (supposedly) objective measurement were a promise for fairer practices, equality and transparency in front of old power dynamics in science and academia (such as endogamy). However, this research shows some of the pervasive downsides of an exploitative environment through the imposition of the dominant temporality of productivism while showing that old hierarchical and masculine power dynamics still continue mixed with or as part of productivist logics too, as we have seen in new centres of excellence where new dynamics were supposed to refresh old practices attributed to

university structures. Not only do productivism and its associated temporality in science not miraculously push women to the top, they also neglect and undermine basic care practices at different levels, threatening inclusion and producing *othering* practices in terms of gender, age, class and race, while preventing and fostering reluctance among (white) men to care about and take responsibility at all the levels. In other words, changing the working culture through redistribution of care among different actors, agents and structures is unthinkable within a dominant patriarchal temporality of productivism, leaving the gendered organization untouched.

These results take off from a situated standpoint, a feminist care vision, and do not seek to be representative nor explain the totality of academic and scientific experiences, but they do show that many discourses, practices and experiences in sciences and academia are increasingly shifting towards this taken-for-granted productivist and hierarchical construction of time, closer to business logics than to dynamics of knowledge development as a common good to improve living conditions, thus normalizing practices that construct or reproduce *otherness* through exclusions linked to gender and care. This does not mean that other forms of *care* practices do not exist, since networks of support in old boys' clubs or instrumental caring attitudes within a masculinised and pressurised environment might be understood as care too. This, however, is not what a feminist care approach would stake for. Care time through the idea of multiple or diverse temporalities, as Puig de la Bellacasa (2015) mentions, needs to be put at the centre, since: "(...) affirming the importance of care time means drawing attention to, and making time for, a range of vital practices and experiences that are discounted, or crushed, by the productionist ethos" (p. 708). In the case of organization of science and its related everyday practices, making care time would mean to make time to care for our diverse practices of knowledge development and our relationships within science, so that our knowledge and scientists can be diverse too.

At this point I suggest the idea of temporalities of care or caring temporalities, inspired by Puig de la Bellacasa "making care time" (2015), as a means, a conceptual and discursive tool to help reframe our imaginaries so as to disrupt time hierarchies of the dominant temporal productivist vision which underlies academia and science. Caring temporalities might mean questioning power dynamics inside time relations and revaluing those temporalities considered worthless – without necessarily falling into a mystified vision of care or slowness – to make the time-space necessary for diverse knowledges and voices to flourish by promoting them in discourses,

funding, evaluation, daily practices, etc., and for enriching and caring practices in science that enable collaboration and attentiveness removed from productivist logics.

Caring temporalities may also inspire a vision of multiple different temporalities that push scientific and academic practices towards transformative and caring processes aimed at healing and repairing imbalances and inequalities, exhaustions and exclusions, in human and more-than-human worlds in our daily practices and forms of relationships, in the doing of science and in the content of science in order to make existence possible and liveable in the complex global chains of a world in which we have become enmeshed due to a white, masculine, individualist productivist vision.

Temporalities of care have the potential to enact these transformative processes by disrupting the established and invisible norm of time commodification and by redistributing the diverse responsibilities that make life liveable for all of us; that is, to care for “our world so that we can live in it as well as possible” (Fisher and Tronto, 1991, p. 40). Indeed, the idea of caring temporalities is meant to be at the service of transforming the patriarchal productivist ideology that governs scientific and academic worlds through dominant forms of power, and in which politics of time constitute one of the roots of *otherness* construction, paying attention to taken-for-granted structures and exclusions, as a collective and transformative act.

8. Conclusions: from no time for caring practices to caring temporalities

The results of this explorative study show that the progressive establishment of productivist discourses and dynamics in science through its dominant temporality neglects or threatens care practices and care time in knowledge organization and development and in scientists' lives which are necessary in order to sustain them and keep them diverse and healthy, reproducing gendered discriminative practices that lead to the exclusion of women in science. It shows that time for care, either in scientific practices or scientists' lives, is seen as unworthy and considered a waste of resources in increasingly normalised accelerated rhythms of the productivist neoliberal ethos linked longstanding masculine practices. Despite it is threatened, care and care time continue to be developed in a hidden, precarious and misrecognized way so that scientific practices can be sustained. The approach of feminist care and care time provides an innovative theoretical framework that may be useful for exploring and understanding the nature of gendered and other discriminatory practices in science, as well as in other spheres of social research. The idea of caring temporalities could be fostered in science and academia through the valorisation of care and time devoted to care as a means of reaching fairer and inclusive practices and worlds in terms of gender and other social inequalities.

To finish, the contributions of this work can be summarised as follows: a) the development of a feminist care framework that relates care, time and gender, and productivism to be applied in scientific practices and science organization, and in other fields; b) the exploration of the application of this framework in the empirical material of this study, shedding light on gendered power relationships and their exclusionary effects; c) to illustrate and give strength in a unifying form to previous findings, unequally distributed in the literature on gender and scientific organization, science and evaluation studies, and other studies related to science, as well as in slow science diverse literature and initiatives; d) to contribute with new findings to this corpus of literature, bringing together different academic fields; e) to suggest the idea of caring temporalities as a means and discursive tool to enact changes within time and power relations in science and academia, as well as in other social spheres, for more inclusive, fair and diverse worlds to come.

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III. CONCLUSIONS

1. SUMMARY OF RESULTS: What is happening to us?

I return to the initial question of this thesis, “What is happening to us?”, in order to present a summary of the main findings presented in every chapter of the thesis, followed by a discussion section and final conclusions. The contributions developed in chapter 1, as an initial review and theoretical approximation, will be exposed in the conclusion section.

1.1. New managerialism in Spanish science and academia

In chapter 2, “**Neo-gerencialismo y austeridad en el contexto académico español y europeo. ¿Dos caras de la misma moneda?**” [“**New managerialism and austerity in the Spanish and European academic context. Two sides of the same coin?**”], we have seen the implementation of new managerialism (Deem, 1998) in Spanish scientific and academic settings. These changes were introduced through university and science laws (in 2001, 2006 and 2011) with the aim of modernizing universities and bringing efficiency by means of the “evaluation culture as a new objective and transparent system to guarantee quality and *excellence* in an effective manner” (Ley Orgánica 6/2001, p. 49401), transference to the private sector, increase in private funding, the creation of quality and evaluation agencies, the creation of centres of excellence with the incorporation of prestigious scientists so as to improve positions in international rankings, “more emphasis in technical research and technological development” (Ley 14/2011, p. 54392), etc. This represents the introduction of the logics of the private sector in Spanish academia and science. Academics and scientists have to focus on producing more results that will be counted through measuring systems, specifically, through standardised indicators (numbers of publications and citations, numbers of projects, positions in international rankings, etc.).

At the end of the first decade of the 2000s, austerity measures were implemented, worsening labour conditions through cutbacks and other measures, bringing with it the freezing of replacement rates. During the major cutbacks period in Spain, from 2009-2010 to 2014-2015, our academic system lost 8,637 positions (5,066 corresponding to civil servants), with an increase of 1,749 (corresponding to tenure-track contracted personnel). This situation has generated long queues of prepared academics – those who have achieved the accreditation evaluated by national or regional agencies of quality – waiting for openings or stable employment at their current level, while currently in temporary employment (*personal interino*).

It has also accentuated the dynamic initiated before the crisis, in the ten-year period analysed between 2004-2005 and 2014-2015, of the decline of personnel employed as civil servants and the growth of those given 'labour' contracts (*contracted personnel*), leading to a situation where the latter exceed the number of civil servants.

Among contracted university personnel, adjuncts constitute the larger workforce – which sustain an important part of the bulk of the teaching –, a position characterised for low salaries and benefits, and temporary, part-time contracts, indicative of an overdependence on this type of staff, and – although it is impossible to know the exact number of 'fake adjuncts' – of the perpetration of the precariousness and instability of contracted personnel (Moreno, 2015). In the last years of the period, it is women who have enlarged this precarious position. The growing parity of women and men in *contratado doctor* and *ayudante doctor* categories may give hope for gender equality, but such growth is slow and their numbers low, and there has not been any improvement for women in the top positions.

We discuss that both, new managerial and austerity dynamics are intertwined in that both seek to reduce public resources using the arguments of efficacy and efficiency (Deem, 1998; EUA, 2015). We see this clearly in the Spanish context, where major cutbacks in public universities were justified by saying that “it is a question of introducing important elements of rationality and efficiency in the education system that will result in improvement of this essential public service” (Real Decreto-ley 14/2012, p. 30977), implementing the dynamic of “doing more with less” (Deem, 1998).

1.2. *Embodied effects or psychosocial risks*

In chapter 3, “**Accelerated Researchers: Psychosocial Risks in Gendered Institutions in Academia**”, we have explored the effects of new managerialism and austerity politics in organization of science and academia on the well-being of academics from a gender perspective, researched in only a few studies such as Mountz et al. (2015) and Acker and Armenti (2004) in the context of United States.

We have found psychosocial risks for both men and women due to overworking (i.e. 10 hours per day, 7 days a week), pressured by their own or their superiors' obsession with publication, which leads to burnout, psychological harm, and lack of self-care. When intertwined with care responsibilities, the pressures and time constrictions are felt most keenly by women, especially

when there is a lack of equal distribution of responsibilities among partners, and a lack of support from colleagues, leading to isolation and feelings of guilt. Some men have also talked about their worries about productivity due to their implication in familiar responsibilities or teaching duties.

Psychosocial risks increase combined with the precariousness of the academic and scientific career, especially due to future job uncertainty and long-term precarious positions. In universities this is especially connected to a lack of available positions arising from the freezing of replacement rate and the bottleneck situation already mentioned in chapter 2, causing anxiety about the future, burnout, malaise related to the loss of quality in teaching and anger at not being able to conduct research while having precarious contracts and concern about the age at which they will achieve stability, affecting life plans and sense of life security, and somatization of tensions about competing with other colleagues for a single open position. In research centres this is especially connected to the degree of hyper-competition, given that job positions rely on grants and projects achieved, and that there are no (or very few in only some centres) available intermediate or permanent positions, in contrast to large numbers of doctoral or postdoctoral researchers. The workplace is characterised as hostile and unfriendly, and competing for a leadership position means embodying an aggressive and hegemonic masculine profile: a tough person that never makes mistakes, that “pretends to be the best” lest “they eat you.” Scarcity of positions intertwined with gender results in difficult conditions for women, who may opt to abandon their career given the hostile, competitive and uncertain climate (experienced as not being compatible with future family plans), or to stay, making great efforts and sacrifices in the race for limited resources while maintaining caring roles at home, and taking on high levels of stress, discomfort and isolation.

Finally, we have found discriminatory gendered practices that increase psychosocial risks for women, such as sexist questions playing with non-stable future prospects in selection processes, exclusion from decision-making processes, dismissal of women’s authority and misrecognition, sexist intromission in private life, and even sexual harassment, which causes women discomfort and to fear losing their job or to wish to leave it.

1.3. Subjectivation processes in neoliberal centres of research

In chapter 4, “**Subjectivation processes and gender in a neoliberal model of science in three Spanish research centres**”, we have explored subjectivation processes in centres of excellence

as spaces especially created to foster the most challenging lines of scientific research and orientation towards excellence, high competitiveness and international impact.

We have identified three subjectivation processes characterised by a strong focus on productivity and competitiveness connected to obtaining funding, in which both men and women have adopted the appropriate scientific subjectivity based on characteristics of the masculine entrepreneurial self (Bröckling, 2005; Foucault, [1979] 2008), although we have found gender differences.

Individualisms (comprising individualism as strategy, individualism as collaboration and individualism as self-promotion) are driven by the need to publish in high impact journals and secure funding in very competitive environments, through business and survival discourses, seen by some researchers as criticisable but inevitable strategies. Collaborations constitute a form of economic exchange, transformed into the consideration of others as resources, though in some cases coexist with the importance of *genuine* collegial scientific work. Here, the role of sociability among researchers is seen as gendered and secondary. Self-promotion consists of the presentation of researchers themselves as a brand (reproducing exchange value) in which we find examples of micro-resistances developed by women.

Love of science and the illusion of freedom and autonomy function as instruments of governance to justify researchers' entire dedication to their work, without feeling tired or the need to slow down, based on passion, feelings of autonomy and rejection of dependencies. In contrast, some women expressed certain tensions related to the establishment of limits or sacrifices. Self-responsibility and blame is a discourse that we see especially among women, consisting of admitting 'limitations' such as self-blame for failure, negative self-esteem and inferiority complex as a scientist, as if it was their own responsibility.

From these processes we have detected two main discursive mechanisms that produce subjection to neoliberal governmentality in science, exemplifying 'the psychic life of neoliberalism' (Butler, 1997; Scharff, 2016) in these centres, 'the form that power takes', which contribute to concealing the conditions of self-construction of this appropriate scientific subjectivity, and preventing resistances in a transformative sense.

The 'turn on oneself' (Butler, 1997), that affects both men and women, leads researchers to become subjected to neoliberal governmentality through the figure of the masculine entrepreneurial self, thinking of themselves as an economic unit and of others as resources to be used (Rose, 1997). The illusion of control, together with the assumption of the inevitability of this transformation, erases any attempt of active resistance to change the system. Micro-

resistances carried out by women reinforce this illusion of autonomy, involving a temporary movement but not a transformative action. The ‘gendered turn on oneself’, affecting women in particular, activates critical reflections, evincing tensions and conflicts with themselves, giving yet another turn to the turning on oneself. They themselves become an object of governance, indicating the existence of a gap between themselves and the successful scientific masculine subjectivity (lack of assertiveness, shyness or modesty), and their inadequacy in relation to the masculine entrepreneurial figure, which, by adding a double job on themselves, reinforces the first turn, preventing resistances.

1.4. Care and dominant temporalities in science and academia

In chapter 5, **“Care, time and gender in new managerial science and academia. Exploring a feminist care approach towards caring temporalities”**, I have developed a feminist care framework in order to contribute to the analysis of academia and science, with the aim of shedding light on the complex relationships of care, gender, time and productivity and its exclusionary effects, since to-date only a few accounts have worked in this direction in a thorough way. To build on this framework, I have explored the approach of time, care and care time, mainly inspired by Barbara Adam (2004), Joan Tronto (1993) and Maria Puig de la Bellacasa (2015), respectively. I systematize the results in six different analytical dimensions: science discourses, funding practices, evaluating practices, knowledge practices, colleagues’ relationships and personal lives where productivity neglects care and care time aspects needed for a sustainable academic and scientific life, maintaining and creating gendered inequities:

The official scientific discourses analysed foster a language and worldview of science bound to the logics of the market and far from a care ethos, with a promissory view of science within a global economic race where speed means greater productivity. Centres of research in STEM fields are imbued with similar promissory rhetoric, which contrasts with the precariousness and very limited opportunities for stability in scientific and academic professions. The discourse of breaking the glass ceiling for women is also based on a productivist approach where they have to ‘advance’ without questioning the premises on which science operates while profound inequalities remain.

Funding practices, the material basis for science, are affected by the logics of the market too, where there is a threat to and neglect of care for scientific developments not linked to economic or marketable results. Within the logic of time-compression and productivity, some funding

practices do not care for differing rhythms and circumstances (i.e. dissertation time, project time), imposing a dominant temporality.

Evaluation practices, seen in the three focus groups, follow this normative productivist vision and criteria, to which some are more aligned and which others may still question but ultimately adopt: a regime of accelerated temporality in which care and time for care are still gendered and placed on the periphery, generating exclusions. The dominant temporality of productivity creates discrimination and exclusion on the basis of age and gendered patterns, taking for granted a culture of long working hours, the weight of care responsibilities being placed on women, and rendering stability as undesirable. Burnout is neglected as an issue in favour of an abstract disembodied scientist hero(ine)-machine. Values of care towards the group, the content of science and social contributions are noted explicitly only by one researcher in one group. Care remains invisible and unvalued in the light of decisions made by women scientists seen as neutral and even “voluntary”.

At the level of knowledge, productivist temporality promotes careless scientific practices which are far removed from ethical concerns while constructing some knowledges as marginal, therefore constituting them as *other* knowledges. In other words, time spent on this knowledge is considered not worthwhile in productivist terms. These uncaring and unethical attitudes are driven by pressures of productivity linked to labour uncertainty, and also affect colleagues’ relationships.

At the level of colleagues’ relationships, the pressurised temporality of productivism generates an uncaring atmosphere and opens the door to abuses of power and on *others* time’ (junior researchers and women) under hierarchical structures, especially as regards unvalued care tasks that require time which are otherwise fundamental for academic and scientific sustainability. Time dedicated to care work is unvalued and obscured too within productivist logics which produce that the demands reclaiming time became invisible, too.

Finally, this dominant temporality in science and academia provokes unsustainable situations for personal lives of academics and scientists in which care time is at constant threat. Discourses acknowledging difficulties experienced by women in motherhood are invisible, possibly due to the risk of essentialism and the neoliberal expectation “to have it all” (and achieve it all) that has also permeated liberal feminism. Other narratives acknowledge the incompatibility of productivism in science with social engagement or an active social life – basic for one’s own and others’ well-being. This regime of productivity is barely compatible with basic and necessary caring practices for elderly relatives and other individuals in situation of dependency, too. Men

engaged in caring responsibilities may also be penalised or embody feelings of inadequacy when not meeting the demands of pressured dominant temporality.

2. DISCUSSION: Gender equality in new managerial science and academia

2.1. Gender equality in academia and science

At the end of this research I will present some views which try to address the question that ignited the spark of this work (see introduction) regarding the unequal situation of women in science and academia: is there anything that we are not considering?

Since the beginning of the 2000s, many official European Commission documents, expert reports, recommendations and other endeavours have been directed towards increasing the number of women in science and academia, especially but not exclusively in top positions and STEM fields (horizontal segregation). This effort has been framed in the discourse of excellence, quality, waste of talents and loss of competitiveness in the research and innovation marketplace, even using transformative discourses like in the report titled “*Structural change in research institutions: Enhancing excellence, gender equality and efficiency in research and innovation*” (European Commission, 2012, my emphasis).

However, what we have found in the results presented (and especially in chapters 3, 4 and 5), has been a pressurised, hostile and uncaring gendered environment that do not precisely encourage women (and some types of men). As seen in the last chapter, scientific discourses in official and expert reports exude a neoliberal ethos in which women are treated in economic terms and in need to *advance* to the top (based in the *slow career* narrative), while inequalities like precariousness or care ceiling are not addressed. It could be a question of time, but recent figures do not point to improvements – as seen in the introduction – and the tendency for doctoral students may be worrying since the percentage has decreased to 47.6% when it stood at 49-50% for years. There must be many other reasons for the little improvement that has been done, and this thesis’ results have to be read in connection with studies on gender and academia from recent decades containing key contributions (many of them reviewed in the introduction). There are also studies analysing why gender equality measures do not enhance the genderedness of a given organization, and other studies looking at resistances to implementing changes (Benschop and Verloo, 2006; Van den Brink and Stobbe, 2014; Diogo et al., 2021).

Nevertheless, and trying to answer more specifically whether the situation of the lack of time and lack of well-being perceived has some connection with the unequal situation of women in science, the exploration of the effects of the neoliberal turn implemented through new managerial dynamics in science and academia shows a myriad of psychosocial risks worsened by precariousness especially for women and for those assuming care responsibilities in their everyday lives (as seen in chapter 3). It may be a pleasant and fruitful path for those, whether man or woman, accomplishing a male disembodied and entrepreneurial self with no bonds nor needs outside work: an appropriate scientific subjectivity engaging with individualistic and business-like strategies (as seen in chapter 4) with no doubts about the productivist direction that science is taking (see chapter 5). Indeed, we can see neoliberal logics progressively embedded in the scientific and academic culture, far from a caring ethos for knowledge, funding and evaluation processes, promoting a dominant temporality (Puig de la Bellacasa, 2015) that leads to gendered exclusions (as seen in chapter 5). However, the vision of equality brought by the idea of objectiveness, transparency and excellence of new managerial logics through standardised evaluation still leads us to question why some women do not want to continue in a such a competitive environment, understanding it as ‘voluntary leaving’ (as we have seen in section 6.3 of chapter 5) which confirms the perceived neutrality of the system Acker, 1992). Fochler et al. (2016) name it “self-selection processes” challenging diversity in the scientific workforce, in which, as they state, the role of gender “merits deeper exploration”, jointly with the role of class and ethnic background (p. 197).

Perhaps the problem, as other analyses of gender equality in work and organizations read, is that, despite what in official discourses is termed as ‘structural change’ – underpinned by a whole range of efforts and studies by colleagues researching inequalities affecting women in science and academia –, we are again facing a liberal equal opportunity model which incorporates the notion of ‘woman’s disadvantages’ that takes the masculine norm as the goal to achieve, without changing anything in organizational culture, “which reinforces gendered power processes” (Kirton and Greene, 2015; Benschop and Verloo, 2006, p. 21). In the case of contemporary science and academia, the neoliberal turn is not only not changing anything in the organizational longstanding masculine culture, but instead transforms it in favour of the *business case* (Kirton and Greene, 2015), where women *have to be included* with the rationale of bringing economic profits to the *knowledge marketplace*, a(nother) masculine and time-compressed productivist logic. Perhaps too, we have already forgotten about science as a public common good to enhance collective welfare and healthy environments for *all* human and non-human beings, “so that we can live in [them] as well as possible” (Fisher and Tronto, 1991, p.

40). The problem is not the existence of some public-private relationships in science and academia; the problem is that neoliberal logics are increasingly becoming the norm in science and academia today – a system sustained by vast public resources –, pervading funding, evaluation and knowledge practices, and leading to a lack of care for science and academia, for their academics and scientists and their working relationships, while also configuring their subjectivities as neoliberal entrepreneurial subjects, leading, too, to gendered exclusions and loss of knowledge diversity (as seen especially in chapter 5, but also in chapters 3 and 4).

2.2. Gender, excellence and critiques of public institutions vs. new research centres

Acknowledging such a situation does not mean that all academics are experiencing the same. Other academics in stable and top positions in universities or in leadership roles in research centres enjoy of their positions. Some often also use their power, as we have seen, reproducing dominant temporality and a gendered uncaring environment (in chapter 5). However, they might be mediated by time constraints and production pressures too, pressuring others below them, especially in research centres where their situation is not totally stable (for example, group leaders and their labs tend to be evaluated every 5 years based on their publications, patents, projects achieved, etc.).

In public universities, we have seen the declining tendency in civil servant positions, exacerbated by austerity-driven cutbacks. Without any pretence of idealising the civil servant model, since all of us have heard the critiques about those “who do nothing in their departments” or the fear of endogamic practices that arose in some interviews collected as part of this thesis (you can see some in chapter 5), the suppression of the status of public employee in some countries and its gradual degrowth in Spain opens the floor to other, less-protected labour categories (García Calavia, 2015; Slaughter and Cantwell, 2012). In our Spanish context it could seem like a measure to put an end to certain, long-standing power dynamics (i.e. endogamy) and to ‘modernize’ public universities. However, the problem with the decrease of this figure is that, as seen in chapter 2, contracted personnel with good working conditions (*contratado doctor*) constitute a small proportion of the total of contracted personnel (non-civil servant), and that adjuncts– the most precarious position– constitute the bulk of the workforce, and last years of the period analysed, enlarged by women). Strikingly, adjunct men still outnumber civil servant women (although they coincide in numbers at the end of the period).

Precisely, the implementation of new managerial-neoliberal dynamics is underpinned by critiques of the professional power and presumed poor quality of public services (Deem, 1998), and by the need for modernization of universities (European Parliament, 2000; Ley Orgánica 6/2001; Ley Orgánica 4/2007). However, even if this was totally true – which could be contested and is difficult to prove given the many diverse local experiences – the problem lies in the fact that it is difficult to find discourses that tackle the improvement of universities and scientific system (and the problem of endogamic practices) outside neoliberal discourses (as concluded in chapter 2).

Academic excellence was supposed to be a neutral standard of merit to bring objective measurement as a promise for fairer practices, equality and transparency in contrast to long-standing practices in science and academia (Van den Brink and Benschop, 2012; Castaño, 2016). However, throughout the chapters of this thesis, we see that new changes in academia and science are crossed or perhaps mutually constituted by old hierarchical and masculine power dynamics confirming that new managerialism and its productivist logics are gendered.

Indeed, centres of excellence, as new science organizations within the excellence paradigm, could have been examples of fairer practices, insofar as they differentiate themselves from old universities in terms of their greater autonomy, less bureaucracy, and greater flexibility and efficiency (see chapter 4). However, it is in these centres where we have found the neoliberal ethos more interiorised, in line with a masculine entrepreneurial competitive self, composed by individualist, survival and business like discourses (chapter 4). In chapter 5, I have also found masculinist aggressive discriminatory discourses particularly in the STEM research centre of excellence (the STEM focus group in 6.3 subsection), with the adoption of highly gendered, ageist and productivist views blind to healthy and ethical values (having to work until 11.00pm, laughing about stability and postdoc burnout, etc.), and reproducing a dominant temporality far from a care ethos. Perhaps it is of no surprise that this centre of research, as other centres studied in the GENERA project (and despite their gender equality guidelines in hiring processes) is very masculinised in terms of the remarkably low proportion of women in the highest positions: 4.35% in our STEM research centre¹, and 10.5% as the average for the three research centres studied in chapter 4. These figures contrast with the higher albeit already low level of women in senior positions in universities: 21% in 2016-2017, and 24% today (UMyC, 2018, 2021). Moreover, these centres of excellence show a very pyramidal structure (explained in chapter 3 and 4) where, under the direction of the group leader, early career researchers (postdoctoral

¹ I would like to acknowledge that these centres received a report produced by the researchers of the project in order to promote awareness and recommendations regarding gender equality.

and doctoral researchers) constitute the largest proportion of the scientific personnel, with few to no possibilities for stabilization justified on the idea of high mobility and “rotation of researchers”.

2.3. Gendered institutions and men

In chapter 3 we confirm academia and science as a gendered institution (Acker, 1990, 1992), in which new managerialism with its productivity pressures and accelerated time regimes exacerbate the hegemonic masculine profile in both public universities and research centres. Indeed, practices, images and values defined by a male hegemonic norm understood as universal and neutral are what constitute gendered institutions (Acker, 1990, 1992, 2006; Connell, 2006). The increasing demands in academia intensify the masculine model of total time availability and devotion to work, a feature linked with hegemonic masculinity, that is, a disembodied white, middle-class and male breadwinner (Acker, 1992, 2006; Bailyn, 2003; Bleijenbergh et al., 2012). In fact, in chapter 5, I argue that new managerial science and academia foster a dominant temporality that neglects care not only in academics personal lives, but also in scientific practices themselves.

Hegemonic masculine values such as aggressive leadership styles, competitiveness and individualistic practices have been worsened by understaffing brought about by austerity measures and/or hyper-competition brought about by neoliberal logics (pretending “to be the best” otherwise “they eat you”, power abuse from hierarchies, etc.). These are all features that characterize gendered institutions and inequality regimes, which contrast with supportive, friendly and kinder styles (Acker, 1992, 2006), where a culture of care could be put at the centre. Gendered discriminatory practices based on gendered personal interactions and power distribution (West and Zimmerman, 1987; Acker, 1992) are also characteristic of gendered institutions, as found in chapter 3 and 5 (i.e. joking with or laughing about the idea of stability in selection or evaluation practices; misrecognition, sexual harassment, etc.), which maintain women in subordinate positions and produce them unwelcome effects (Connell, 2006).

In chapters 3 and 5, we have also found men talking about family bonds, caring responsibilities and pressures experienced, acknowledging anxiety, burnout and stress. This is interesting given that, as argued in chapter 1, hegemonic masculinity tends to lead men to hide their symptoms, since they cannot show vulnerability (O’Brien et al., 2007; Barker, 2011) and do not usually dare to talk about it (Herschberg et al., 2014). In their narratives we can find that they partly embody

non-traditional masculinities, and in some cases are *penalised* for not accomplishing high productivity standards or mobility due to sharing their care responsibilities equally. This could be another characteristic of gendered institutions: the existence of non-traditional masculinities experiencing the impacts of a masculinised regime.

However, we have to consider that it is less likely that men have the same pressures as women in terms of care responsibilities due to interiorised gender scripts, and that, at the same time, these scripts normalise entrepreneurialism and competitiveness as part of masculine gender performativity. Moreover, even if men are critical of new managerial dynamics, academic and scientific settings have always been welcoming and naturalised spaces for them in which women constitute the *other*. As seen in chapter 4, women tend to make this critical reflexive turn on themselves (the double gendered turn) to fit into the appropriate scientific subjectivity, expressed as feelings of guilt, self-blame for failure, or feelings of inadequacy and inferiority (some of them also seen in chapter 3). Curiously, men talk more in terms of worry for their career advancement or scientific productivity although one has expressed self-blame for failure and feelings of inadequacy (similar to those found in chapter 4 as embodied by women) under productivist discourses that reproduce dominant temporality. Finally, in gendered institutions, men are not exposed to such gendered discriminatory practices described previously that cast doubts on their professional recognition and self-esteem (or at least not in the same way or to the same degree).

2.4. Slow science or... and... care?

In chapter 1 I undertake a critical review of slow science initiatives (for an extended revision, see Conesa, 2018, in the Annex II) as potential responses to the problem of having no time in science and academia. Some are more nuanced than others, and more politicised than others. For example, the famous German Slow Science Manifesto (2010) argues in favour of the “ivory tower” model for “selected brains”, constituting a disembodied and depoliticized account.

Indeed, some critiques of slow science posit a relation to the middle class or a shift towards individualism which do not challenge power relations connected to “age, gender, academic status, discipline, family situation, psychological disposition” (Martell, 2014; Mendick, 2014; Carrigan and Vostal, 2015, p. 1), despite there are some critical accounts, such as Gosselain’s publication “Slow science. La désexcellence” (2011) or Stengers public inaugural lecture “Another science is possible! A plea for slow science” (2011).

Nevertheless, these accounts do not tackle gender, class or race variables. Only the article of the Great Lakes Feminist Geography Collective, “For slow scholarship: A feminist politics of resistance through collective action in the neoliberal university” (Mountz et al., 2015), widely cited in this thesis, tackles this phenomenon more transversally. Drawing on the negative *embodied effects* on the health of (women) academics, it stands out as an interconnection between slow scholarship and feminist ethics of care in its approach to questions of time, gender, privilege and power in the neoliberal academy “due to gendered, racialized, classed, heteronormative, and ableist structures and daily practices” in order to challenge elitist exclusions (p. 1240).

Thus, while I conclude that slow science-related initiatives, especially the critical ones – including “la désexcellence” or the accelerated academy contributions – have the potential to analyse and challenge the limitations and exclusions of fast-paced contemporary academia, it is key to find approaches to tackle lack of time and care in scientific and academic settings that engage with gender.

3. CONCLUSIONS: Care as an analytical, political and transformative tool

3.1. Politicization to create time for care

In chapter 1, “**(No) time for care and responsibility: from neoliberal practices in academia to collective responsibility in times of crisis**”, I have argued that *embodied effects* (Mountz et al. 2015) need to be approached by looking at the context instead of being understood as individual malaises, that is to say, to politicise them, especially when looking at gender. Like women’s malaises, *embodied effects* experienced by women continuously run the risk of being concealed and devalued, situated as ‘women’s issues’ from the androcentric hegemonic perspective, which can lead to pathologization and medicalization (Valls-Llobet, 2009; Barker, 2011; Pujal and Mora, 2015). Chapter 2 and 3 are an attempt to respond to the need to contribute empirical evidence of these effects by looking at and analysing the context of new managerialism and precariousness in Spanish academia and science.

In chapter 1 I also raised the dilemma of academics’ role of responsibility and transformation in this situation, considering that they are suffering lack of time to care for themselves and others, suffering consequences in their bodies, which makes possibilities for change difficult, especially for those in lower and more precarious positions. I introduce here the definition of care

provided by Fisher and Tronto (1991) and Tronto's (1993) ethics of care elements, concluding that the care notion can be a useful tool in challenging the lack of care and time for care, since those who design and implement managerial and austerity politics have remained *inattentive* to and *ignorant* of the lack of care in academic lives, as well as of the quality and direction of science itself, performing *privileged irresponsibility*, and reinforcing care as something private, gendered, classed, and raced. Thus, I conclude that it is important for academics and scientists to politicise the situation when and if those responsible for these politics remain inattentive.

Clarke and Knights (2015) and Menzies and Newson (2008) point out that academics should engage with ethical subjectivities to counteract and resist individualist careering and ad hoc survival strategies, and to deal with the duplicity of their roles when bringing these changes on themselves without awareness and under the effects of stress. I argue here that transformation or resistance is not only difficult due to the pressures and constraints experienced by academics and scientists themselves, but also and precisely because, as argued in chapter 4, subjectivation processes have subjected them to and constituted them within neoliberal governmentality in science, making any type of resistance in a transformative sense difficult.

We see this in the first "turn to oneself" (Butler, 1997) by which researchers become subjected to neoliberal governmentality through seduction (Rose, 1997), acting with feelings of pleasure and freedom that come from an illusion of control and autonomy, becoming entrepreneurial selves that assume an appropriate scientific subjectivity. The "second gendered turn", in addition to the first one, constitutes another practice of governance for women, who maintain a strong and constant critical attention to themselves, through self-monitoring and self-control linked to the desire to participate in a masculinized science. Therefore, they reinforce the gaze inside the limits of the self, which results in despoliticization, that is, maintaining privately what should be in the public and political sphere, preventing any type of resistance.

Therefore, I conclude that it is important to contextualise, analyse and understand the implicit mechanisms that harm us and at the same time subject us with feelings of pleasure, in order to politicise to revert the situation. In chapter 1, I use the notion of care not as an idealized but as a political force that makes us understand that "we all maintain, continue, and repair our world" in a "complex, life-sustaining web" (Fisher and Tronto, 1991, p. 40), in which, continuing to refer to Tronto's elements (1993), I propose that *to care for* and *being cared for* might mean to create space and time for care to foster the *availability of the processes of response and responsibility*. That is to say, for academics, first, to stop and ask themselves what allows for their availability to respond; second, to create time to organize and sustain life collectively in a broader sense.

This means to collectively engage with each other, to care for ourselves and to create better scientific institutions, outside neoliberal logics, challenging the threat of falling into individualist practices as a means of surviving in this hostile environment. In other words, to *create* time for care.

3.2. A feminist care framework

In chapters 1 and 3, I introduce care and the ethics of care (Tronto, 1993), stating that more research about it is needed in the context of new managerial academia and science, and suggesting that an application of an ethics of care from a feminist perspective may challenge this gendered institution and gain ground for gender equality, insofar as it places care at the centre of the political arena (Tronto, 1993; Carrasco, 2001; Mountz et al., 2015), supporting ideas of interdependency and vulnerability linked to all beings, and questioning the ever-present disembodied hegemonic masculine model we have seen in the results (chapter 3, 4 and 5).

Starting from the idea that there is a lack of time and care not only affecting academic lives but also affecting scientific practices and science itself – as first reviewed and reflected on in chapter 1 – and guided by the detection of these themes in the fieldwork, in chapter 5 I fully develop a feminist care approach based on the concepts of care from Fisher and Tronto (1991) and Tronto (1993) and care time from Puig de la Bellacasa's work on productivist technoscientific endeavours (2011, 2015), in order to analyse relationships of care and time, to an explorative end, with different aspects of contemporary academic and scientific organization, practices and lives.

Fisher and Tronto's (1991) open definition of care de-essentialises the notion linked to the feminised traditional care role, in order to understand it as something that we all need and which comprises many different activities, despite the fact care is usually undermined and invisible, and seen as a private practice mostly undertaken by people marked by gender, race and class (Tronto, 1993; Hochschild, 2000).

In this development I expose the strong connections that care has with time, since, although it has different temporalities, usually "care requires patience and time" (Winance, 2010, p. 111). Considering that in Western societies time has been transformed into an exchange value in order to be controlled and instrumentalised, linked to economic gain and social advantage, and that time compression and acceleration is "an unquestioned economic and political goal as it increases profit" (Adam, 2004, p. 128-129), time devoted to care is invisible and considered

unproductive, as care is devalued too (Tronto, 1993; Adam, 2004). In this sense, care and care time stand in opposition to the neoliberal ethos of time-compressed productivism (Tronto, 2003; 2017; Ivancheva et al., 2019; Pérez Orozco, 2014; Carrasco, 2001, for a discussion of this idea see chapter 5, subsection 3.3).

STS scholars such as Maria Puig de la Bellacasa (2011, 2012, 2015) have contributed to broadening and thickening the notion of care with their studies. Puig de la Bellacasa proposes the term ‘matters of care’ for knowledge politics and encourages an ethos of care in Science and Technology Studies as a way of engaging with a “speculative commitment to neglected things” (2011 p. 85), reminding us that “A feminist vision of care (...) engages with persistent forms of exclusion, power and domination in science and technology” (2011, p. 91), requiring attention to those “whose voices are less valued, as are their concerns and need for care” (2011, p. 92). With the same aim, and drawing on her elaboration, I engage with the feminist care approach not only for academics’ lives and their relationships, but also for science and its practices, as set out in this final chapter.

Puig de la Bellacasa (2015) also analyses temporalities and care in technoscience in her study of soil science, stating that dominant productivist and progressivist timelines in scientific endeavours leave important lively elements (human and non-human, such as soil) exhausted by a lack of care and care time. In her elaboration she also argues that “Care time is also irreducible to productionist time” (p. 707) and that “(...) against this [productionism], a politics of care exposes the importance of the work of care for creating liveable and lively worlds.” (p. 708). Thus she argues in favour of “affirming the importance of care time” to draw attention and *make time for* those practices and experiences devalued by the “productionist ethos” (p. 708). She proposes drawing attention to multiple interdependent temporalities by *making care time* to re-discover the diversity of timelines marginalised in the dominant timescape and to disrupt “traditional notions of technoscientific innovation” (p. 692).

Based on this framework, in chapter 5 I analyse, in an explorative sense, scientific discourses, funding, evaluation and knowledge practices and academics’ relationships and personal lives by looking at underlying temporalities in discourses and practices, examining what is marginalised, neglected or unvalued under the productivist pattern that requires care or care time in order to sustain a healthy and diverse science and avoid gendered exclusions and *othering* practices. In all these six dimensions, we have seen how the productivist ethos and its related dominant temporality displace practices of care in science, provoking exclusionary effects on women

academics and on those not fitting into productivist norms, with a potential loss of a diverse scientific workforce, ideas and knowledge.

As such, this feminist care and care time framework has helped us to shed light on productivist dynamics found in the fieldwork and reveal its related dominant temporality and its effects on gender and caring practices, as well as to visibilize what is neglected and obscured under productivism, reproducing gendered exclusions.

3.3. Towards caring temporalities

In chapter 5, I conclude that this feminist care approach brings us to an idea of care time through multiple or diverse temporalities, in order to make time for “a range of vital practices and experiences that are discounted, or crushed, by the productionist ethos” (Puig de la Bellacasa, 2015, p. 708).

Following this analysis, and from these ideas, I suggest the idea of caring temporalities to make time to care for our diverse practices of knowledge development and our relationships within science, so that our knowledge and scientists can be diverse too. Temporalities of care or caring temporalities might serve as a conceptual and discursive tool to help reframe our imaginaries so as to disrupt time hierarchies of the dominant temporal productivist vision underlying academia and science. That is to say, to reevaluate marginalised, invisible and devalued temporalities of care, to foster an ethos of care in academic and scientific discourses and practices away from productivist ethos, that question power dynamics inside time relations, and to make it possible for diverse knowledges and voices and sustainable academics lives to flourish.

Caring temporalities may inspire transformative and caring processes aimed at healing and repairing imbalances and inequalities, exhaustions and exclusions, by disrupting the established and invisible norm of time commodification, and by redistributing the diverse responsibilities that make life liveable for all of us, in our scientific and academic organization and settings in order to promote processes that sustain life removed from gendered exclusions pertaining to a white, masculine, individualist productivist worldview, so that “we can live as well as possible” (Fisher and Tronto, 1991, p. 40). The idea of temporalities of care is aimed at transforming the patriarchal productivist ideology that governs scientific and academic worlds through dominant forms of power, and in which politics of time constitute one of the roots of the construction of *otherness*.

3.4. In conclusion

Throughout this research I have provided responses to the question ‘what is happening to us’ in relation to the perceived lack of time and care in academic and scientific settings, and what consequences this has for science itself, and for academic and scientific personnel, considering possible connections to the unequal situation of women in academia and science.

In the following paragraph, I summarise the provided responses to the research question of this thesis: How have new managerialism and austerity politics affected scientists’ and academics’ lives – in terms of *embodied effects* (or psychosocial risks) and subjectivity – and scientific practices, from a gender perspective that addresses questions of care, time and gender, considering the already unequal situation of women in academia and science?

Firstly, we have seen the introduction of new managerial dynamics in Spanish science and academia, and their characteristics, which, intertwined with austerity politics, have brought productivity pressures in the midst of precarious working conditions and reduction of resources. Secondly, we have seen how this implementation has brought academics and scientists into vulnerable situations, experiencing damage to their well-being bringing psychosocial risks, especially for those responsible of care work, intensifying academia and science as a gendered institution through the exacerbation of total time availability, competitiveness, aggressiveness and individualistic practices worsened by understaffing and hyper-competition. Thirdly, we have seen the adoption of an appropriate scientific subjectivity through the figure of the entrepreneurial self, reproducing individualist and business discourses with researchers thinking of themselves as an economic unit and others as resources to be used, driven by an illusion of control. The concealing of the conditions of self-construction of this subjectivity, with subjects closed within the limits of the self, where women try to overcome the figure of the *other* in science by trying to achieve the masculine norms of the entrepreneurial self, prevents resistances in a transformative sense. Fourth, we have seen a feminist care approach build upon care and care time notions of Tronto (1993) and Puig de la Bellacasa’s (2011, 2015), respectively, which has shed light on relationships of care, time, gender and productivity in different dimensions. Productivism and its dominant temporality displace practices of care in funding and knowledge practices, threatening diverse scientific developments not linked to accumulative and market logics or that do not fit into narrow timelines and, in evaluation practices, producing gendered and ageist exclusionary practices in assessment procedures. This pressurised

temporality also leads to uncaring environments and potential abuses of others' time in colleagues' relationships, and to unsustainable personal situations in which care and care time are under constant threat.

This research, therefore, shows that new managerialism, by introducing the logics of the private sector into Spanish science and academia, implements the norm of productivism characteristic of neoliberalism, which fosters a dominant temporality based on time commodification (Adam, 2004) far from an ethos of care and from science and knowledge as a public good. This not only threatens academics and scientists' well-being but provoke exclusionary practices that make scientific paths difficult for women and those with care responsibilities, potentially giving rise to self-selection (Fochler et al., 2016) or abandonment, thus threatening the diversity of the workforce – especially when not accomplishing with an appropriate subjectivity through the adoption of the entrepreneurial self –, as well as threatening knowledge practices not linked to economic gain. This partially answers – taking knowledge as always partial and in connection to other knowledges (Haraway, 1991; Puig de la Bellacasa, 2012) – the broader question of which bodies are able to pursue and remain in our contemporary academic and scientific system, and which model of science we are reproducing and normalising.

All in all, new managerialism, “the organisational arm of neoliberalism” (Lynch, 2014, p. 1) may change the direction of science away from that of a common good for the enhancement of collective welfare and healthy environments for all human and non-human beings, “so that we can live in it as well as possible” (Fisher and Tronto, 1991, p. 40).

The notion and approach of feminist care has allowed me to put the focus on the lack of processes that sustain life (lack of care and time) in scientific and academic settings, producing *embodied effects* or psychosocial risks, from a gender perspective, to see what is happening to us in academia and science. It has allowed me, too, to consider not only the effects of the lack of care and time in personal lives or among colleagues' relationships, but also *to care about* (Tronto, 1993) the lack of care in the direction of science itself, and in its funding, evaluation and knowledge practices.

I conclude that the care (and care time) notion, mainly inspired by Tronto (1993) and Puig de la Bellacasa (2011, 2015) has demonstrated to be an analytical, political and transformative tool insofar as it has allowed me to construct a theoretical and analytical framework, to explore relationships of care, time and gender in science and academia, unveiling dominant temporalities of productivism far from a care ethos and which produce gendered exclusions, which may serve to be applied in other contexts; it has provided the idea of creating time to care

in order to foster the *availability of the processes of response and responsibility*, that is to say, to politicise what is happening to us in order to counteract exclusionary effects through collective processes directed to care for ourselves and for science and academia; and it has inspired the idea of caring temporalities as a conceptual and discursive transformative tool to help reframe our imaginaries so as to disrupt the dominant temporality of productivism and foster an ethos of care in academic and scientific discourses and practices aimed at healing and repairing imbalances and inequalities, exhaustions and exclusions, in order to make it possible for diverse knowledges and voices and sustainable academic lives to flourish.

3.5. Limitations, recommendations and further research

3.5.1. Recommendations

A general recommendation emergent from this thesis is the application of a culture of care in science and academia. This means to apply the feminist vision of care and the idea of caring temporalities in all the processes and practices, revisiting its politics and its culture of evaluation.

More concrete practices may entail the revision of the following items from an ethos of care perspective:

- 1) The conditions established for funding achievement, so that diversity of knowledges and temporalities are possible (i.e. many research needs more than three years to be completed) and taking into account the variety and characteristics of each academic discipline or sub-discipline, especially considering societal contributions not necessarily linked to market and accumulative logics. Adequate resources should be made available for the technical and administrative support for research projects and teaching.
- 2) The way recruitment practices are carried out, so that a diverse body of academics and scientists can participate in the doing of science, having the openness to check our interiorised gendered, racist, ableist or classist biases, considering not only women but also gender dissidences and diverse identities and cultures of origin, while dismantling prejudices around Western and productivist dominant temporalities applied in the revision of curriculums and their milestones, considering that 'talent' might be enhanced (rather than an essential innate feature);
- 3) Working conditions, so as to end with precarious contracts and to establish possibilities for stabilization in academic and scientific institutions, introducing ways to hire and

- stabilise academics in situation of administrative irregularity. Mandatory mobility (and ‘rotation of researchers’) must be transformed into an option that can be taken following life rhythms and scientific needs, which can be included within current employment contracts.
- 4) Scientific productivity, considering the quality of the work based on the content itself – and not on quantitative measures having nothing to do with that content – and its contribution to a more liveable world. This means redirecting the idea of scientific productivity away from the *publish or perish* culture, where other scientific developments that do not fit into journal articles or patents can be valued too. Re-creating time to read for academic assessment without ready-made quantifiable solutions based on dominant fast temporalities, and to reward and value this inverted time as something enriching and necessary.
 - 5) Group, lab or department culture, so as to generate encouraging, motivating and caring environments where time to think collectively, to debate and to care for each other is possible, thus enriching ourselves and our scientific and academic developments, in order to find societal solutions for the care of all human and non-human beings. This entails revising the time needed for each project and researcher (i.e. more time for theoretical development or for more grounded and longer experiments), generating spaces to talk about possible pressures and quality of the work.
 - 6) The normalised long-hours culture (which include nights and weekends) with its strict deadline norms and *publish or perish* culture, so as to respect employment rights, to care for academics’ lives and others around them, and to lead knowledge to flourish. Scientific and academic institutions need to consider having enough and dimensioned (human) resources to cover more scientific, technical or administrative tasks, so that the sustainability of the projects and researchers do not fall into the hands and time of a few precarious academics.
 - 7) Transparency and responsible research and innovation, in order to account for hidden and neglected aspects in the processes of knowledge production.
 - 8) Science as driven by private-sector and market logics, so as to reconsider science and knowledge as a common public good, notwithstanding that private and public spaces can enrich one another, on the basis that the economy is also a human activity that sustains life, though not necessarily linked to the pursuit of profit. To revise the economic model of science editorials and its benefits accumulation (Larivière et al., 2015), so that public institutions do not need to pay high amounts of money to have access to knowledge produced by themselves (with their own public resources) and to

revise the open access journal system so as that authors (and in many cases the institutions that support them) do not have to pay again for their contributions to be openly accessed. Reconsider the option to generate time and resources for university journals to flourish again.

Of course, many (albeit not all) of these recommendations require resources and perhaps these words might sound naïve within the worlds we inhabit, especially against the contemporary political background in which, precisely, an aggressive masculine and competitive ethos is very present through war and crisis logics. However, our task as academics is continue thinking that “[a]nother science is possible” (Stengers, 2011), producing strong and diverse knowledge that continues to push for a more equal and a fairer worlds. In this sense, one last recommendation for science would be to reconsider the material limits of the planet so as to construct knowledge that cares for our environments and our lives².

Some of these recommendations are already addressed by The Leiden Manifesto (Hicks et al., 2015) or by the initiatives of *The San Francisco Declaration on Research Assessment* (DORA) – which in recent years has incorporated a gender perspective – that many scientific and academic institutions have signed, besides individual signatures (Declaration on Research Assessment, 2013). However, as with the *HR Excellence in Research* award based on transparency and equal treatment in recruitment processes to promote sustainable labour markets (Euraxess, 2022)³ that the studied research centres have received, these changes have to be guaranteed and implemented using resources (i.e. training, time to review documents and practices, etc.) and an honest will to provide real change in academic and scientific culture towards an ethos of care.

3.5.2. Limitations and further research

These results draw from a situated position as an academic myself, one critical with normative modes of doing science which produce exclusionary effects, and looking at the data from a feminist care and gender perspective. In this sense, the results of this thesis do not seek to be representative nor explain the totality of academic and scientific experiences, which are of

² For example, by promoting an equilibrium among consumption and resources extracted, with the aim of stopping and addressing colonialist extractivist practices that sustain our way of living, favouring instead learning how to organize life collectively, covering the basic needs of all without exploitation.

³ This award is based on the the [European Charter for Researchers](https://euraxess.ec.europa.eu/jobs/charter/european-charter) (<https://euraxess.ec.europa.eu/jobs/charter/european-charter>) and the [Code of Conduct for the Recruitment of Researchers](https://euraxess.ec.europa.eu/jobs/charter/code) (<https://euraxess.ec.europa.eu/jobs/charter/code>).

course diverse according to local context. However, as already mentioned, I highlight the increasingly pervading neoliberal ethos encountered in the fieldwork developed as part of the thesis and the GENERA project PI and collaborators, through narratives of malaises and resentment, the adoption of individualist strategies through business-like and survival discourses or uncaring and gendered exclusionary practices, significant evidence of which has been shown, notwithstanding the good experiences or joyful moments recounted, too. As partial and situated knowledge, this research seeks to and must be considered in conversation and connection with other knowledges (Haraway, 1991).

As I have acknowledged in the Gender section (see introduction), and as the results of this thesis show, academia and science are still normative spaces occupied by white, middle-class and Western-born men and (in less proportion) women. Further research should seek strategies to assure more diverse participants for the fieldwork in order to include an intersectional perspective that tackles other axes of inequality, addressing racist, classist, ageist, ableist or other gendered exclusions, such as those affecting LGBTQI+ academics.

Recent changes in Spanish legislation affecting working conditions of academic and scientific personnel are not included and should foster further research, since it is still early to see their developments. The first is the passing of the “20/2021 Law on urgent measures to reduce temporality” at the end of 2021, which seeks the stabilization of temporary personnel in public services, something not without complexities given ambiguities surrounding the interpretation of each case that needs to be managed by universities, negotiating bodies, and the approval of regional governments (Central Sindical Independiente y de funcionarios [CSIF], 2022, 15 March). The second, and very recent, is the passing of the draft bill of the “Organic law of the university system”, known as the LOSU, in June 2022, set to come into force in 2023 and which, at this moment, seeks to reduce temporary personnel and provide stabilization of certain Adjunct professors (CSIF, 2022, 7 July). While this is good news, we must wait for their definitive implementation and effects to be known, all the while being aware of the challenges inherent in the current economic and political context. In any case, it remains to be seen whether these stabilization measures challenge the masculine dominant temporality of productivism in science (or only for some).

In our fieldwork, we have not found examples of resistances in the collective or transformative sense. This does not mean that they do not exist, as mentioned at the beginning of the thesis, through academics’ protests and trade unions, especially those fighting for better working conditions for temporal workers, which – as seen in the previous paragraph – has borne fruit in

certain parts of both laws, however late and with their effects remaining to be seen. It is important to recall the many different protests from students and professors against the Bologna Process and the implementation of the LOU law during the early 2000s, in which I also participated as a university undergraduate student, some of which were harshly suppressed, paving the way for the dismantling of the movement some years later. I guess our results may constitute a mirror image of the introduction of this neoliberal turn in our bodies, subjectivities and practices, the concrete effects of which we could not have predicted at that time.

Additional focus for further research could be the analysis of aspects of quality in teaching and research under new managerial academia from a gender perspective, or, although a bit far from this line of work, to explore the corporatisation of universities through the use of online workspaces owned by big companies (i.e. email or video call services), especially from the pandemic onwards.

3.5.3. Final note

Finally, I wish to note that the fact that this thesis is a compendium of contributions with some co-authored articles has meant that the narrative use of the person has alternated from “I” to the “we”, with the use of the impersonal when presenting the works, and at other times employing a “we” that involves the reader when recalling what has been done (and read), in addition to the “we” encompassing academics and scientists. While being aware that recommended feminist practice is to write from the “I”, in order to position the view of the writer and to not put one’s own words in others’ mouths, I have decided to maintain this alternating voice for the reasons exposed in each case, despite the confusion this may cause.

IV. **REFERENCES OF INTRODUCTION AND CONCLUSIONS**

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⁴ I have decided to follow the feminist guideline to show the full names of each author in chapter 5 and in this references list. I have used UOC general guidelines for 7th APA style which includes this adaptation.

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ANNEXES

ANNEX I.
**“THE SPANISH EQUALITY
LAW AND THE GENDER
BALANCE IN THE EVALUATION
COMMITTEES:
AN OPPORTUNITY FOR
WOMEN’S PROMOTION IN
HIGHER EDUCATION”**

González, A. M. [Ana M], Conesa, E. [Ester], Pons, O. [Olga] & Tura, M. [Marta]. (2018). **The Spanish Equality Law and the gender balance in the evaluation committees: An opportunity for women's promotion in higher education.** *Higher Education Policy*, 33, 815–833.
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Original Article

The Spanish Equality Law and the Gender Balance in the Evaluation Committees: An Opportunity for Women's Promotion in Higher Education

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Despite advances in gender policy and equality laws in the twenty-first century, women are still a minority in the full professor category in Europe. Some measures establish gender quotas to balance gatekeeper positions, which will supposedly pave the way to make women's integration into senior higher education positions easier. In Spain, Organic Act 3/2007¹ of 22 March on effective equality between women and men launched progressive norms governing gender issues, and the Spanish Science and Technology Act (2011) incorporated measures to promote effective equality in academic institutions. This paper evaluates how Spanish evaluation agencies' compliance with implementing gender balance has affected the composition of evaluation committees and its impact on the advancement of women in science. Findings reveal some positive figures on women's representation in recent decades, even though gender-balanced committees do not show any clear evidence of causing this effect. There seems to be no correlation between gender-balanced committees and women's success rates, suggesting intermediate variables affect women's low participation in competitive submissions. It explores several factors concerning two agencies' evaluation procedures, such as formality and transparency, direct/multiple gatekeeping processes, the influence of epistemic cultures, cohorts and confidence of female candidates. *Higher Education Policy* (2020) 33, 815–833. <https://doi.org/10.1057/s41307-018-0103-y>; published online 7 August 2018

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Introduction

Discrimination against women continues in the twenty-first century, despite advancements in gender policy and equality laws. In 2015, Spanish data showed positive figures for women, who represent 42% of tenure track (some 35% in 2005) and 21% of full professors (compared to 13% in 2005), where these figures are above the EU mean of 37.1 and 20.9%, respectively. But the percentage of women in rector positions is lower than the EU mean (only 10%, below EU mean of 20%). Horizontal segregation is still in place, with a minority of women in STEM (science, technology, engineering and mathematics) disciplines, since there are more than twice as many men in the early stages of STEM careers across higher education, government and business enterprise. This reveals only a moderate advancement of women reaching top positions, which hints at a sticky floor phenomenon, and ongoing low representation of women in STEM fields.

Some decisive equality policies promise faster advancement for women in science, but more information needs to be collected on the extent to which gender measures have been applied and if they yield a positive impact favouring the representation of women in science.

This article examines the compliance of Spanish evaluation agencies with the gender-balanced composition regulated by the Spanish Science and Technology Act (2011), exploring its real impacts on the entry of senior researchers and their attainment of the highest stages of recognition.

The first section outlines the methodology, and the second sets out the context of gender equality actions in the Spanish research and development (R&D) policy environment, including the implementation of legislation. The third section explores the impact of evaluation processes on the advancement of women in research. The fourth section describes the evaluation process and addresses the gender composition of two Spanish evaluation agencies. The fifth section discusses the impact on female success rates of applying female quotas to committee boards. Finally, the main results are summarised and we set out a few suggestions and recommendations.

Methodological Notes

The article addresses the gender composition of the evaluation committees at two independent Spanish evaluation agencies that act as gatekeepers for R&D institutions to promote researchers' advancement. The nature of this work is based on the use of mixed approaches, ranging from legal and political analysis to employing secondary data. It focuses on the gender balance composition of the National Agency for Quality Assessment and Accreditation (ANECA), which evaluates the accreditation of academics, compulsory for applying to full professor positions, and of the National Committee for the Evaluation of Research Activities



(CNEAI), which evaluates the research merits accumulated by researchers in tenure track positions for 6-year periods, and then compiles a ranking based on meritocracy, for which top-rated researchers receive bonuses and recognition. We would expect legislation to benefit gender equality, at least by formally regulating the gender-balanced composition of evaluation committees. Finally, summary data are presented of how the implementation of female quotas and evaluation processes may influence the success ratio of men and women researchers in achieving promotion and recognition by accreditation.

Gender Equality Actions in R&D and Innovation in Spain

European countries have dealt with the gender gap by launching regulations, positive actions and equality policies to support female careers. In Spain, Delgado (2014) explains that the gender agenda in research has been a result of two general trends: firstly, European governance and supranational demands for data to implement gender mainstreaming, and secondly, national pressures from gender lobbies, such as the Spanish Association of Women Researchers and Technologists (AMIT). These two trends led to the enactment of Organic Act 3/2007¹ of 22 March on effective equality between women and men to establish the legal framework, and the creation of equality observatories at universities, governmental organisations and large corporations. This law also created the Women and Science Unit (UMyC), which advocates the inclusion of gender issues in the text of the 2011 Science and Technology Act. As Delgado (2014) has pointed out, and which we will confirm later in this work, its advocacy stance and watchdog mission is decisive for increasing equality at academic institutions. Regarding this legislative vocation, in 2011 the Spanish Science and Technology Act established gender measures in R&D under the framework of Equality Act 3/2007¹. All stakeholders expected the specific mention of women in legislation and the balanced composition of men and women on evaluation committees to create opportunities for women in academia.

Legislative framework

In 2011, the Spanish government approved the Science, Technology and Innovation Act 14/2011,² which replaced the former legislation from 1986. This was done after an overhaul of academia rules in 2001, via Organic Law 6/2001³ of 21 December and Amended Organic Law 4/2007 of 12 April. Its aims were to transform Spanish R&D by promoting research, innovation and technological development. To do so, legislators planned to modernise Spanish universities and promote internationalisation, which would involve cultural changes in research careers and more competitive activity by trying to align with the European Research Area. Among other modifications, Act 14/2011² implements a 'gender



balanced composition in management and representation bodies' in Spanish academia to enact gender mainstreaming in line with European guidelines (Bustelo, 2004; Bustelo and Lombardo, 2007). This is based on Organic Act 3/2007¹ of 22 March on effective equality that establishes that the 'total number of people in a body should not exceed 60% or be less than 40%'. Thus, the disposition is mandatory for those committee boards that regulate hiring and promotion for staff civil servants and private sector employees in academia.

Additional Section 13 of Science and Technology Act 14/2011² enacts the incorporation of gender mainstreaming in research with the following instruments: (1) The Spanish Science and Technology Strategy and the Spanish National Plan for Scientific and Technical Research and Innovation for promoting gender perspective in every step of the research process (objectives, research problems, theoretical and explanatory frameworks, methods, collection and interpretation of data, conclusions, predicting applications and technological developments, and future proposals), (2) fostering gender and women's studies that motivate and recognise women's presence on research teams, (3) collection of segregated data by sex in every R&D institution and the construction of indicators on gender gap, (4) avoidance of gender bias in the selection and evaluation of national research activity (handled by CNEAI) and researchers' curricula (managed by ANECA), keeping data on the sex of the candidate confidential for evaluation purposes, (5) promotion of gender mainstreaming in every dimension of the Spanish Innovation Strategy and the National R&D and Innovation Plan, and (6) implementation of equality plans at public research institutions with the inclusion of positive measures to monitor and analyse trends through annual indicators.

Progressive gender policy should have a great impact on women's advancement in academia, but its implementation depends on how it is managed at different Spanish institutions, and the financial crisis unfortunately brought its execution to a stop (Salazar, 2016; Puig-Barrachina *et al.*, 2016).

Are Women a Minority in Academia Because of Old Boy Networks? The Gender Composition Panels on Evaluation Committees

Since the late twentieth century, a large body of the literature highlights the importance of social and structural factors affecting the scant percentage of women in senior positions (Acker, 1989; Benschop and Brouns, 2003; Krefting, 2003; Kuijpers and Scheerens, 2006; van den Brink and Benschop, 2011; Etkowitz and Ranga, 2011), which aids in preserving the hegemony of male researchers in academia (Rees, 2011; Sealy, 2010). O'Connor and O'Hagan (2016) criticise the myth of excellence and the ultimate legitimacy of the organisation of science as still favouring gender inequity.



Homophily and old boy networking slant the bias in favour of white men who resemble the people who sit on influential committees (Kanter, 1977; Ibarra, 1992; Lewis and Simpson, 2010; Moss-Racusin *et al.*, 2012). Porter and Rossini (1985) explain that researchers make decisions based on cognitive similarity, membership in a particular group, and the tradition of a discipline, what they call cognitive particularism, and Knorr Cetina (1999) calls epistemic culture. In these cases, men have higher chances of success at accessing senior positions because of informal networks that influence the subjective decisions of peer reviewers (Brouns, 2000; Bozeman *et al.*, 2001; Mouw, 2006; Sandström and Hällsten, 2008). Formal processes related to high transparency levels and public accountability are supposed to create opportunities for the progression of women in academia (Benschop and Brouns, 2003). On the contrary, processes related to invitation and nomination actually disfavour women's advancement, such as the case study of the Netherlands presented by van den Brink *et al.* (2006). In that evaluation process, the male inner circle caused serious deviation from the application of the assessment criteria.

Several studies (Grant and Low, 1997; Wennerås and Wold, 1997; Blake and La Valle, 2000; Sandström and Hällsten, 2008; Marsh *et al.*, 2008; European Commission, 2009; Moss-Racusin *et al.*, 2012; Leathwood and Read, 2013) have emphasised the low proportion of women receiving grants in research funding. According to their findings, old boy networks appear as a problem due to male reviewers deciding in favour of male candidates. Although some studies do refine the results, seeking variations on different types of applications and knowledge fields, they find no clear evidence to support gender differences in grant allocations. On the contrary, their evidence reveals that few women submit competitive applications, which decreases the gender success ratio (Marsh *et al.*, 2009; Ceci and Williams, 2011). The number of women's submissions drops when the processes are informal and opaque, as if they were measuring their low chance of success. Therefore, cultural factors affecting female confidence in evaluation processes appear relevant to understand the low participation of women.

Some studies highlight that male and female evaluators show less confidence regarding women's competences because of gendered organisations, supporting stereotypes that male academics are more secure and consistent than female candidates (Benschop and Brouns, 2003; Moss-Racusin *et al.*, 2012; van den Brink *et al.*, 2010). The study by Streinpreis *et al.* (1999) points out gender bias in preference for male job applicants when male and female evaluators review the curricula of job applicants for tenure tracks. These facts underline that male and female evaluators are equally biased in making decisions. O'Connor and O'Hagan (1950, 2016) explain that 'members of the board were seen as extremely unlikely to read any individual application in detail'; therefore, the researcher's reputation is clearly key in the appraisal methodology, where women get low credentials. Also, van den Brink and Benschop (2014, 478) state women evaluators' difficulties with



defending female candidates due to their minority positions on evaluation panels, which could be interpreted as favouritism and feminist choices.

In Spain, Zinovyeva and Bagues (2011) found gender bias in accreditation processes for full professor and tenure tracks accredited by ANECA, since the gender composition of committee panels correlates with men having greater success in achieving accreditation. More recently, Bagues *et al.* (2015), speaking of the Italian and Spanish promotion systems, concluded that there was no clear correlation between the gender composition of evaluation panels and the increasing rate of women's success in full track professorship. These results differ from the conclusion of van den Besselaar and Leydesdorff (2009), who tell of a decreasing gender gap over time, as equality policies increase. However, the reality of both Italian and Spanish academia shows little effect from promoting women's advancement, even though Spain in particular has launched progressive policies on gender in academia.

The Evaluation Processes and the Composition of Committee Boards

The Spanish evaluation system is formally based on three dimensions: independent peer review, accountability of excellence and gender-blind assessment. According to the first feature, both national agencies are external and independent institutions so that they accomplish their mission without interference from academia, but academics are in charge of some phases of the evaluation process. The National Agency for Quality Assessment and Accreditation (ANECA) and the National Committee for the Evaluation of Research Activities (CNEAI) are in charge of Spanish researchers' evaluations that operate according to peer-review processes, inviting senior researchers to evaluate the curricula of the candidates. The evaluators are experts in their field of knowledge, but they are not professional evaluators or entirely independent reviewers. They become gatekeepers for the entry (tenure track and full professorship as civil servants or private employees) and promotion of new researchers (merit recognition process), which ends up multiplying the number of decision-making tasks that only a few influential researchers must perform (Merton, 1968). Regarding the second feature, the accountability of excellence, it is mediated by bureaucracy, a typical characteristic of the Spanish management culture. These criteria emphasise the quantitative evaluation of merits in curricula, except for assessing the qualitative aspects of researchers' work. According to Spanish academia, these procedures are transparent because evaluators are guided by a list of merits and the quantitative value of every merit (this process also makes the peer-review process feasible, because it is basically a mechanical and quantitative process of assigning a score to every merit). Transparency orients researchers' efforts for accumulating the proper merits to achieve accreditation. Finally, the third aspect of the Spanish evaluation system is



characterised by what they call evaluation objectivity, interpreted as a blind assessment process to avoid any kind of discrimination (gender, race, religion, etc., according to Spanish Acts 3/2007¹ and 14/2011²). The evaluation agency itself repeats that gender is not a problem in the evaluation process because evaluators should evaluate only ‘objective criteria’, ignoring personal circumstances (such as motherhood or illness). Contrary to their intention, this objectivity criterion actually harms female careers because lack of merits during their life course is penalised in the evaluation of research careers that defines excellence as lineal and accumulative by adding recognitions (Benschop and Brouns, 2003; González Ramos *et al.*, 2015; González Ramos and Revelles-Benavente, 2017; O’Connor and O’Hagan, 2016).

Mapping the composition of the assessment boards at Spanish evaluation agencies

Since 2001, the Spanish Organic Universities Act 6/2001³ has defined two different career specifications entailing different contract statuses, benefits and prestige. Private sector employees at every university are added to alleviate the state-level expenses of hiring a large volume of civil servants, which are financed by every autonomous community. This gives regional universities the opportunity to invigorate their R&D policies by hiring young private employees. Hence, while we refer to them as ‘private sector’, the truer meaning is hiring at an autonomous community level.

As mentioned, two agencies are responsible for evaluating the research merits of Spanish academics. The National Agency for Quality Assessment and Accreditation (ANECA) grants accreditation to researchers so they can apply for posts at universities as civil servants or private employees. The National Committee for the Evaluation of Research Activities (CNEAI) recognises the accomplishment of research merits for the past 6-year period, involving salary incentives and peer recognition. Although both processes involve meritocracy, they are supported by two different processes, handled by different compositions of committee boards, and have two unique bureaucratic procedures.

ANECA is an autonomous organisation whose aim is to provide external quality assurance for the Spanish higher education system. Since 2002, ANECA has developed several evaluation programmes to conduct the evaluation, certification and accreditation of Spanish universities. It assesses applicants’ qualifications, as a necessary step to access higher positions in Spanish universities. After they obtain this accreditation, researchers can apply for a higher position. CNEAI is part of the Spanish Ministry of Education, Culture and Sports and evaluates the research outcomes of academics for 6-year periods to obtain productivity bonuses. Unlike ANECA, this evaluation is voluntary and automatically rewarded, an incentive to improve salary, peer recognition, participation in influential committee boards and seniority.



ANECA bases its decisions on twofold phases. First, it studies independent reports by two random experts selected by a pool of evaluators who evaluate curricula considering the merits characteristic of each field of knowledge and career stage (from associate to lecturer and full professor). The experts classify candidates by four categories (from A to D) according to their outcomes. Secondly, A and B curricula are discussed by a commission of panel reviewers who eventually decide whether to approve or reject accreditation. CNEAI makes decisions based on the decision of an expert panel (which may ask further experts for technical opinions in the case of a draw). The committee panel grades curricula from 0 to 10, where 6 is the minimum score to obtain a 6-year qualification. People involved in both evaluation agencies design their evaluations based on quantitative guidelines.

According to Acts 3/2007¹ (in a broad sense) and 14/2011² (specifically on science), the composition of both agencies' assessment boards must be gender balanced (40–60%). We will now examine the gender composition of the ANECA and CNEAI assessment boards in the past and current databases in every knowledge field.

ANECA assessment boards

The evaluation panel and the pool of experts have changed over time with regard to structure, number of evaluation committees and gender distribution. A report by UMyC (2014, 104–105) pointed out the male dominance of the ANECA committee board, which may promote changes in gender composition. In 2016, the evaluation panels had more gender-balanced committees compared to the previous compositions of the evaluation panels and pool of experts in 2015.

As shown in Figures 1 and 2, Arts and Humanities and Social and Legal Sciences have unbalanced gender composition on evaluation panels. The gender

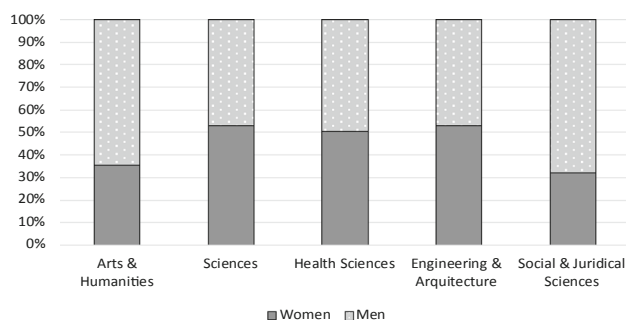


Figure 1. Composition of the evaluation panels.

Source: Public data from ANECA (2015). Retrieved 5 May 2015 from <http://www.aneca.es/Programas-de-evaluacion/ACADEMIA/Comisiones-de-Acreditacion>.

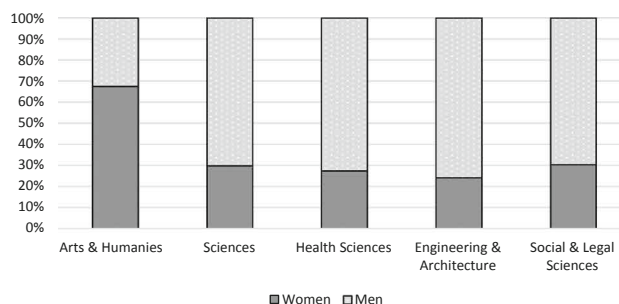


Figure 2. Composition of the pool of experts.

Source: Public data from ANECA (2015). Retrieved 5 May 2015 from <http://www.aneca.es/Programas-de-evaluacion/ACADEMIA/Panel-de-expertos>.

balance of the pool of experts displays highly unbalanced ratios, although Arts and Humanities are gender balanced. They display percentages below the range of 40–60 (from 24 to 30% women, as detailed in Fig. 1). Conversely, women exceed this 40–60 (from 24 to 30% women, as detailed in Fig. 1) balance in Arts and Humanities (70% approximately). The committees with 50–50 balances have female chairs: Science, Engineering and Architecture and Health Sciences. These findings were surprising, especially in the light of the fact that traditionally male-dominated areas have balanced committees.

Due to the revamping of ANECA programmes in 2016, evaluators were changed and the structure modified. There are now 21 areas of knowledge (instead of five) and new names for the peer reviewers' list (without a pool of experts). Regarding gender, as illustrated in Figure 3, the 21 areas are composed of 40–60% except for these fields of knowledge: Molecular and Cellular Biology, Clinical Medicine, Behavioural Sciences, Social Sciences, History and Philosophy, and Philology and Languages. The trends indicate some areas have persistently unbalanced compositions, such as Social Sciences and Humanities (in the Fig. 3 below, History and Philosophy, Philology and Languages), which are feminised areas with respect to the number of female researchers in Spain (these two areas represent the highest percentages, 45–46% in 2014–2015 according to figures from UMyC, 2016, 56).

With regard to chairs, women lead only eight of 21 commissions: Mathematics, Physics, Chemistry, Biomedical Sciences, Electrical and Telecommunication Engineering, Computer Engineering, Architecture and Economics and Business. This distribution would seem to be related to epistemic cultures rather than quantitative factors; they do suggest a male-dominated science structure, since the majority of committees are male chaired.

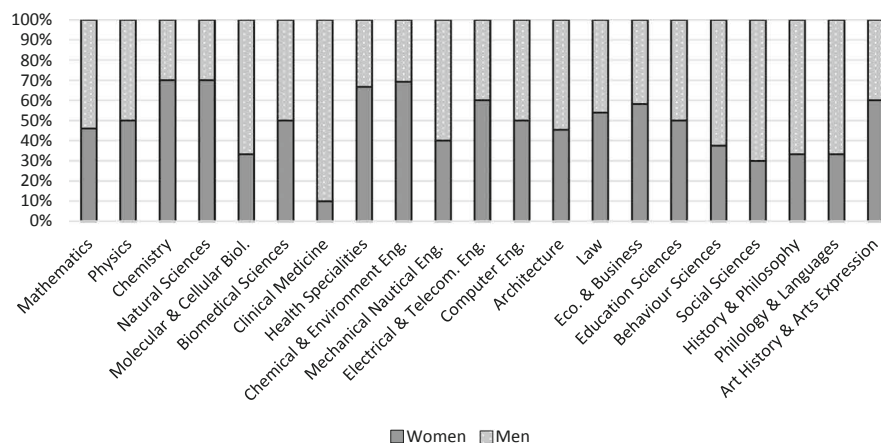


Figure 3. Composition of the evaluation panels (21 areas, from 2016).

Source: Public data from ANECA (2016). Retrieved 25 May 2017 from www.aneca.es/content/download/13428/166407/file/academia_3.0_comisiones_170426.pdf (<http://www.aneca.es/Programas-de-evaluacion/ACADEMIA/Documentos-del-programa>).

Composition of the CNEAI evaluation panel

CNEAI assessment boards evolved differently across knowledge fields and periods of time (public data available from 2003 to 2014, in some fields only some years are available). There are two clearly different groups regarding gender compositions: male-dominated committees, and female-dominated or gender-balanced committees. The first group, male dominated across time, is bigger (9 fields of knowledge) in comparison with the female-dominated committees (6 fields of knowledge).

As depicted in Figure 4, ten committees show an evolution mainly dominated by men where composition was unbalanced. Since 2011, the year the Spanish Science and Technology Act was implemented, in Mechanical and Production Technology only 2011 and 2012 were balanced, and 2013–2014 was somewhat unbalanced; in ICT and Electrical Engineering only 2013 was balanced; Biomedical Sciences is balanced only in 2011 (and previously 2006–2007), and unexpectedly, Economic and Business Sciences reversed its balanced trend in 2011 through 2014.

The second group has been composed of six female-dominated or 40–60% balanced committees since 2011. Data trends reveal that the Spanish Act caused changes to the gender-balanced composition of CNEAI evaluation committees. Only two areas were close from this year, although still not 40–60% composed, Philosophy, Philology and Languages, and Mathematics and Physics. The distribution of these six fields of knowledge is displayed in Figure 5.

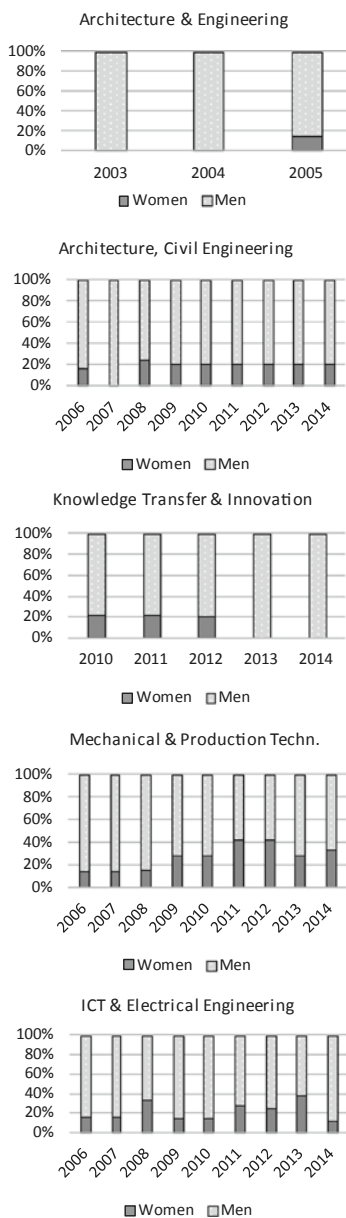


Figure 4. CNEAI male-dominated committees.
Source: Public data from CNEAI (2016). Retrieved 8 April 2016 from <http://www.mecd.gob.es/ministerio-mecd/organizacion/organismos/cnei/comites-asesores.html>.



Ana M. González Ramos *et al.*
The Spanish Equality Law and the Gender Balance

826

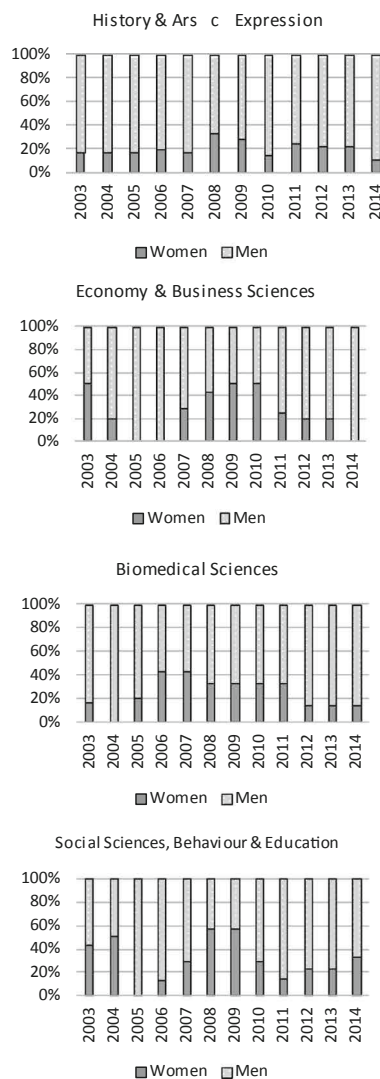


Figure 4. continued

However, there is not a coherent trend for the gender balance of evaluation committees, as we see disparities between both agencies' compositions and persistent gender gaps in some fields such as Social Sciences, Humanities and Medicine.

Higher Education Policy 2020 33

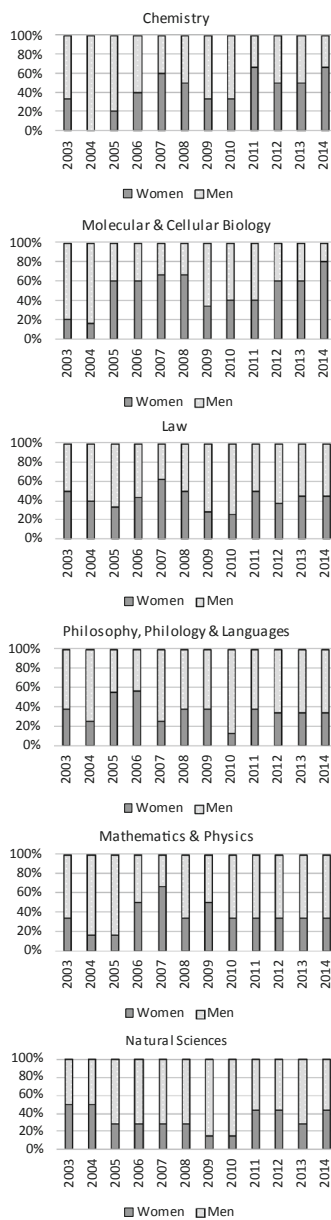


Figure 5. CNEAI female-dominated or gender-balanced committees.

Source: Public data from CNEAI (2016). Retrieved 8 April 2016 from <http://www.mecd.gob.es/ministerio-mecd/organizacion/organismos/cnei/comites-asesores.html>.



After this analysis, intermediate variables such as the effects of the size of the discipline area (van den Brink *et al.*, 2006) and the influence of epistemic cultures (Knorr Cetina, 1999) have been examined in order to address the influence on gender-balanced committees across areas and agencies. Findings show that the largest disciplines do not always present gender unbalanced committees and the organisation of epistemic cultures emerges as a possible correlation, although it needs further exploration. In summary, the Spanish Act does seem to set the trend in general terms across all broad areas, but it highlights the importance of regulation and surveillance by gender equality gatekeepers since some agencies adopt 40–60% after women's organisations publish report.

Discussion of the Impact of Applying Quotas to Evaluation Boards on Female Progression

Despite the implementation of national regulations based on the European scheme (Bustelo, 2004; Bustelo and Lombardo, 2007), the introduction of quotas for balancing the presence of women on assessment boards is a controversial issue as shown by the literature and empirical data. Firstly, there is not a clear correlation between gender-balanced committees and women's career progression (Marsh *et al.*, 2009; Ceci and Williams, 2011; Zinovyeva and Bagues, 2011; Bagues *et al.*, 2015). According to the Ministry of Education, Culture and Sports (MECD, 2016a) in Spain, there are twice as many men as women in every field of knowledge applying for a full professor position (5549 men and 2663 women, respectively). Moreover, the success rates of men and women stand at almost the same percentage (differences by sex are some 1–3 points and women surpass men in some STEM areas, where ANECA committee boards were male dominated prior to these data and later on became gender balanced). Women seem to submit their curricula to a lesser extent than men for accreditation for the full professor category (depending on areas, female percentages reach 33–38% of total applicants in contrast to 62–67% of men; the lowest percentage of female submissions corresponds to Architecture and Engineering, at 22% of total applicants, where committee boards are male dominated over the entire period of time and are also chaired by men).

Secondly, as Lewis and Simpson (2012) argue, gender equality is not a simple question of numerical advantage, since masculine values and gender stereotypes remain in decision-making and organisational practices in academia. Tracking researchers' performance during the 6-year accreditation periods (MECD, 2016b), women and men received a similar number of merit accreditations, and women even slightly outnumber men in some fields of knowledge, except for Arts and Humanities (these committees are male balanced in the CNEAI). The number of men and women submitting their curricula for this accreditation is unbalanced (64% men, 36% women among civil servants, and 53.5% men and 46.5% women



among private sector personnel). Gender success rate is slightly higher in favour of male civil servants (91.2% men, 88.4% women), but gender balanced among private sector employees (84.6% men, 84.7% women). This difference between civil servants and private sector employees is probably related to cohorts and the scientific culture of both groups of researchers. Since 2002, the success rates of tenure track have become gender balanced, which is very likely related to the cultural transformation of Spanish academia.

Our previous hypothesis suggests that quotas on committee boards may make a difference, but an unsteady gender composition on these committees refutes this assertion in the Spanish R&D system. According to CNEAI accreditation, private sector personnel's worst success ratio for women is in Architecture and Engineering, ICT and Electronic Engineering, Knowledge Transfer (all male dominated) and Mathematics and Physics (gender balanced). Therefore, gender mainstreaming does not seem to escape entirely from gendered biases in academia (Benschop and Verloo, 2006) and leads our research to postulate the influence of intermediate variables unrelated to the sex of evaluators' influence regarding women and men candidates, but instead involving the structure and operating modes of these two agencies, and epistemic cultures (Porter and Rossini, 1985; Knorr Cetina, 1999; van den Brink *et al.*, 2006).

An alternative explanation is related to the procedures in evaluation processes and their influence on women's decisions. As previously mentioned, the CNEAI evaluation process is voluntary with automatic effects on researchers' curricula, whereas ANECA is a multi-step procedure where candidates must first obtain the accreditation and later pass an oral examination. Thus, ANECA accreditation is not enough to qualify candidates for a professorship, and even the job vacancy depends on a national appointment decided upon according to collegiate decisions in universities and epistemic cultures.

Faced with this complexity, women may decide to submit for the recognition of 6-year accreditation, which is a single evaluation, and feel discouraged from submitting for the full track in ANECA that requires a longer and more uncertain process. This operational mode is a highly complex process, while CNEAI is a formal process and simple to apply. González Ramos *et al.* (2015) reveal that collegiate decisions disfavour women in research, while individual processes of achieving merits are easier for women.

Final Remarks

This article addresses the impact of gender policy in research to increase the number of women in top positions. Similarities in European and Spanish legislation provide a broad contextualisation for enlivening the discussion on the effectiveness of gender policy and positive actions, such as gender quotas in the composition of



committee boards. Due to the claims of women's associations and the framework of European Union legislation and recommendations, at the turn of the new century the Spanish government launched progressive legislation on gender equality. European influence and pressures from women's organisations (such as AMIT and UMyC) are clearly responsible for these changes. However, the economic crisis and the conservative government have put a stop to these positive measures, primarily related to budget allocations to comply with only mandatory items. However, only fulfilling compulsory legislation should have improved women's progression in research (since women exceed men in the earliest stages of research careers). The gender gap is actually shortened mid-career, although they are still a minority in the full professor category and in traditionally male-dominated areas.

Regarding the focus of this article, we describe and analyse the composition of two evaluation agencies (ANECA and CNEAI) regarding the procedures and gender composition of their committee boards. The aims of this analysis address the extent to which quotas have actually influenced female careers. We critically analyse the mainstays of peer-review processes, the accountability of excellence based on scrutinising merits, and objectivity by disregarding personal circumstances just because they are supposedly gender-blind assessments. The figures on gender balance (40–60% as required by law) on committee boards reveal satisfactory fulfilment and unbiased proportions across several years and several subfields of knowledge, particularly since the implementation of the Spanish Science and Technology Act in 2011, although between five areas out of 21 areas at ANECA and 11 of 15 areas at CNEAI are still male dominated (below 40–60 composition). Unexpectedly, in general male-dominated areas are gender balanced and traditionally female-dominated areas are underrepresented by women. Thus, these results are not due to lack of women in these knowledge fields and suggest the influence of intermediate variables related to cultural and structural environments in academia (Benschop and Brouns, 2003). Even if more women sit on evaluation committees, there are still similar percentages of female success rates. However, incorporating senior women is required to recognise their seniority in these influential positions and to counteract the image of male tribunals and old boy networks.

Further, evidence reveals low female participation and a small number of female applications, which cause gender balance deviations in accreditations, and quite balanced positive accreditations for women in tenure track private employment contracts, unlike in civil servant positions. We have suggested that women have low expectations for full professor accreditation because of the complexity of the promotion processes, and collegiate gatekeeping may also discourage females from deciding to apply. Also, findings point out generational effects and more competitiveness in Spanish R&D, since female researchers who have been enrolled in academia during the last 15 years with employment contracts show quite good results.



In summary, despite open and transparent processes being implemented in Spanish academia, gendered institutions may keep women in sticky floor positions. Secondly, quotas for committees do not necessarily yield a positive impact on women's promotion because of the male environment that influences female and male researchers at every level of academia. Human agency clearly depends on micropolitics, epistemological cultures and the lack of feminist or gender stances among old boy networks.

Acknowledgements

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Notes

- 1 Ley Orgánica 3/2007, de 22 de marzo, para la igualdad efectiva de mujeres y hombres [Organic Act 3/2007 of March 22, on effective equality between women and men], 71, *Boletín Oficial del Estado*, § 6115 (2007).
- 2 Ley 14/2011, de 1 de junio, de la Ciencia, la Tecnología y la Innovación. [Science, Technology and Innovation Act 14/2011 of 1 June], 131, *Boletín Oficial del Estado*, 9617 (2011).
- 3 Ley Orgánica 6/2001, de 21 de diciembre, de Universidades. [Organic Universities Act 6/2001 of December 21], 307, *Boletín Oficial del Estado*, § 24515 (2001).

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Ana M. González Ramos *et al.*
The Spanish Equality Law and the Gender Balance

832

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ANNEX II.
**“ACADEMIA ACELERADA,
SLOW SCIENCE Y
ÉTICA DEL CUIDADO”**

Conesa, E. [Ester]. (2018). **Academia acelerada, slow science y ética del cuidado**. In A. M. [Ana M] González, *Mujeres en la ciencia contemporánea. La aguja y el camello* (pp. 175–207). Icaria Editorial.

VI. ACADEMIA ACELERADA, *SLOW SCIENCE* Y ÉTICA DEL CUIDADO

Ester Conesa Carpintero

En 1990 la académica Barbara Adam afirmó que la conceptualización del tiempo es importante en tanto que construcción social relativa a nuestra vida diaria, nuestra participación social, nuestra construcción de identidad, nuestra interacción con todo aquello que hemos creado y nuestro planteamiento sobre el futuro. El impacto de la dimensión temporal en la masa trabajadora ha ido apareciendo en la literatura y las políticas públicas cada vez con mayor frecuencia y preocupación, a la vista de los cambios en los estilos de trabajo y su incidencia en la vida cotidiana. En el mundo académico se ha estudiado de forma intermitente a lo largo de las últimas décadas, reforzándose sobre todo en los últimos años, debido a la extensión e intensidad de los efectos del neoliberalismo académico.

La academia acelerada

A partir de la primera década del presente siglo en Europa, las universidades y centros de investigación implementan un modelo de gestión propio del sector empresarial basado en la aplicación de medidas privadas a las instituciones públicas. Ello ha afectado tanto en las instituciones, como a la masa trabajadora y a los clientes (es decir, a los estudiantes). El «neogerencialismo» (también denominado «nuevo gerencialismo» y «nueva gestión pública») se fundamenta en una medición y evaluación constante del trabajo académico a través de indicadores de productividad y de calidad

175

—*audit culture*—, ello conlleva un aumento de la demanda de trabajo monitorizado y pautado.

El «neogerencialismo» es un instrumento del neoliberalismo académico que pretende empujar a las instituciones académicas hacia el éxito, incrementando el prestigio y excelencia de las organizaciones en un modelo de competición internacional. Ello tiene un coste sobre el conjunto de trabajadores académicos, puesto que incrementa la presión institucional dirigida a obtener mayores resultados, dando lugar a una aceleración del ritmo de trabajo. Este estilo de trabajo genera una cultura de las largas horas, que produce extenuación, tensión y falta de descanso. La responsabilidad sobre las tareas no se termina tras las largas jornadas laborales sino que se extiende, invadiendo las horas de descanso y desconexión y creando un ritmo de trabajo trepidante, una intensificación de la responsabilidad por las obligaciones y la competencia extrema. Esta cultura provoca estrés y diversos malestares que afectan a la salud física y psicológica del personal académico.

Las condiciones de trabajo tienen un efecto negativo igualmente detectable en las personas y en el trabajo realizado. La intensificación del ritmo de trabajo en el mismo espacio de tiempo reduce la capacidad de llevar a cabo un trabajo académico reflexivo, de lectura profunda y debate, y de calidad en los resultados. Esta situación amenaza la libertad y desinterés del trabajo científico (Merton, 1949), lo que genera alarma en la población académica y diferentes respuestas. Una de ellas propone un giro total hacia la *slow science*, un ritmo más pausado que afecte positivamente a la calidad del trabajo realizado y a la calidad de vida del personal académico. Sin embargo, incluso este planteamiento ha sido criticado poniendo de relieve la complejidad del cambio social y del impacto que tendrá en cada colectivo de personas que conforman la academia, sobre todo, en relación a sus oportunidades dentro de su estructura de poder. La influencia del «neogerencialismo» académico en los ritmos de trabajo acelerados está atravesada por las relaciones de poder de una institución elitista y gestionada desde un modelo neoliberal. Algunas personas están en mayor medida involucradas en el cumplimiento de este reordenamiento temporal, según su posición en la estructura social, dependiendo de la obligación de cumplir con los regímenes de evaluación

exigidos por la academia (Felt, 2017) que, como han señalado Conesa y González (2018), están también sujetos a su situación de precariedad laboral en las organizaciones. Por lo que, la toma de decisión respecto a las trayectorias académicas y a los contenidos y calidad del conocimiento científico está condicionada por la aceleración del trabajo de investigación (Fochler, Felt y Müller, 2016; Müller, 2014).

La reestructuración del modelo global económico basado en la economía del conocimiento no está exenta de las relaciones de género y de otras variables sociales de relaciones de poder atravesadas por el género y otras variables sociales. Este modelo remite a un ideal académico autónomo y competitivo, donde las personas desarrollan un trabajo acelerado que pueden llevar a cabo sin interferencia de otras responsabilidades (como los personales y familiares porque están cubiertos o se eluden). En dicho modelo hegemónico masculino, los cuidados y la sostenibilidad de la vida son ignorados, generando otras situaciones de desigualdad.

Este capítulo describirá, en primer lugar, la academia actual caracterizada por el «neogerencialismo» y la austeridad económica. En segundo lugar, las respuestas vinculadas a la *slow science* que han aparecido como críticas al modelo actual y que reflexionan sobre el tiempo y el efecto del trabajo acelerado en nuestras vidas. En tercer lugar, se expondrán las críticas que ha recibido el concepto *slow science* y los enfoques alimentados por una perspectiva de género. Finalmente, se expondrá el modelo inspirado por la ética del cuidado atendiendo a sus aportaciones como marco analítico y político.

Neogerencialismo y austeridad

En las últimas décadas, las instituciones académicas han incorporado transformaciones significativas en la gestión de los recursos humanos, aunque han sido implementados en diverso grado en las distintas áreas geográficas y territorios nacionales. Estos cambios han afectado tanto a la cultura académica como a las prácticas, trayectorias y vidas del personal académico. Un abundante cuerpo de conocimiento se ha desarrollado entorno al análisis del «neogerencialismo» que se refiere a los cambios producidos a

nivel organizacional relativos a la gestión del personal académico y a la gestión de la calidad científica (Deem, 2001, 2005; Ball, 2015). Puesto que el modelo incorpora características del capitalismo, la literatura también ha denominado este fenómeno como capitalismo académico. Este concepto remite a la idea de que la Academia se comporta como si fuera un mercado y sus agentes (tanto las instituciones como el personal académico) compiten por los recursos económicos (becas, proyecto, contratos externos, producción de patentes, colaboración universidad-empresa, creación de empresas *spin-off*, atracción de estudiantes y personal de investigación) tanto a nivel institucional como internacional (Slaughter y Leslie, 2001; Slaughter y Rhoades, 2004; Conesa y González, 2018).

El grupo de expertos reunidos, en la década de los 80, para definir la Agenda de Lisboa tuvo un papel relevante en la introducción de elementos del modelo neogerencialista (Slaughter y Cantwell, 2012). La Agenda de Lisboa pretendía convertir a la Unión Europea en «la economía del conocimiento más competitiva y dinámica del mundo», y las universidades debían ser el motor de cambio (Parlamento Europeo, 2000). Así, la Agenda de Lisboa pone las bases de una competición global por los recursos y la búsqueda de resultados contables y comercializables. Las universidades y centros de investigación se vieron envueltas (si no lo estaban ya) en un contexto de competición por una posición en los *rankings* de prestigio internacionales, contruidos según indicadores estandarizados tales como el número de publicaciones consideradas de alto impacto, el dinero atraído, los alumnos matriculados y graduados, las patentes y licencias registradas, etcétera.

El término «neogerencialismo» se refiere a las prácticas y técnicas propias de la gestión del sector privado aplicadas a las instituciones públicas. El objetivo de este modelo organizativo consiste en la adopción de prácticas dirigidas a la obtención de una mayor eficacia y eficiencia para llegar a la excelencia (Deem, 2001). El nuevo gerencialismo hace referencia no solo a las prácticas sino también a la configuración ideológica detrás de este modelo de gestión, es decir, a los valores y condiciones socioeconómicas que generan (Deem y Brehony, 2005). Así, el «neogerencialismo» se ha considerado «el brazo organizacional

del neoliberalismo» (Lynch, 2014:1), pero su extensión ha sido desigual en el contexto internacional, presenta variaciones locales, de modo que son más bien un conjunto de prácticas que migran y mutan según el entorno (Ball, 2015; Ong, 2007; Lynch, 2014; Saura y Muñoz, 2016). Siguiendo a Ball (2015: 1) y a Saura y Muñoz (2016), habría que afirmar que son prácticas localizadas en «el aquí», y que cada institución académica instaura según un «pequeño neoliberalismo».

El neogerencialismo se caracteriza por la cultura de la auditoría (*audit*) y de la rendición de cuentas (*accountability*), es decir, la continua contabilización y monitoreo de los resultados en productos cuantificables (medibles). La fórmula para asegurar el éxito es la competitividad y «la excelencia», tanto de las instituciones académicas como de las trayectorias profesionales. Estos principios suponen idealizar el proceso de obtención de resultados de calidad en la producción de conocimientos y provocar tensiones en las trayectorias de las personas investigadoras (Bagilhole y Goode, 2001; Scully, 2002; González Ramos y Revelles-Benavente, 2017). El sistema que descansa sobre procesos de evaluación cuantitativos supuestamente objetivos, entendidos como una medición neutral, deja en suspenso la eficiencia y equidad del sistema. Sin embargo, su aplicación en las universidades y centros de investigación ha provocado una creciente presión relacionada con la consecución de indicadores de resultados tanto referidos a la docencia, como a la responsabilidad administrativa, de investigación y de colaboración con las empresas. La investigación ha experimentado una transformación significativa, ya que representa el valor y prestigio en las que se sustentan el instituciones de educación superior.

La excelencia científica es evaluada en base al número de artículos publicados y al factor de impacto en las revistas científicas (indicador que resulta del cálculo del número de citas anuales recibidas por las revistas, y que se entiende como la «calidad» de la misma). El sistema de valoración más habitual y prestigioso en las ciencias positivas se basa en las citas recibidas por las revistas registradas en la base de datos *Journal Citation Reports* (JCR), propiedad de la multinacional Thomson Reuters. Puesto que su origen proviene del ámbito de las ciencias naturales y las ciencias puras, y a pesar de las actualizaciones que han incorporado otras

revistas pertenecientes al ámbito de las ciencias humanas y sociales, su modelo de evaluación no encaja suficientemente bien en otras áreas de conocimiento, con tradiciones de publicaciones diferentes. A pesar de las críticas recibidas, la misma lógica se aplica a la investigación que a la evaluación del prestigio de una institución o al éxito de las trayectorias del personal de investigación, por lo que también influye en sus opciones de promoción en la Academia.

Siguiendo la Agenda de Lisboa, los sistemas contables adoptados por las universidades y centros de investigación cumplen la misión de «modernizar» las estructuras y convertir las unidades de investigación en excelentes. Sin embargo, suponen una gestión de las trayectorias profesionales fundamentadas en principios individualistas, de mayor responsabilidad sobre los resultados, que provocan una mayor presión en la consecución de logros. Para lograrlo, el personal de investigación debe aumentar sus horas de trabajo para conseguir un mayor número de publicaciones, mejores evaluaciones del alumnado sobre su actividad docente, mayor cuantía económica de los proyectos competitivos, etc. Es decir, debe invertir más tiempo normalizando las horas de trabajo continuadas (*long hours culture*). El sistema ha impuesto un proceso de evaluación y constante monitoreo externo (*audit culture*) que le aboca a la autovigilancia y control de los éxitos alcanzados.

Las políticas neoliberales se caracterizan por la desregulación laboral (Slaughter y Cantwell, 2012; Hey, 2001; Henkel, 1997) que, junto a las medidas de austeridad derivadas de la crisis económica de las últimas décadas, han deteriorado gravemente las condiciones laborales del personal de investigación. En diversos países, entre los que se encuentra España, los sistemas de promoción profesional se han congelado, paralizando la tasa de reposición del profesorado universitario, afectado por una elevada tasa de envejecimiento. Asimismo, las condiciones laborales han empeorado a consecuencia de la extensión de contrataciones de corta duración y a tiempo parcial. La precariedad laboral y la autorresponsabilidad de las propias trayectorias de investigación han normalizado la concatenación de contratos postdoctorales, las figuras interinas y, en definitiva, la incertidumbre laboral (Deem, 1998; Henkel, 1997; EUA, 2015).

La aceleración del ritmo del trabajo académico comporta dificultades relacionadas, en primer lugar, con la capacidad de disponer y gestionar el tiempo necesario para realizar una investigación y una docencia de calidad. Consecuentemente, en segundo lugar, las tensiones derivadas de conciliar la vida personal y profesional que provocan malestares en los cuerpos y la psique del personal de investigación -exacerbados por la cuantificación, el automonitoreo, la inestabilidad y la precariedad laboral-. La situación es aún más compleja en el caso de las mujeres, cuyos roles aún se sitúan en los márgenes de la Academia (Rossiter, 1993; Van den Brink y Benschop, 2012), anclados en la división del trabajo sexual (Folbre y Bittman, 2004; Tornø, 2005; Durán, 2007). Estos problemas son el origen de los planeamientos críticos que la Academia ha dado para responder a una situación preocupante que afecta a mujeres y hombres.

Algunas respuestas a la aceleración de la academia: la *Slow Science*

El personal de investigación en categorías sénior en la Academia ha sido quien, en primer lugar, ha criticado la aceleración del ritmo académico y ha manifestado la necesidad de adoptar otros modelos de trabajo. Con ese objetivo, se han publicado manifiestos, cartas en revistas científicas de referencia y artículos académicos. Uno de los primeros artículos donde se menciona la *slow science* fue publicado por Eugene Garfield en 1990. No deja de sorprender puesto que es el fundador del *Institute for Scientific Information* (ISI) de donde surge la creación del sistema de evaluación del factor de impacto de las revistas científicas. Puede que para contrarrestar los efectos de la aplicación de este sistema de indexación que más tarde llevaría a la intensificación del ritmo de trabajo del personal de investigación, Garfield escribiera un ensayo titulado «*Fast Science vs. Slow Science, or slow and steady wins the race*», en el que criticó el sistema de búsqueda de financiación y el impacto causado en el cambio de líneas de investigación más interesantes (*hot topics*) para la comunidad investigadora o de moda en los medios de comunicación. Garfield declara que frente a los raros momentos de «eureka», la ciencia

requiere tiempo y reflexión, «los avances científicos dependen de una investigación a largo plazo, persistente y metódica» (1991: 380). Así, el autor dedica la mayor parte de este manuscrito a reclamar el tiempo y los recursos necesarios para realizar una investigación cuidadosa y orientada a los objetivos desinteresados de la ciencia, sin presiones exteriores.

Hay que esperar a los primeros años del presente siglo para encontrar opiniones más contundentes y declaraciones más explícitas que critican los procesos apuntados por Garfield solo para algunas áreas de investigación, ahora aplicables a todas ellas. A continuación, siguiendo un orden cronológico, se detallarán los principales manifiestos e ideas publicadas en esta dirección.

Slow science y deséxcellance

En 2006, Lisa Alleva escribe una carta en la prestigiosa revista *Nature* en la que reclama una *slow science* para «saborear las recompensas de una ciencia lenta». La idea proviene del movimiento *slow food* que preconiza un modelo de alimentación cuidadoso con el medio ambiente y satisfactorio para los seres humanos. En dicha carta, Alleva pone de manifiesto el deterioro de las condiciones laborales debido a la *long hours culture* que son requeridas para lograr elevadas expectativas en la academia. Alleva denuncia la situación precaria de las personas y las resistencias que pueden provocar:

Quizá no estaré aquí en seis meses, doce meses o dos años, pero no voy a trabajar 100 horas a la semana para intentar alcanzar los objetivos escurridizos de la beca que me emplea en mi laboratorio, quizá incluso estando fija. (2006: 271)

Otro hito interesante en este movimiento es el manifiesto publicado en 2010 por un grupo formado por el personal de investigación, académicos, editores y otros simpatizantes. En *The Slow Science Manifesto* se reclama una ciencia de calidad, y no hace referencia a las condiciones en las que el personal académico trabaja o desarrolla la actividad científica. Además, su declaración se posiciona a favor del modelo actual de ciencia («[W]e do

say *yes* to the accelerated science of the early 21st century»),¹ y del rápido sistema de publicaciones que hace avanzar la ciencia; pero reclama la necesidad de tiempo para pensar, para asimilar los conocimientos e incluso para malinterpretarse. Empleando un discurso fuertemente elitista, el manifiesto concluye que ellos son requisitos relevantes para fortalecer la «torre de marfil» constituida por la comunidad científica formada por investigadores básicos y «cerebros selectos» (2010: 2).

El artículo de Olivier P. Gosselain titulado: «*Slow Science. La Désexcellence*» (2011) presenta una argumentación mucho más elaborada y una crítica más compleja del sistema científico publicado en la revista francófona *Uzance*. En dicho artículo se pone en cuestión la idea de la excelencia que, según el autor, conduce al egoísmo, al cálculo, a la mediocridad y a las lógicas empresariales que «gobiernan» la universidad. Así, señala:

El enorme desfase que se ha instalado entre una concepción burocrática de la investigación, fundada sobre los preceptos de la econometría y de la gestión de empresas, y su práctica concreta fundada sobre el compromiso mutuo de los investigadores, que se esfuerzan ante todo por hacer honestamente su trabajo. (2011: 130)

En oposición a esta lógica cada vez más instaurada en las universidades occidentales, Gosselain defiende los principios de creatividad y convivencia característicos de los movimientos *slow* aplicados a diferentes aspectos de la vida contemporánea. Para él, este movimiento también se inspira en la figura del artesano, y en los movimientos comunitarios, a partir de los cuales se construye una ciencia honesta y de calidad, lejos de las ideas de competitividad y productividad. Posteriormente, en 2014, *La charte de la désexcellence*, Gosselain junto a un colectivo de académicos de la Universidad Libre de Bruselas, abogará por la *slow science* subrayando la precariedad, la competición excesiva y la estandarización de la evaluación. Estas características afectan negativamente al personal de investigación, en especial, porque

1. «Decimos sí a la ciencia acelerada de principios del siglo XXI».

provoca desmotivación, baja autoestima y deterioro de la calidad del trabajo. Para contrarrestarla, se hace un llamamiento al compromiso con la docencia, la investigación y el servicio a la comunidad/sociedad.

En el año 2011, la Universidad Libre de Bruselas invita a la académica Isabelle Stengers a que pronuncie la conferencia inaugural, que ella titula: *Another Science is posible! A plea for slow science*. Su declaración denuncia las condiciones de la producción de conocimiento, el impacto negativo de un modelo científico basado, o al menos mediado, por los intereses de la industria y la competitividad neoliberal, pero pretendidamente objetivo que ignora las preocupaciones sociales más urgentes (por ejemplo, la sostenibilidad ambiental) y ajeno a las complejidades de la contemporaneidad:

La simbiosis entre la *fast science* y la industria ha estado privilegiando un conocimiento y unas estrategias desarraigadas y desarraigantes, abstraídas de las complicaciones desordenadas de este mundo [...]. Yo caracterizaría entonces la *slow science* como la exigente/desafiante operación que reclama el arte de lidiar con, y aprender de lo que los científicos demasiado a menudo consideran embrollado, esto es, lo que escapa a las categorías generales llamadas objetivas. (2011: 10)

Isabelle Stengers reivindica otro modo de hacer ciencia de manera comprometida, para salir del estado de «enfermedad» de un entorno que se ha aceptado sin demasiadas resistencias, centrado en el imperativo de la competición y la evaluación cuantitativa propia de los mercados, que desarma al personal de investigación de la fuerza necesaria para defender una ciencia comprometida. Por el contrario, derivada en la aceptación del modelo *fast science* o *accelerated academy*.

Desde otro punto de vista, Jean-François Lutz (2012) se posiciona acerca de la necesidad de propiciar una ciencia lenta, poniendo el acento en la calidad del conocimiento científico y las escasas oportunidades del personal de investigación más joven en un ambiente de competición y con una presión más elevada que nunca. Lutz subraya el deterioro de la calidad científica en

los crecientes casos de «duplicación de las publicaciones, plagio, resultados irreproducibles y fraude» (2012: 588). En la cultura del publica-o-perece (*publish-or-perish culture*) no hay tiempo suficiente para leer la enorme cantidad de literatura publicada en una especialidad, y escribir resultados de investigación más pausadamente y con mayor grado de madurez que propicien el avance del conocimiento científico.

Yvonne Hartman y Sandy Darab (2012) hace un repaso sobre otras cuestiones fundamentales como la gobernanza, la cambiante noción del tiempo dependiente del contexto histórico y la corporatización de la universidad. Las autoras aluden a la intensificación de la carga docente en una universidad y a las consecuencias de una pedagogía acelerada (*speedy pedagogy*) basándose en un estudio de caso de la academia australiana. El nuevo estilo de trabajo conlleva un aprendizaje caracterizado por un descenso del debate crítico, una disminución del tiempo para pensar, la aceleración del ritmo de las entregas de los trabajos escolares y el declive de la calidad en los contenidos. Prácticas que desempoderan a ambos, profesorado y estudiantes, ya que es a través de la educación que se llega a una cultura democrática, asociada a una participación rica en la vida social. Sobre el movimiento *slow*, las autoras consideran que es «un concepto contra-hegemónico que golpea el núcleo de la racionalidad neoliberal» (Hartman y Darab, 2012: 57) y ligado a una pedagogía *slow*, concepto referido a la educación ambiental descrito por Payne y Wattchow (2009).

En una línea similar, Maggie Berg y Barbara Seeber (2013) se centran en la reivindicación del *slow profesor*. La aceleración del ritmo académico, provocada por considerar a la universidades como corporaciones y la concreción de las medidas de tiempo utilizando medidas econométricas, ha traído consigo una pérdida de bienestar de los docentes y los discentes. El estrés y la presión han afectado a la docencia, al aprendizaje y a la capacidad de emprender una reflexión en profundidad. Basándose en las obras de *In Praise of Slow* (Honoré, 2004) y *Slow Living* (Parkins y Craig, 2006), las autoras consideran que una perspectiva influenciada por el movimiento *slow* tiene el potencial de alterar el *ethos* empresarial y la aceleración de los tiempos en la Academia.

Aproximaciones críticas al concepto de *Slow Science*

El concepto de *slow science* ha sido criticado por la comunidad académica. La revista *Forum Qualitative Social Research* ha dedicado una sección especial a este tema: la *The Slow University*. Luke Martell ha examinado los procesos económicos y sociales de la aceleración de la Academia. En unos de los pasajes, Martell precisa: «No es la velocidad sino el control sobre la velocidad. Esta diferenciación es relevante porque cambia la cuestión crucial de la autodeterminación del *slow* al ser capaz de avanzar hacia el *slow*» (2014: 40). A partir de este punto, el autor advierte del peligro que conlleva considerar la *slow science* únicamente tomando en consideración el movimiento *slow food* el cual, al fin y al cabo, ha derivado hacia un producto de consumo destinado a quienes se lo pueden permitir. Además, la lentitud no es posible cuando existen grandes y complejas redes, estructuras de opresión vinculadas a los procesos económicos y globales. Su propuesta se focaliza en un modelo de universidad realmente pública, democrática e inclusiva, base para una *slow university*.

En la misma sección, Heather Mendick (2014) aborda las tensiones entre el *slow*, el género y la clase social. En primer lugar, aborda críticamente el artículo de Hartman y Darab (2012), cuestiona el hecho de que *slow* signifique «de mayor y mejor calidad» puesto que simplemente se basa en el nuevo principio de eficiencia que refuerza la racionalidad neoliberal. Mendick se pregunta quién puede ralentizar el ritmo de trabajo en la academia, qué personas tienen las oportunidades de hacerlo, qué tipo de universidades son, qué contratos, qué responsabilidades tienen los individuos y cómo influye en el contexto donde se practica. Como Martell, también subraya que el movimiento *slow* está reservado a una clase media global, construida en relación a los «otros» que trabajan en la academia con contratos de cero horas, sin estabilidad ni opciones de mejora. Añade:

Hay que ser cautelosos a la hora de promover el movimiento *slow* únicamente entre aquellos que están en los puestos más altos de la jerarquía, de manera que solo posibilitaría el incremento de la velocidad o la devaluación de los que están más abajo. (2014: 9 [27])

Una intervención a favor del movimiento *slow* en la Academia, dice Mendick, debe tener en cuenta que incluso los de abajo, con contratos precarios y mayor diversidad de género, raza y clase social, no pueden compararse con aquellos que realizan el trabajo devaluado de la clase social baja, fuera de la Academia.

En la misma sección de la revista, Maggie O'Neill (2014) argumenta a favor del concepto *slow* como «catalizador para llevar a cabo conversaciones interdisciplinarias y una investigación crítica que pueda provocar un pensamiento profundo y crítico» (2014: 16). Según O'Neill, la *fast academy* no solo provoca efectos negativos en la salud del personal académico, sino que «reduce las habilidades del análisis crítico en medio de la creciente burocratización y cultura de la evaluación» (2014: 16). Por el contrario, es necesario disponer de tiempo para crear espacios para la reflexión, la interpretación y el diálogo: «la presión interfiere en la necesidad de crear un espacio mental y de pensamiento simbólico abstracto, necesario para confrontar la situación» (O'Neill, 2014: 39).

Por su parte, Ruth Müller (2014) afirma que el término *slow science* también es utilizado por Donna Haraway y otras académicas «como un posible antídoto al frenesí de velocidad de la academia contemporánea» (2014: 2). Entiende que el concepto puede referirse a muchos conceptos al mismo tiempo, los cuales aportan fortaleza y debilidad, pero que en el contexto del trabajo académico funciona como un atajo «para imaginarios contraculturales en unos mundos académicos apresurados y metrificados» (2014: 18). Para Müller, *slow science* puede ser un concepto que permite «reunir y poner en común las experiencias de muchos académicos provenientes de diferentes contextos disciplinarios para desarrollar modelos de resistencia y cambios» (2014: 18).

Filip Vostal (2015) argumenta que no todos los académicos experimentan la aceleración de una forma negativa, y que la «lentitud (*slowness*) es raramente reconocida como un principio que sirve para todo» (2015: 309). En coautoría con Mark Carrigan (2016), estos dos autores señalan que las iniciativas de la *slow science* son convenientes únicamente para aquellas que pueden disminuir el ritmo de su actividad académica, de manera independiente, y sin impacto sobre las relaciones de poder en las que están situadas en la Academia. Estos autores defienden que cuanto

más concentradas y jerárquicas sean las relaciones de poder, asociadas a «variables relevantes como la edad, el género, el estatus académico, la disciplina, la situación familiar, [o] la disposición psicológica», más difícil será adoptar un estilo de trabajo *slow* (Carrigan y Vostal, 2016).

Estudios relacionados con el tiempo, la aceleración y Academia

En 2003, Oili-Helena Ylijoki y Hans Mäntylä escriben un inspirador análisis, basado en entrevistas a un grupo de académicos sobre las consecuencias de las fuertes presiones de tiempo encontradas en su trabajo diario. En este artículo examinan las diferentes perspectivas temporales experimentadas por el personal académico, concluyendo que las dimensiones de tiempo colisionan con la vida cotidiana de estos profesionales. En su estudio identifican tensiones graves entre el tiempo programado (las crecientes tareas programadas e impuestas), el tiempo de extensión indefinido (el tiempo de inmersión necesario para la lectura o la escritura), el tiempo contractual (el establecido según contrato cuya duración está asociada a la incertidumbre laboral), y el tiempo personal (que siempre queda relegado al último plano y amenazado por la importancia de las otras dimensiones temporales).

La aparición de estas tensiones en el tiempo académico está estrechamente vinculada a los cambios profundos del capitalismo académico, que exige mayores demandas de responsabilidades. Ante esta situación, el personal académico requiere una coexistencia más balanceada entre los diversos tiempos para «minimizar las consecuencias negativas de la perversión del tiempo programado y la inseguridad del tiempo contractual» (Ylijoki y Mäntylä, 2003: 75). Los trabajos posteriores de Ylijoki (2010, 2013) se centran y se continúan centrando en las consecuencias de la dimensión temporal en la vida académica. Por ejemplo, en la orientación de las personas de investigación a la hora de planificar su siguiente paso en la trayectoria profesional, con un pie en el presente y otro en el futuro, siempre explorando sus mejores opciones (Ylijoki, 2010), y situadas en las fronteras difusas entre vida personal y profesional (Ylijoki, 2013).

Dick Pels (2003) reflexiona sobre la influencia del incremento de ritmo de los *mass media*, la publicidad y el mundo de los negocios, visible cada vez en mayor proporción en el ámbito científico. En este mismo estudio, defiende la importancia de mantener la coexistencia entre diferentes perspectivas temporales y el balance de los diferentes regímenes de tiempo presentes en la vida de un profesional intelectual. De este modo, se protege la autonomía, que permite una crítica desapresurada del pensamiento y de la acción:

Si la ciencia es legítimamente superada por la política y los negocios, todavía requiere una política crítica de desaceleración, que preserve su definitorio ritmo temporal y resista al «estrés» del trabajo científico, como resultado de la excesiva infiltración de los límites temporales (*deadlines*) políticos, empresariales o periodísticos. (Pels, 2003: 224)

Rosalind Gill, en 2009, realiza una revisión crítica sobre todas las características que envuelven al mundo académico en el artículo: *Breaking the silence: the hidden injuries of neo-liberal academia*. En este trabajo, la autora se preocupa por las experiencias vividas, raramente explicadas (silenciadas), que son normalmente consideradas como asuntos particulares, en lugar de pautas comunes y estructurales de la universidad contemporánea. El análisis de Gill se centra en tres puntos fundamentales. El primero, las experiencias de precariedad y los costes de avanzar desde un trabajo mal pagado, informal y discontinuo alejado de un trabajo estable, además de su incidencia en la capacidad para planificar su trayectoria en relación al género.

El segundo punto, la *fast academy* se centra en la intensificación del trabajo como rasgo endémico de la Academia, que Gill relaciona con la insuficiente financiación de la universidad en combinación con la hiperinflación de las exigencias, y una implementación cada vez más completa de la *audit culture*, que invisibiliza las horas extras de dedicación. Los intentos de resistencia por parte del personal de investigación son silenciados con frases que nos recuerdan a situaciones vividas por todas las personas, debidas a un mismo contexto y que, sin embargo, re-

caen en la individualización de los actos (las opciones privadas y personales son las únicas que pueden «manejar lo inmanejable» como, por ejemplo, el recurso a la lectura rápida para afrontar la acumulación de textos científicos) (Gill, 2009:11). Otro rasgo de la *fast academy* es la «extensión» de la Academia sin fronteras mediatizadas por la permanente conexión tecnológica. Para la autora, este rasgo también es interiorizado por las personas para no quedarse atrás, ser más rápidas y ágiles en su adaptación a los constantes *deadlines*.

El tercer punto se refiere a la «vergüenza tóxica», es decir, las actitudes agresivas entre los colegas (como los comentarios irrespetuosos en las evaluaciones), que nos hacen dudar de la propia valía (resalta aquí la autora, el componente de género). En el mismo artículo se pregunta si se trata de un ejercicio de poder o si tan solo es rabia acumulada por las condiciones tóxicas de la academia neoliberal (conectadas a la presión, competitividad extrema y frustraciones personales). El placer y apego al propio trabajo, el querer hacerlo bien a las personas al régimen neoliberal y ellas asumen cada vez más costes personales. En ese sentido, Rosalind concluye que:

El personal académico son, de múltiples formas, sujetos neoliberales modélicos, con su inacabable autosupervisión, flexibilidad, creatividad e internalización de las nuevas formas de auditoría y cálculo. El neoliberalismo encontró un terreno fértil entre los académicos, cuya predisposición a ‘trabajar duro’ y ‘hacerlo bien’ encaja perfectamente con las exigencias neoliberales de contar con los sujetos autónomos, automotivados y responsables. Ello también está atravesado por el género, la etnia y la clase [...]. (2009: 18)

La falta de resistencias por parte del personal investigador es consecuencia de las prácticas atomizadoras, de silencio y de cansancio pero también de placer, de autorrealización y de autonomía (o su promesa). El resultado de esa combinación de sentimientos es «la inseguridad, el estrés, la ansiedad y la vergüenza» (2009: 56). Así que se pregunta cómo podemos empezar, si quiera, a resistir.

Judith Walker (2009) destaca que la carga de trabajo para cumplir con los indicadores de rendimiento y la competición en un mercado global obligan al personal académico a recortar su tiempo personal para lograr «buena ciencia» (leer libros, involucrarse con el alumnado, etc.), reduciendo tiempo dedicado al pensamiento crítico y a las posibilidades de diálogo y resistencia colectiva. La inclusión de la dimensión temporal en el debate sobre la academia y sus efectos (ansiedad, precariedad, alienación, cansancio y pérdida de control) es necesaria desde una perspectiva interseccional de género, clase social, raza, edad y experiencia (*seniority*) en la disciplina académica. Siguiendo una línea foucaultiana, Walker (2009) afirma que pese a ser un ‘trabajador flexible, autónomo’, hay constricciones y regulaciones temporales que, más que formar parte de una disciplina manifiesta, son interiorizadas como valores neoliberales a modo de autorregulación. Walker subraya que la ideología del neocapitalismo se fundamenta en la eficiencia no tanto en la velocidad, lo que significa que hay que manejar el tiempo más eficientemente para «hacer más con menos», y que la eficiencia «significa hacer algo de forma rápida y barata» (2009: 498). Del mismo modo que el capitalismo temprano dependió del cambio en el uso del tiempo, el capitalismo tardío (y, por tanto, el capitalismo académico) depende de que la gente abrace estas ideas sobre el tiempo. Así:

El capitalismo académico requiere de la cosificación del tiempo y la interiorización de la importancia de manejar el tiempo de una manera eficientemente demostrable. Alcanzar exitosamente el control del tiempo en el capitalismo académico asegura el éxito al estudiante individual o al miembro de la facultad, como trabajadores del conocimiento globalmente competitivos, y de la misma forma, ayuda a la incorporación de la universidad en la economía global. Esencialmente, el capitalismo académico se basa en la premisa de que ambos, académicos y estudiantes, justifican su uso del tiempo buscando aventajarlo. (2009: 484-485)

En el estudio citado anteriormente, Müller (2014), refiriéndose a investigadores postdoctorales, concluye que la *academic*

rat race, consiste en producir más «resultados académicos contables por unidad predefinida de tiempo». De ello resulta una «aceleración anticipatoria» y una «individualización latente». La aceleración anticipatoria se produce por las presiones de tiempo y el intento de tener «un futuro más controlable y mejorado de la propia posición, en una intensa y arriesgada competición (*rat race*). Según Müller, las largas horas de trabajo se convierten en un círculo vicioso de dependencia emocional y de inversión en el éxito académico. La individualización latente se refiere a las decisiones tomadas en base a un futuro que actúa en el presente, en un contexto de alta competición y movilidad internacional basada en la métrica. Las instituciones por las que transitan el personal de investigación y las relaciones interpersonales son entendidas como recursos que reportarán resultados individuales más adelante.

Filip Vostal (2015), en su estudio sobre la aceleración académica basada en personal académico sénior, inspirado en teóricos como Hartmut Rosa («*La aceleración social*», 2013) concluye que la aceleración es enfrentada de tres formas diferentes, por parte de estas personas experimentadas. Una primera respuesta es la aceleración que constriñe, la que daña al bienestar; la segunda respuesta afirma que la aceleración es estratégicamente manejada; y la tercera, la aceleración abrazada, se refiere a una aceleración energizante. De este modo, pone en duda la asunción de que los académicos están todos estresados y con falta de tiempo o, por el contrario, que defienden que es uno de los trabajos menos estresantes. Vostal no menosprecia las consecuencias negativas de esta aceleración, pero considera que la lentitud (la iniciativa *slow*) no es la respuesta adecuada a esta situación e intenta conectar las soluciones a la «obsesión por la cantidad»:

Parece que el propio *status quo* de la cuantificación y la subsiguiente intensificación de los estilos de trabajo con la conciliación de la vida personal, como si fuese algo «natural», es algo que necesita ser desafiado de forma individual y sistémica. Un posible camino sería [...] que los efectos negativos en la salud mental y en la familia sean reconocidos como cuestiones significativas, en relación a la obsesión con la cantidad y la

resultante aceleración que constriñe la vida personal. Esto, sin embargo, no implica de manera automática que una academia postcuantificada debería ser una academia lenta (*slow academy*) [...]. (2015: 309)

La misma preocupación por la cuantificación y los debates sobre el papel de los indicadores en los sistemas de evaluación científica ha llevado a Ulrike Felt (2017) a reflexionar sobre la cuestión del tiempo en la academia, lo que ha denominado la «cronopolítica»: este concepto «(...) se refiere a la política del tiempo (*the politics of time*) gestionando la generación del conocimiento académico, las entidades epistémicas, las vidas y carreras académicas, así como también los procesos del *management* académico» (Felt, 2017: 54).

Para Felt (2017), los reordenamientos de los regímenes de tiempo en la academia son coproducidos con los regímenes de evaluación de la academia, caracterizados por el incremento de los sistemas de indicadores y los *rankings*. Así, las nuevas estructuras temporales consisten en la organización de la investigación, mediante proyectos financiados externamente (por una duración limitada) que, generalmente, están relacionados con las publicaciones y el mantenimiento de los contratos de los doctorandos vinculados a las becas y proyectos, lo que condiciona la promoción del personal de investigación. La estructuración temporal de las carreras académicas es establecida a través de indicadores de resultados que promueven la competición entre los mejores y las más capaces. La distribución de la financiación entre los estados y las universidades también está basada en los sistemas de contabilidad, que solo valora los proyectos conseguidos, las publicaciones indexadas en las bases de datos «más prestigiosas», el número de graduados, etc.

De reflexiones y análisis críticos acerca de los regímenes de evaluación han surgido iniciativas como el *The San Francisco Declaration on Research Assessment* (DORA) en 2012. Dicha declaración promueve la valoración del contenido de los trabajos, en vez del factor de impacto de la publicación. Igualmente, el Manifiesto de Leiden, publicado en la revista *Nature* en 2015 alienta la revisión de indicadores, creando otros propios que protejan la investigación local.

Estudios con perspectiva de género sobre el tiempo y la academia. La *feminist slow scholarship*

A pesar del enfoque crítico, la mayoría de estos estudios ignoran las relaciones de género. Sin embargo, algunas autoras han abordado estos temas centrándose en la experiencia de las mujeres. En su artículo «*Sleepless in Academia*» (2004), Acker y Armenti analizan la realidad a partir de un estudio cualitativo centrado en un grupo de mujeres académicas. Estas investigadoras manifiestan sentimiento de cansancio, dudas, miedo y otros malestares (*illness*) durante sus entrevistas de campo. Estas situaciones de malestar ponen en riesgo su salud, especialmente, entre aquellas que tienen que conciliar su vida profesional con la familiar. Las mujeres interiorizan los valores y los roles sociales que les exigen ser «buenas» y «hacerlo lo mejor posible» en todas las esferas de su vida (*have it all*). En ese artículo, las autoras subrayan la necesidad de profundizar en el conocimiento del contexto de malestar que producen las presiones recibidas desde el mundo académico.

En Canadá, Heather Menzies y Janice Newson (2008) llevaron a cabo un estudio piloto acerca de los cambios en la organización del trabajo académico, afectado por el neogerencialismo y el uso de las nuevas tecnologías implementadas en la organización de la ciencia. A través de una encuesta presencial y entrevistas personales, las autoras concluyeron que las mujeres muestran un mayor grado de adaptabilidad a las nuevas tecnologías (sobre todo, en lo relativo al trabajo colaborativo y la conectividad con las redes profesionales), pero también mayor grado de presión relacionado con el uso del tiempo y el impacto del estrés en sus vidas. En la encuesta ofrecieron puntuaciones más elevadas en prácticamente todos los indicadores de estrés: privación de sueño, nuevas alergias y sensibilidades, pérdida de memoria a corto plazo y problemas de concentración. También mostraron un mayor estrés y tensiones en las relaciones personales, con familiares y colegas, y sentimientos de aislamiento. Las autoras consideran que esto se produce de manera inconsciente, debido a los efectos del estrés y al hecho de verse obligadas a aplicar:

[una] serie de estrategias individuales de supervivencia *ad hoc*, aparentemente inocuas, como enviar emails en vez de hablar

con estudiantes o colegas presencialmente, esconderse tras la pantalla en casa o la oficina para acabar el trabajo eficientemente, o buscar [solamente] la información útil concreta en los libros y artículos en vez de leer en profundidad y reflexivamente. (Menzies y Newson, 2008: 518)

De alguna forma, las mujeres están liderando estos cambios debido a su necesidad de enfrentar varios roles sociales al mismo tiempo, aunque las autoras defiendan que es debido a su «predisposición al *multi-tasking*», siendo ellas quienes experimentaron mayores niveles de estrés y, en consecuencia, opiniones más críticas.

Retomando el hilo del movimiento *slow*, un grupo de académicas de los Grandes Lagos, el *Feminist Geography Collective*, aborda los efectos «escritos en el cuerpo», tales como la ansiedad, el miedo, el cansancio, la parálisis, la culpa o la vergüenza, que conectan con las interrelaciones entre los regímenes de tiempo y la elevada demanda de productividad de la universidad neoliberal en relación al género y a los cuidados. El análisis del tiempo respecto a la división de roles de género en las tareas de cuidado se acompaña de la crítica del tiempo productivista neoliberal como heredero de una lógica colonial (Shahjahan, 2015). Las mismas autoras también señalan que la cultura de la cuantificación y de la evaluación actúan como tecnologías del *self* que paralizan posibles resistencias del personal de investigación con la lógica de la mejora continua. Por ello, reclaman una *slow scholarship* desde una ética feminista del cuidado que desafíe y rompa las lógicas de poder elitistas relacionadas con el género, la raza y la clase social. Para revertir la situación, las estrategias individuales no son suficientes puesto que:

Nuestro objetivo es pasar de las experiencias individuales del tiempo neoliberal a la acción colectiva, precisamente, para resistir a las presiones intensificadas de querer hacerlo todo e intensificar las estructuras elitistas que hacen la *slowness*, [solo] posible para algunas personas, mientras dejan a las otras trabajando duro en las trincheras. (2015: 1248)

Su demanda se focaliza en la necesidad de «centrar socialmente las actividades reproductivas» (2015: 1246), por lo que su propuesta se basa en una política feminista de la resistencia, basada en la ética del cuidado, que mejore la calidad de la academia al mismo tiempo que rompa las relaciones de poder desiguales y marcadas por el género.

Implementar la ética del cuidado en el ámbito académico

Como se ha visto, numerosas iniciativas y estudios han ido poniendo de relieve los problemas de la academia neoliberal y la aplicación del neogerencialismo en la ciencia pública. El *ethos* neogerencial refuerza el ideal académico de dar «total prioridad al trabajo sin tener en cuenta otros intereses o responsabilidades» (Bailyn, 2003: 139). Este ideal masculino, arraigado fuertemente en las áreas de intensa dedicación, como la política o la dirección empresarial, se ha fijado como norma en el mundo académico. Si antes había personas que de forma voluntaria querían dedicarse sin descanso al trabajo, ahora es una exigencia promovida por las instituciones altamente demandantes, que dificulta la tarea de las personas situadas en una posición de vulnerabilidad y la de aquellas que escogen tener una vida fuera del trabajo. Así, el tiempo de trabajo se vuelve ilimitado y la dedicación a la familia, a la comunidad o incluso a la vida personal se vuelven secundarias (Bleijenbergh, van Engen, Vinckenburg, 2012: 23).

La progresiva adopción de un modelo corporativo en la academia, en el ámbito de la competencia global, busca un símil con aquellas organizaciones que gozan de poder e influencia económica y social. Al igual que la imagen del líder exitoso (hombres blancos occidentales), el académico exitoso corresponde con una persona emprendedora. El empresario y el académico emprendedor comparten muchas de las características estereotípicas masculinas de los regímenes de la desigualdad como, por ejemplo, «la fortaleza, la agresividad y la competitividad» (Acker, 2006: 445). Un modelo de academia basado en el ideal de autonomía que rechaza las ideas de dependencia y que silencia el malestar, ignora el tiempo del cuidado propio, de las personas cercanas y del entorno. El tiempo contemplado legalmente en los contratos

de trabajo es irreal, puesto que en realidad se extiende, debido a las crecientes demandas, a una dedicación 7/24.

Desde una perspectiva de la «ética del cuidado», tal como la definen en 1990 Joan Tronto y Berenice Fisher, el cuidado es entendido como aquello que sustenta la vida, que la hace posible:

[...] Una actividad de los seres vivos, que comprende todo aquello que realizamos para mantener, continuar y reparar nuestro «mundo», para poder vivir en él tan bien como sea posible. Este mundo incluye nuestros cuerpos, nuestros seres y nuestro entorno, todo lo cual buscamos entretener en una compleja red de sostenimiento de la vida. (1993: 103)

Tronto (1993) reconoce que el cuidado es un concepto integral, parte de la vida que desestabiliza la idea de autonomía, que incluye las ideas de interdependencia y vulnerabilidad. Parte de la ética del cuidado se fundamenta en las ideas de responsabilidad, atención y respuesta (*responsive*). El cuidado opera como una noción política y filosófica que extrae estas prácticas de la periferia (el espacio privado, relegado mayoritariamente a las mujeres y a las mujeres de clase baja migrante), para situarlas en el «centro de la vida humana».

Igualmente, el colectivo de economistas feminista españolas habla de poner «la sostenibilidad de la vida en el centro», sacando a los mercados donde se concentran el poder y los recursos del centro de nuestras vidas (Pérez Orozco, 2014).

La centralidad de la producción mercantil como objetivo económico básico, la dependencia del salario de una parte importante de la población y la cultura del trabajo masculina han contribuido a oscurecer la relevancia de los procesos de sostenibilidad social y humana haciendo difícil la comprensión de las conexiones e interdependencias que mantienen con la producción capitalista. (Carrasco, 2001: 3)

La academia se ha transformado en un espacio que prioriza la productividad frente al debate y al pensamiento crítico, la elevada demanda y las largas horas de trabajo «descuidan» los riesgos psico-

sociales de los profesionales. Sin embargo, los cambios requeridos por la sociedad del futuro deben tener en cuenta la diversidad social, en términos de género, clase social y raza. Para el resto de la gente también es deseable porque, ¿quién puede seguir trabajando hasta elevadas horas, los fines de semana, «descuidando» a los otros y a sí mismo? ¿Significa entonces que solo las personas sin responsabilidades, sin necesidades y sin lazos sociales pueden ejercer un papel exitoso en el mundo académico? Entonces, ¿solo las personas de cierta edad, clase social, raza, con un alto grado de autonomía pueden dedicarse a la ciencia?

Desde hace tiempo, las académicas feministas trabajan examinando la cuestión del tiempo como punto clave para acabar con las desigualdades y la eliminación de las divisiones de género (Hochschild, 1997; Folbre y Bittman, 2004; Torns, 2005; Durán, 2007; Legarreta, 2010). El cuidado ha sido tradicionalmente relegado al ámbito femenino, desarrollado mayoritariamente por mujeres, y, precisamente por ello, devaluado social y económicamente. Aunque las mujeres se han incorporado en el mercado de trabajo remunerado, no han podido incorporarse en la misma medida que los hombres en espacios de reconocimiento, ni en las mismas condiciones. Las tareas de cuidados no remunerados imponen una doble jornada a la mayoría de mujeres, lo que contribuye a una distribución desigual del uso del tiempo (esta vulnerabilidad de las mujeres se ha denominado «pobreza de tiempo»). Además, en la medida en que las fronteras entre el tiempo personal y el tiempo de trabajo se han ido desdibujando la situación de las académicas se ha vuelto más compleja (Hochschild, 1997; Carrasco, 2001).

Una academia acelerada, que obvia las tensiones y dificultades ocasionadas por los regímenes de tiempo, y que añade más presión y demandas de trabajo académico, pone en riesgo la salud de las mujeres académicas y su permanencia en las instituciones académicas. También provoca tensiones y malestares en aquellos hombres que quieren ejercer papeles de corresponsabilidad (lo cual se convierte en un factor desmotivador) y adoptar otros modelos de éxito. Por tanto, el actual ritmo académico pone en riesgo doblemente el avance hacia la igualdad, desde el cambio necesario para las mujeres y desde el cambio deseado por los hombres.

Una ética de los cuidados incluye una dimensión objetiva y una dimensión subjetiva, de los afectos, de seguridad psicológica, de creación de relaciones y de lazos humanos «tan esenciales para la vida como el alimento más básico» (Carrasco, 2001: 3). En la academia neoliberal es preciso adoptar un modelo diferente, que disponga de algo de tiempo destinado al cuidado y a los afectos hacia sí mismos y hacia las personas significativas del entorno académico (donde aún los cuidados son invisibles y minusvalorados). Un cuidado propio que ahora mismo está reservado únicamente a las personas situadas en la élite, y que las personas en posiciones de vulnerabilidad no pueden disfrutar. Un cuidado que involucre a las personas de nuestro alrededor, el apoyo mutuo entre colegas, el dedicado a estudiantes, el respeto entre colegas anónimos, todo ello indispensable para sustentar la ética de los espacios académicos (Müller, 2012). Los vínculos personales son importantes en la academia pues introducen valores de responsabilidad, que mejoran la calidad del trabajo en la academia tanto desde un punto de vista objetivo (contenidos en la investigación) como subjetivo (los afectos). La ética de los cuidados implica responsabilidad social, dedicación al trabajo y calidad de tiempo. En contraposición con la imagen del científico sin lazos y desencarnado (Müller, 2012; Haraway, 1988), el personal académico debe actuar con responsabilidad y cuidado de sí mismo, así como del trabajo de los colegas; por ejemplo, teniendo en cuenta su tiempo, sus palabras y sus narrativas más invisibilizadas (Puig de la Bellacasa, 2012; Müller, 2012).

Conclusiones

El neogerencialismo ha instalado la lógica del capitalismo en la academia, generando prácticas y valores relacionados con la mercantilización, cuantificación y evaluación del trabajo realizado. Sus fundamentos están orientados a promover la excelencia, pero también han instaurado prácticas de aceleración y precarización de los tiempos y calidad de las condiciones de trabajo en la academia. Junto a las medidas de austeridad, han agudizado la sensación de malestar del personal empleado en ciencia y tecnología. En respuesta a esto, algunos sectores de la academia han llamado la atención sobre esta situación preocupante, han criticado algunos

de sus principios y han propuesto otros modelos de hacer ciencia y de funcionamiento de la academia.

Uno de esos términos ha sido el concepto *slow science*, que ha generado muchas expectativas en un breve período de tiempo. Este concepto presenta una gran fortaleza, por su capacidad movilizadora y de conciencia crítica. Pero, el movimiento *slow science* también puede correr el riesgo de caer en prácticas posibles solo para algunas personas privilegiadas, a costa del trabajo de las otras (Martell, 2014; Vostal y Carrigan, 2015; Mendick, 2014). Así, el modelo de *slow science* puede suponer una buena respuesta para los desajustes generados por los regímenes de tiempo derivados del neogerencialismo y la *accelerated academy*. Pero, también es necesario crear una respuesta más avanzada, que satisfaga a un mayor número de personas (pensando en la igualdad y la diversidad), y que promueva una serie de transformaciones en profundidad en las instituciones productoras del conocimiento científico. Y, además, el cambio debe afectar al mayor número de dimensiones posible, tal y como el capitalismo ha afectado a las instituciones, a las carreras científicas, y al modo de trabajo, este modelo debe extenderse a estos y otros niveles.

Es importante entender las diferentes situaciones de las personas que constituyen la academia y sus argumentaciones en contra del actual modelo; analizar los lugares de exclusión y promover otros espacios de inclusión. La precariedad y las lógicas del «des-cuido» están provocando tensiones que requerirán una solución a largo plazo (como, por ejemplo, los problemas de salud, el cansancio y el estrés generalizado de las personas empleadas). En este capítulo se han descrito algunos de estos problemas referidos al uso del tiempo y los malestares que pueden ser utilizados para imaginar propuestas de acción responsables. También se ha avanzado en un enfoque caracterizado por una ética feminista del cuidado. Esta perspectiva analítica y política centra su atención en las cosas que importan, que deberían posicionarse en el centro de la ciencia (el tiempo para pensar, el trabajo crítico, la calidad del contenido científico, el uso del tiempo fuera del trabajo académico, el tiempo dedicado al autocuidado, al entorno familiar, social y personal, a la academia, al entorno del grupo de investigación, a los estudiantes y a la academia).

La ética del cuidado reflexiona sobre las relaciones de poder, más allá del ideal académico forjado en la idea de la autonomía y la autoregulación. Obliga a pensar en una dimensión temporal atravesada por una perspectiva de género y a poner en cuestión los regímenes del cuidado vigentes. También presta atención a otras exclusiones, más allá del género, que invisibilizan a otros actores en la ciencia. Permite entender las experiencias de ansiedad, estrés, enfermedad física, politizando el malestar generado por la academia neoliberal. Permite focalizarse en el cuidado de la elaboración científica (Puig de la Bellacasa, 2012; Müller, 2014), así como en el cuidado de los lazos de trabajo con los estudiantes y los colegas, que mantienen viva la universidad, y promueven la colaboración, los espacios de debate y la acción colectiva dirigidos a la mejora social. La ética del cuidado rompe las lógicas de la competición extrema e individualista, reconfigura los regímenes de tiempo, importante para nuestra construcción social de futuro (Adam, 1990).

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ANNEX III.
**“TEMPORALITIES AND
CARE: GENDERED TENSIONS
IN SCIENTIFIC PRACTICES”**

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Temporalities and Care: Gendered Tensions in Scientific Practices

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Abstract¹

Changes in science organization connected to new management and evaluation regimes have activated a set of studies working, on the one hand, on the effects of the acceleration of the working pace on academics (Ylijoki & Mäntila, 2003; Müller, 2014; Walker, 2014; Mountz et al., 2015; Vostal, 2015), and on the other, on effects and shifts in epistemic practices (Anderson et al., 2007; Burrows, 2012; Fochler et al, 2016; Horbach & Halffman, 2019). Broader reflections on temporalities and science under neoliberalism are slow science initiatives (Stengers, 2011; Müller, 2014; Mountz et al., 2015), chronopolitics (Felt, 2017) or dominant temporalities neglecting aspects of care in technoscience (Puig de la Bellacasa, 2015). Based on this, I develop an argument that relates time, care, gender and neoliberal regimes in science following feminist care approaches developed by Tronto (1993; 2017) and Puig de la Bellacasa (2015). Through a qualitative analysis of public scientific discourses, researchers' interviews and three focus groups on evaluation practices, I explore five levels: scientific discourses, evaluative practices, knowledge practices, relationships between colleagues, and personal lives. Tensions and dysfunctions in the relationship between time and care are shown to affect not only researchers' lives and their relationships in gendered ways, but also their practices, (dis)connected from quality or 'excellence', and furthermore, the direction of science. A diversity of temporalities is defended as a way of promoting care time and practices of care in science. The notion of care is also discussed as a possible guiding principle for a better and more inclusive and diverse science.

1. This paper is a partial elaboration of the last part of the doctoral thesis.

1 Introduction

In European countries, in the last few decades, science and academia have experienced important changes that relate to more global economic changes such as the knowledge economy. The Lisbon Agreement pushed Europe to enhance international economic competition through science, technology and innovation, modifying the role of universities and creating top research centres in the name of excellence (Conesa and González, 2018a). New management (Deem, 1998; Shore and Wright, 2000) – usually called new managerialism or new public management (see Deem and Brehony, 2005) – redefined the rules of the scientific organization by applying the logic of the private sector to the public (Deem, 1998) through the application of the principles of productivity and competitiveness, secured with the audit culture (Shore and Wright, 2000). Research production moves to the fore through publication in high impact journals owned by big editorials. Funding achievement – through demonstrable scientific production and networks around the globe – also becomes central within a system of fierce competition, and in some institutions, it is now the only way to receive payment in an environment of uncertain and precarious labour (Vayreda et al., 2019). Connections with industry through patents and other collaborations have also been fostered (Conesa and González, 2018a).

2 Work intensification and changes in knowledge practices

These movements have produced different consequences, among which, on the one hand, is the intensification of work, and on the other hand, changes in the knowledge practices.

The acceleration of the pace of work has been noted in terms of conflicts that occur in temporal structures related to daily working time, writing time, contractual time and personal time (Ylijoki and Mäntylä, 2003). Müller (2014) highlights the academic race to produce a higher quantity of output in shorter periods of time. This engenders individualist and instrumental strategies of careerism and future anticipation in an endless effort to secure a position (Müller, 2014; Clarke and Knights, 2015; Ylijoki, 2010). Fast academy produces harmful affective states and distress in terms of lack of time for personal, familial and social lives, as well as for the house work, which is still gendered and mostly shouldered by women (Conesa and González, 2018b; Mountz et al., 2015; Gill, 2009; Acker and Armenti, 2005). However, while many feel constrained by time pressures,

others may experience it as thrilling, as shown in a study of senior academics of an elite British university (Vostal, 2015).

On the other hand, some studies point to how new management and evaluative culture have produced effects in knowledge practices. First of all, metrics have led academic value to determine career continuity (Burrows, 2012). In this logic, the race to publish in high-pressure rhythms has brought on dubious practices and academic misconduct toward colleagues and research itself, such as cutting corners, self-plagiarism or refusing to share knowledge within the same group or work environment (Anderson et al., 2007; Horbach & Halffman, 2019). Epistemic practices are influenced by productive goals that disregard social and ethical issues in science (Fochler et al., 2016). Finally, among other consequences, metrics have also impacted the creation of local knowledge in local language journals, which are not as valued as English-language, high-impact journals (Hicks et al., 2015).

3 Time, Care and Science

Both lines of studies can lead to questions on time, care and science: is it possible to say, under a feminist care approach, that we are experiencing a lack or undermining of care and care practices at the personal level and the level of colleagues, while also at the scientific level, in order to gain time for our productivity and for the survival of our careers? Does the connection between time and productivity result in *careless* practices? Broader reflections on temporality and science in new management regimes can shed some light that will help frame this question.

Slow science initiatives have appeared in the last years to demand time to think and read, in some cases through disembodied and simplistic claims – as for example the manifesto of The Slow Science Academy (2010) – and others in more reflexive ways (for a review see Conesa, 2018). Personal repercussions, critiques of new management techniques, the race to publish in order to have a competitive edge, and the need for time to engage with students and university life have been cited as arguments in favor of a ‘slower’ science (see for example, Gosselain, 2011; O’Neill, 2014; Müller, 2014; Mountz et al., 2015). Among these heterogeneous voices, Isabelle Stengers appeals to slow science in a critique of the *knowledge economy* that has transformed science into “privileging disembedded and disembedding knowledge and strategies, abstracted from the messy

complications of this world” under “fast science and industry” (Stengers, 2011, p. 10), thus pointing to the content and the way in which science is produced.

Ulrike Felt (2017) approaches the question of time in science using the term *chronopolitics*: “Chronopolitics refers to the politics of time governing academic knowledge generation, epistemic entities, and academic lives and careers” (Felt, 2017, p. 54). For example, knowledge production is compressed into predefined time units determined by the length of projects funded, governing academics’ everyday life amidst other demands (Felt, 2017). This framework opens up the politics of time to the different levels of scientific governance. Another meaningful reflection in more theoretical or philosophical terms is developed by Maria Puig de la Bellacasa (2015) when analysing technoscientific dominant temporality, taking as a case the field of soil science. She describes science as driven by productivist timescapes:

Perhaps more than any other modern social practice, science is actively and performatively embedded in the dominant progressive, promissory, productivist epochal timescape” (Puig de la Bellacasa, 2015, p. 697).

In this way she argues how this dominant temporality in technoscience neglects care aspects, as for example, the *care time* needed to “maintain, repair and ‘foster soil’s liveliness” (p.702). The futuristic and linear orientation to an increasingly productivist soil science has been translated into exhaustion and loss of diversity of the elements of soil, disregarding the *care time* vital for human and non-human entities.

This reflection brings us to the relationship between time, care and productivity. In Western societies time has been transformed into an exchange value in order to be instrumentalised (Adam, 2004). In this sense, acceleration or time compression is “an unquestioned economic and political goal as it increases profit” (Adam, 2004, p.128-129), since the more we can compress time the more we can produce. These considerations function within a very specific framework, where “inequities remain invisible” (Adam, 2004: 125). In other words, in Western economic terms, the time of the unproductive is not valued and rendered invisible (Adam, 2004). It is usually the time for care and caring practices that goes unnoticed; therefore, the time involved in these activities usually undertaken by the “least well off members of society”, that is, women, racialized people, and other groups marked by class, age or ability (Tronto, 1993, p. 113). With all this in mind, can an approach to care inform us and be used as an analytical tool applicable to

academia and science? I draw on a broad definition of care, a definition developed by Fischer and Tronto in 1990:

“On the most general level, we suggest that caring be viewed as *a species activity that includes everything that we do to maintain, continue, and repair our ‘world’ so that we can live in it as well as possible [sic]*. That world includes our bodies, our selves, and our environment, all of which we seek to interweave in a complex, life-sustaining web” (Fisher and Tronto, 1990, p. 40; Tronto, 1993, p.103)

As framed, this definition does not essentialise care as a natural activity for women. It dismantles the idea of care as a (merely) private issue, restricted to the personal sphere, beyond the dyadic relationship (cf. Noddings, 1984). It also helps us understand care as a basic need without which we cannot live – which is close to what Spanish feminist economists refer to when they talk about *the processes that sustain life* when dealing with the notion of *care* (Carrasco, 2001; Pérez-Orozco, 2014). Feminist approaches to care aim to place care at the centre of the political life as a way of disrupting broader social inequalities (Tronto, 1993; Pérez Orozco, 2014; Carrasco, 2001).

Now, how can we apply such an approach to academia? Puig de la Bellacasa also draws on this definition in her account of time for (soil) science (2015) and in her elaboration of “matters of care” (2011) in Science and Technology Studies (STS), as a reformulation of “matters of concern” as developed by Latour (see Latour, 2004). Puig de la Bellacasa (2015) feminist approach “engages with care as a way to draw attention to the significance of practices and experiences made invisible or marginalized by dominant, ‘successful’, forms of technoscientific mobilization” (p.692). In this application, she approaches time for care or *care time* in an in-depth and meaningful way in order to counteract the futuristic and productivist temporalities in technoscientific endeavours of soil science. This can be read as an application of a care approach to the content of science itself.

Other accounts of care have been applied to academia in organizational literature to highlight a highly gendered workplace, in particular due to total dedication to work but also to internal hierarchies and discriminations (Lynch, 2010; Conesa and González, 2018b; Ivancheva et al., 2019). Heijstra et al. (2017) have used the term “academic housework”, drawing a parallel to housework as a way of referring to the undervalued chores of academia (i.e. student supervision), usually undertaken by women and early-career academics. However, care has not been applied as an analytical concept to the different

levels of academic and scientific endeavours (in terms of content, organization, work relationships, the personal sphere) in ways that could provide an interesting account on how science is evolving and on ways to improve internal tensions and exclusionary practices highlighted in the aforementioned literature.

This paper, therefore, is an initial, in-progress attempt to apply the lens of a care feminist approach in academia and science to the different levels of scientific governance. It asks what it would look like to look at science through the lens of care in terms of its relationships with time and productivity. It also provides evidences in the context of Spain, adding to previous literature on the topic from other countries.

4 Methodology and Context

This study is based on twenty-five semi-structured biographical interviews with academics and scientists based in Spain, three focus groups and the analysis of web discourses and documentation on hiring processes. They are complemented by notes taken in institutional settings and an analysis of scientific reports by the European Commission.

Part of this research was generated within the GENERA project where I conducted eight interviews in one research centre of excellence and eight in one university department in an equal number of men and women academics at different points in their career (from postdocs to senior positions) working in Biomedicine and Humanities, respectively. Focus groups on evaluative practices were conducted in two Biomedicine and Environmental Sciences research centres and in one Humanities university department, with three-four participants in each group. Nine further interviews were conducted with women working in different university settings and fields following a snowball strategy, covering the fields of Social Sciences, Humanities, Environmental Sciences, Engineering and Biology. A qualitative analysis using content analysis tools developed by Corbin and Strauss (1990/2015) rose tensions around issues of time, productivity, gender and care.

New management techniques have been applied in Spain since the implementation of the 2001 university law of crafted to fit to the European guidelines of the Lisbon agreement (Conesa and González, 2018a). The academic Spanish context has also been and still is affected by harsh cutbacks, especially from 2011 to 2014, with replacement rates in public universities being frozen and funding for research activities curtailed (Conesa and González, 2018a). The application of narrow research metrics by new national and

regional quality agencies have toughened already-complex accreditation process (a highly bureaucratic process to be accessible for a position, before a position opens). All in all, this situation has led to a bottleneck situation of accredited academics in precarious conditions waiting for the opening of permanent positions and/or facing stricter academic merits and demands.

4 Findings

In this analysis, productivity-, time-, and care-related tensions are organized into five levels (although some of them overlap): scientific discourses, evaluative practices, knowledge practices, relationships between colleagues, and personal lives.

4.1 Scientific Discourses: Fast Science as a futuristic promise

The EU frames knowledge as “the currency of the new economy” and research in a “(...) global R&I marketplace, [where] Europe has to compete with other regions (...)”, as reports on research of the European Commission usually read¹. This type of discourses normalise science as a commodity in which outcomes introduced into the productive system are the most valued items. In this context, promissory and futuristic linear temporality rhetoric (Puig de la Bellacasa, 2015) permeate certain slogans, especially those found in STEM research centres or campuses of excellence, where leading, global competitive research is being developed: “the science of the future”, “advancing the edges of...”, “pushing the frontiers of...” or “accelerating research”. Science needs to be fast and future-led, like in a carrot-and stick logic in the search for never-ending productivity. Thus, it would seem the time and care needed to think and work on social and environmental problems is disregarded. Temporality also emerges in motivational speeches in institutional settings, in which researchers and academics are exhorted to “run as fast as you can”, and “to be the best in your field” together with a mantra on the indicators importance², as if the aim of science were not the scientific content itself but personal

1. Both expressions are found in EU Commission communication and report: the first “A Reinforced European Research Area Partnership for Excellence and Growth” (2012, p.2) and the second “Structural change in research institutions: Enhancing excellence, gender equality and efficiency in research and innovation” (2012, p.13).

2. To preserve anonymity, the institutional settings and the people who voiced these discourses have not been identified.

success surreptitiously translated into an improvement in institutional rankings. When explaining the time and effort devoted to projects that have been prepared and will not be funded, the testimonies of interviewees contrast with this fabled temporal imaginary, such as in the case of the male group leader of a very successful lab in Biomedicine: “Out of thirty proposals we have written, twenty are nos, and 10 have been yeses, so we develop these ten”. Scientific temporalities have other rhythms that do not fit with time compression driven by projectification (Felt, 2017) or other newly norms in science. For example, in Spain the average duration of the PhD has decreased from 7 years in 2010 to 4.4 years in 2017 due to a Royal Decree implemented in 2011 that determined a maximum length of three years (with extensions under exceptional circumstances)¹. Narrow and restricted time spans for researchers in training – whose labour conditions could be very diverse (i.e. supervision, working environment, resources, etc.) – point to risks in the care dedicated to the content and development of the research. Productivism – in the form of articles – and the individualist rhetoric of ‘being the best’ (see also Conesa and González, 2018b) to ‘accelerate the future’, diverges from views such as those of this group leader woman: “The content of *Nature* is not what advances science but the knowledge we each contribute. This is what society can benefit from, not your personal success”. In her view, science is a collective process of knowledge generation that is unrelated to journals, impact factors or personal achievement.

From a care approach we could say that discourses of speed and productivity foster individualism and *fast science* that possibly endanger the time needed to care for the content and development of scientific endeavours. In time-compressed jobs, more complex activities are left out (Sabelis, 2002). In this case, for example, the time and care that would be devoted to the in-depth activities needed to attain a certain degree of quality or commitment (i.e. to read books or complex texts – that many scientists admit they cannot do anymore – to develop in-depth research, write high complex papers or engage in some concerns).

1. Source: Ministerio de Ciencia, Innovación y Universidades, [Estadística de tesis Doctorales](#).

4.2 Evaluative practices: Extreme devotion and narrow metrics that neglect “sustainability of a life”

Evaluative practices are not only an important time in an academic career, they also point to the assimilation of certain formal and informal criteria, having constitutive effects. Three focus groups were conducted around evaluative practices. Due to spatial constraints, I will refer to only one of them. The focus group simulated an academic selection process as a way to discuss evaluative criteria with reference to two fictional curricula, one belonging to a man and another to a woman, both searching for a second postdoctoral contract. The focus group was comprised of two male group leaders (junior for A and senior for B) and two human resources personnel of the Biomedicine research centre.

They began the discussion with the number of papers each had published, per the candidates' curricula, and in which journals (searching for impact factors). This was followed by an examination of the time frames between academic milestones (i.e. thesis defence, first postdoc contract and publications), which was expressly different for both fictional candidates. In concrete, the woman's longer time gap between positions was of concern. After this, the discussion turned on the importance of the personal interview and what the group leaders looked for in it:

A: In general, I look for a young person, that comes here with much drive and motivation, and that has this ambition [to become a PI]. I look for this in the interview.

But if her profile is more oriented to a stable contract, it is not that powerful and intense drive of a postdoc that wishes to become a PI. (...) I have four women who are pregnant or have children. They leave at 17h00 while a man can stay until 23h00. If they want a stable position there are not many chances. (...)

B: If what they want is to come back because 'I have a family, I'm tired of being in the United States'...

A: (*interrupts B*) Exactly, then not.

B: (*continues*)...I might be interested. That is, if I don't have someone else and this person knows how to do what I need. But this is not usually what we are looking for.

A: Exactly, exactly. In my case I usually wouldn't hire this person. And it's very easy to tell.

Junior group leader (A) defines a young person as being someone with a lot of drive and determination. He begins by taking for granted that the woman will want a more stable contract (unlike the man), which is the opposite of what they are looking for in a new researcher. The candidate's profile is also evaluated in terms of age, "someone young", – this re-appears later in the discussion. For both leaders, ambition with respect to the next position – which is something riskier and more difficult to achieve due to the scarcity of positions after postdoctoral stages – will ensure the candidate's constant, non-stop commitment. In other words, the time and willpower which will lead to publications for the candidate and the lab (thereby ensuring the lab's continuity insofar as securing future funding is concerned). Again, they describe a regime of science exclusively driven by productivist goals towards a now labour-related, promissory future that may never materialize. In this way, life stability and the time needed to care for oneself and others is viewed as undesirable and it is undermined in a markedly gendered way. The statement "a man can stay until 23h00" means that science can only be done by those who can devote their time exclusively to work (see Conesa and González, 2018b), and, besides, women will not even be considered or eligible for this. Scientists are thought and construed, therefore, as pieces of a machinery devoid of attachments, affective bonds or personal care. Under the lens of a care-focused approach, the dominant emphasis on productivity neglects life sustainability – the everyday care practices and care bonds needed to sustain life – fostering dominant temporalities of intensity and speed of production. Narrow evaluative systems shape selection processes in the search for a *successful* (masculinized) *entrepreneurial self* (Vayreda et al., 2019) and exclude the necessary care time for other scientific and personal practices and needs, generating exclusionary practices that follow taken for granted gender scripts.

4.3 Knowledge practices in the race "to publish high"

The importance of metrics and the power of indicators in certain journals usually develop into high pressure that in turn grown into feelings of hurt and frustration. But there are also consequences at the level of knowledge creation or epistemic decision-making (Fochler et al., 2016).

This scientist, now in a technical position argues that doing good science in accurate ways is not enough anymore. There has to be a “fashion factor” and “sexy” topics must be chosen in order to publish:

If you have published in *Nature* or *Science* you have accomplished with the 50% to get a job. It's like the stamp. One can agree or not. One must not agree. (...) And then they select not only on a basis of scientific quality but on the fashion factor, if what you do is sexy or not. (...) I mean, this has consequences in your career, obviously, even if the work is very well-done, rigorous, highly scientific ... (...). This is not normal. This is the part of the science that I rejected. (Man, Biomedicine).

We could assert that there is a lack of care for the quality of science itself in favour of a hyped and trendy science (the marketable visible part) that rejects and neglects the complexity of *less fancy topics* however important for the scientific development itself.

There are also consequences for knowledge in other fields. The following researcher claims that humanities and social sciences are adapting to *hard sciences*'s norms of metrics. When there is scarcity of time and resources and high levels of precarity the need arises to prioritize certain kinds of knowledge and specific forms of publication that will provide a competitive edge in terms of securing access to employment. Local knowledges or local relevance and audience become devaluated (Hicks et al., 2015):

“The rules of the economic academy are written by the hard sciences, and Humanities and Social Sciences we fit as we can (...) We all know that impact indexes in Humanities are ridiculous. Sometimes a book written in a regional language read by 800 people has more impact [because] it has stirred up the way of doing research in this part of the country. And not to have an article about an enormous trifle but very well written that is accepted in a first quartile. But these are the rules of the game and we already know them.”

(Woman, Humanities).

The logics of centre and periphery apply in the valuation system in a way that undermines certain ways of doing science while prioritizing those of the dominant point of view. In constrained timespans, care for the development and dissemination of different knowledges and languages outside the ‘centre’ is neglected.

Another interviewee explained a situation in the United States in which she was pressured to sign an article whose hypotheses had not been proven. After refusing to do so, her boss fired her. Fearing legal action, Human Resources maintained her in her position. However, the result of this astonishing situation was that she became technician:

My dream job! Look how things went! And it was my last chance to pursue science (...). It was very frustrating to find these things in the best place I had ever imagined. (...) It seemed very unfair, and then I wavered between disappointment with science in general – like ‘it can’t be true that these things happen!’ – and the fear of being fired, and feeling very sad. (Woman, Biomedicine).

There are several ways in which we are not caring for knowledge practices due to the productivist, high-pressure temporal rhythm of science that prioritizes fast and publishable research. We could affirm that care time for certain kinds of content, certain languages and audiences (which promotes diversity) out of the centre is lost due to the logic of productivity that stems from neoliberal forms of conducting science. Moreover, in the last example – and in others (see Conesa and González, 2018b) –, there is evidence of a lack of care for colleagues’ relationships – especially under power relations in hierarchical structures – for the sake of publishing.

4.4 Care between colleagues and “academic housework”

Other practices that neglect care between colleagues are shown below. In situations where power relations are enacted in abusive ways it is easy to normalize and forget the rights, time, and respect of others (Conesa and González, 2018b), and pretended ‘objective’ measures in science have not changed these dynamics. Perhaps, on the contrary, high-pressure environments foster them. The following PhD Student explains that she had been devoting the entire time of her thesis grant to her research group work. The last six months before her contract ended, she said she needed to concentrate on her dissertation in order to finish it. Her demand was not well-received:

Let’s see, I’m paid to work on my thesis (...) ‘Until now, I’ve been helping you and I’ve always said yes. Always.’ Until the moment you say ‘No, now I need to concentrate on the thesis, for the next six months, and then I’ll see if I can help you again or not. But right now, I can’t because I want to finish my work. And they didn’t take it very well... Since then, our relationship has been tense, I mean our relationship is quite tense. (...)

I felt very bad because they told me that I was missing out on opportunities and it sounded like a threat. The fact that they didn't appreciate everything I've done until now, it's like, 'Come on, what's going on?!' – (Woman, Social Sciences).

This is an example of “academic housework” (Heijstra et. al, 2017): the invisible work done as research support by a PhD student. This kind of work tends to be given to those at the beginning of their career, who usually acquiesce because of the possibility of future job positions through the demonstration of hard work and submissiveness (Gill, 2009; Heijstra et al., 2017). As is the case with care work at familial level, it tends to be gendered. So, an associate professor in engineering explains when she developed the role of pastoral care with students which demanded a lot of time from her. Not only this time was not valued institutionally but also some students considered her a soft and not so serious professor compared to hard and aggressive male engineer professors they were used to. In a way, time for caring relationships inside scientific settings either with colleagues or with students or junior researchers is non-existent or made invisible and unvalued, yet the focus on productivity enacted by a high productive masculinized figure under hierarchical schemes is in the centre. Care is still associated with weakness in front of dominant values of autonomy and competitiveness (Tronto, 1993).

4.5 Gendered care work at personal lives

On a personal level, many interviewees raised the issue of a lack of time for their personal lives, at the social, emotional and familial level (see Conesa and González, 2018b) which turns into a lack of care on themselves, for their mental health and their general well-being. A woman from Social Sciences explained how she put aside her social activism and semi-professional artistic practice due to high demands from her science group, which ended in feelings of emptiness and isolation.

Another woman explained how her partner – who shared child care of their three children equally – was penalized for no time abroad by having his access to a stable position barred.

He devoted a significant part of his time, like me, to raise our children and this has penalized him to obtain the accreditation. (...) the type of CVs they look for are very homogeneous and the issue of having children... of course... I mean, when they say you lack research stays abroad, it means they do not take into account that you have

children. Because if you have young children you... you cannot nor want to do time abroad. Apart from the fact that in a globalized and technological world we can communicate without being necessarily there. And this means total exclusivity to academic career models and a narrowly-defined trajectory. (Woman, Humanities).

She is talking about the total time availability of academic career models where the basic need of care for personal lives is not taken into consideration, still following the traditional male breadwinner model (see Conesa and González, 2018b). For those men who start to share care work equally, this time regime disrupts the move toward gender equality (Conesa and González, 2018b) since total devotion is expected more from men than from women (as we saw in 4.2 section). The most common situation for men working in the high time-pressured academia is clearly supported by this interviewee: "I have missed my children's childhood" (Man, Humanities), though men usually do not acknowledge this as loss, due to gender scripts.

Care at the level of personal lives is undermined in neoliberal science because it implies time that is not employed toward productivist goals. In other words, the time necessary for care practices at personal, familial and social levels become devalued, invisible, absent or is constantly under threat.

5 Conclusions/Discussion: Care as a Guiding Principle in Science?

Field work shows tensions and dysfunctions in the relationship between time and care that affect not only researchers' well-being and personal relationships as well as those between colleagues in gendered ways, but also knowledge practices and epistemic choices that foster a (dis)connection from/to quality or 'excellence' under a dominant productivist temporality. We have seen examples at these different levels: scientific discourses, evaluative practices, knowledge practices, relationships between colleagues, and personal lives. We could argue then that in science and academia the time employed in non-productive non-measurable activities becomes secondary or invisible thus eroding practices of care. The care approach functions as a framework that helps us to analyse and make visible exclusionary dynamics in knowledge and science itself (i.e. what is researched, how it is researched), as well as for academics (especially early-career academics and women) in what can be seen as a decline of practices of care at these different levels. Time pressures guided by productivity goals following narrow evaluative

regimes lead to the prioritization of some knowledges over others, some practices over others, and finally and consequently, to some temporalities over others, deteriorating *care time* for science, for personal lives and for our colleagues' relationships. An inherited scientific regime of power relations based on hierarchies and full work devotion (the intellectual of the ivory tower), embodied in the traditional male breadwinner model that has no responsibilities at home, seems not only to continue, but also to be exacerbated by the introduction of the new 'objective' norms that put pressure on lives and practices through the imperative of productivity and speed. Furthermore, it shows tensions in the direction of science as a public good guided by ethical values concerning social or environmental issues. A diversity of temporalities (Puig de la Bellacasa, 2015) that cannot be squeezed in standard and closed time frames is shown and should be defended in order to promote care time and care practices in science.

Now, could the notion of care be a guiding principle for a better and more inclusive and diverse science? Locating care at the centre, within a wide care perspective (Tronto, 1993; Puig de la Bellacasa, 2011, 2015; Pérez Orozco, 2014) would affect the organization of science in a very important way.

However, it would be risky and undesirable to try to systematize care for science as a guide or as a norm. First, because the notion of care is not free from problematic issues that we need to be aware of (see Puig de la Bellacasa, 2015 and, for example, Hughes et al, 2005; Murphy, 2015 or Pérez Orozco, 2014); secondly, because it could create a moral normativity easily subjected to power relations (Puig de la Bellacasa, 2011, 2015); thirdly, because in a neoliberal context, care is susceptible to be co-opted – as it is in certain ways in health care (Tronto, 2017) – or misused, stripping its political meaning and subversive potential.

This said, we could rely on care in an ethical way – being conscious of the related problems – through a culture of care and care time that would permeate our worlds and promote more inclusive, diverse and respectful – human and non-human – environments. In science, a culture of care would have the potential to a) displace competitiveness and foster cooperation and stability in scientific careers; b) promote a different work organization where care of personal lives would be shared equally (which would mean, for example, redesign working schedules that disrupt women as principal carers by omission); c) support different rhythms of research productivity depending on the context, resources,

research groups, etc.; d) support and value diverse formats of research production and dissemination while valuing other academic practices by making them visible and important e) fears of professional problems – usually the subtext under neoliberal politics – could be compensated with other forms of organization and horizontal styles, in which the power of senior academics is developed differently; and finally, f) all this could result in care for knowledge practices that are not guided by productivist milestones and pressures, except for the aim of doing science with the time and care it demands (see for example ‘matters of care’ in Puig de la Bellacasa proposal previously mentioned).

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ANNEX IV.
**“EL IMPACTO DE
LAS PRÁCTICAS
NEO-GERENCIALISTAS
EN LAS TRAYECTORIAS
CIENTÍFICAS DE HOMBRES
Y MUJERES EN TIEMPOS
DE CRISIS”**

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El impacto de las prácticas neo-gerencialistas en las trayectorias científicas de hombres y mujeres en tiempos de crisis

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RESUMEN

La incorporación paulatina de prácticas neoliberales en las organizaciones científicas ha dado lugar a profundos cambios en los modelos de carrera científica de hombres y mujeres. Actualmente, sus trayectorias se caracterizan por una intensa movilidad internacional y un modelo de progresión individualizada, puesto que las carreras profesionales no son sostenidas en una sola institución. La excelencia científica es el marco justificativo, ya que sólo aquellas personas que consigan un mayor número de méritos individuales podrán alcanzar las categorías superiores de la carrera profesional. Las políticas de austeridad imponen una restricción adicional, ya que los recursos para financiar nuevas incorporaciones e impulsar los procesos de promoción del personal de investigación se han reducido significativamente. Este trabajo se centra en las estrategias utilizadas por hombres y mujeres procedentes de distintas instituciones científicas donde operan diversos factores contextuales como las culturas científicas, el impacto de la crisis, etc. Los resultados muestran una variedad de situaciones sociales de hombres y mujeres en las instituciones científicas que, sin embargo, tratan de enfrentar las metas y prácticas que definen la excelencia científica.

Palabras clave: Políticas neo-gerencialistas, capitalismo académico, carreras sin fronteras, sesgos de género.

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67

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Ana González, Ester Conesa y Agnès Vayreda *Impacto de las prácticas neo-gerencialistas*

The impact of the new managerial practices in the scientific trajectories of men and women in times of crisis

ABSTRACT

The progressive incorporation of neoliberal practices in scientific organizations has provoked deep changes in the models of scientific career of men and women. Currently, their trajectories are characterized by intense international mobility and an individualized model of progression because professional careers are no longer sustained by one unique institution. Scientific excellence is the justificatory framework, since only those who reach a major number of individual merits will achieve the highest positions on the professional ladder. Austerity policies impose one additional constriction since resources for new enrollments and promotions have significantly decreased. This work focuses on the strategies used by men and women from different scientific institutions where various contextual factors operate, such as scientific culture, impact of the crisis, etc. The findings display a variety of social situations of men and women in scientific institutions that, however, try to deal with goals and practices that define scientific excellence.

Keywords: New Managerial Policies, Academic Capitalism, Boundaryless Careers, Gender Biases.

INTRODUCCIÓN

El concepto de “carrera científica” delimita las etapas que conforman la trayectoria profesional en la investigación. Las escalas laborales, descritas en los cuerpos legislativos y los convenios de trabajo, establecen un recorrido y qué criterios (méritos) hay que tener para acceder a categorías profesionales superiores (LOMLOU, 2007; Ley de la Ciencia, 2011). La descripción de estas escalas laborales proporciona un marco de referencia, al cual subyace cierta declaración de derechos (relacionada con el desarrollo profesional) y compromisos por parte de las organizaciones de sostener las carreras de investigación de su personal. La promoción es un derecho laboral que conlleva la estabilidad laboral, la mejora de las condiciones de trabajo y el salario, así como el reconocimiento de los logros profesionales. La crisis económica, junto a la implementación del neoliberalismo académico, han afectado profundamente al sistema de promoción en las universidades y centros de investigación.

Por una parte, la necesidad de racionalizar los recursos económicos debido a la situación de crisis ha paralizado los concursos del funcionariado y del personal laboral en las universidades. Las necesidades docentes se han cubierto con contratos de asociados de menor coste económico y que están desvinculados normativamente del derecho a la promoción profesional (la legislación dice que han de ser profesionales que aportan su experticia sobre la materia impartida y no se define ninguna carrera docente para este colectivo). También los centros de investigación han sufrido incidencias económicas que han afectado al desarrollo de las carreras científicas. Los grupos de investigación han recibido un número de proyectos inferior al esperado y de menor cuantía económica, por lo que cuentan con menos financiación para sostener sus equipos y personal de investigación y laboratorio. En algunos centros se ha reducido su

plantilla por cuestiones de ahorro y viabilidad¹ y, en general, se tiende a adoptar un sistema de contratación temporal. El número de categorías profesionales estables es excepcional en algunos centros altamente competitivos.

Las trayectorias científicas están afectadas por dos dinámicas reguladoras. Por una parte, la extensión de las políticas de gestión del personal neo-gerencialistas que provienen del liberalismo económico y, por otra parte, la implementación de un discurso de excelencia centrado en la internacionalización de la producción científica. El neo-gerencialismo (Deem, 1998, 2001) pone énfasis en la racionalización de los recursos y la maximización de los beneficios, por lo que desarrolla una fuerte orientación hacia la “marketización” de la producción científica y de la docencia (Slaughter y Rhoades, 2000, 2004). Por su parte, el discurso de la excelencia ha evolucionado hacia una mayor exigencia, contabilización de los méritos y selección de los criterios basados en la internacionalización. Los sistemas de evaluación de la calidad se han extendido y multiplicado generando cada vez mayor carga de trabajo y una gran presión en la cumplimentación de los requisitos (Morley, 2005; Mountz et al., 2015). Y el sistema de promoción descansa sobre patrones de evaluación considerados objetivos, aunque la subjetividad y la pertenencia a redes de influencia influyen inevitablemente en la toma de decisiones colectiva (Van den Brink y Benschop, 2012; Scully, 2002).

El ideal de excelencia científica tiene un impacto diferente en las carreras de hombres y mujeres puesto que un científico varón no verá interrumpida su carrera profesional por razones de maternidad (Bagilhole y Goode, 2001, González et al., 2015). En cambio, se ignoran los sesgos de género que se producen en las prácticas cotidianas, en los procesos de discriminación en los procesos de evaluación y estereotipos de género. Por tanto, como veremos a lo largo de este trabajo, las mujeres siguen trayectorias similares a los hombres en el sentido de que tratan de alcanzar los mismos hitos a pesar de enfrentarse a situaciones sociales (tanto en la familia como en las organizaciones científicas) diferentes a las de los hombres. Sus carreras se ven, en mayor medida, afectadas por el abandono, un ritmo más lento o una menor valoración de sus méritos profesionales.

El objetivo de este trabajo es analizar las estrategias de hombres y mujeres procedentes de distintas instituciones científicas donde operan diversos factores contextuales (cultura científica, impacto de la crisis, etc.) en el contexto de crisis económica y de adopción de un modelo de gestión neo-gerencialista. Para aproximarnos a este fenómeno, hemos utilizado una metodología cualitativa basada en diez estudios de caso llevados a cabo en diferentes centros de investigación y departamentos de universidades del estado español. El trabajo se divide en cuatro apartados. La primera sección presenta algunas aportaciones teóricas que permiten interpretar los discursos del personal de investigación. La segunda sección presenta las características de los centros incluidos en este estudio y la metodología de

¹ Por ejemplo, “El CNIO acuerda reducir su plantilla con 31 bajas voluntarias y ningún despido” según el titular de rtve de 08.01.2014, <https://goo.gl/UdPAMh>

Ana González, Ester Conesa y Agnès Vayreda *Impacto de las prácticas neo-gerencialistas*

acercamiento al objeto de estudio. La tercera expone las narraciones de estas personas a propósito de sus carreras científicas en su contexto institucional. Por último, la cuarta sección, sintetiza los resultados sobre los modelos de carrera científica implementados en las instituciones científicas.

1. VARIACIONES SOBRE UN TEMA, LA(S) TRAYECTORIA(S) CIENTÍFICA(S)

La definición de una trayectoria profesional transparente refleja una política de gestión de recursos humanos eficiente y responsable. La Carta Europea para los Investigadores (European Commission, 2005: 18-19) recoge la necesidad de establecer una carrera investigadora que esté prevista en las unidades de gestión de recursos humanos, y guiada por mentores que tienen la misión de motivar a los investigadores, en cualquier etapa en la que se encuentren, con el fin de reducir la incertidumbre sobre su futuro profesional. Actualmente en España contamos con diversas normativas aplicables a diversas instituciones (universidades, CSIC y centros de investigación regulados por varios organismos), tipos de profesionales (por ejemplo, funcionarios y laborales), vinculadas a las propias organizaciones (normas internas y convenios laborales, dependiendo de la naturaleza jurídica del centro) y por agencias de evaluación externas (que certifican la independencia de la acreditación de méritos). Como resultado de todo ello, podemos afirmar que los modelos de carreras científicas presentan diversas variaciones sobre un mismo tema.

Igualmente, las diferentes culturas científicas han definido históricamente el modelo de ciencia predominante: qué criterios son reconocidos, cómo se desarrollan las trayectorias de excelencia, qué tipo de movilidad se deben realizar. Más allá de las de estos criterios generales, cada área define una cultura propia que influye en las carreras profesionales del personal de investigación. Pongamos el caso de la astrofísica y la arqueología. Ambas disciplinas necesitan realizar trabajo de campo en localizaciones específicas (la astrofísica en observatorios, la antropología en los yacimientos históricos). Mientras la astrofísica ha desarrollado una movilidad constante entre observatorios, la arqueología ha adoptado una estrategia de estancias periódicas en los diversos campos de trabajo.

Además, la movilidad se ha extendido a otros campos del conocimiento como consecuencia de la alta especialización tecnológica (puesto que las tecnologías más avanzadas están localizadas en ciertos laboratorios e instalaciones científicas) y la extensión de una cultura de la excelencia basada en la internacionalización (ya que las mejores investigaciones se producen en un número limitado de institutos o universidades). Cuando la cultura científica gira alrededor de una red de institutos de investigación que trabajan sobre un campo del conocimiento específico (por ejemplo, la robótica) el nomadismo científico se ha establecido como pieza fundamental de creación del conocimiento (Bozeman et al., 2013).

El concepto de “carreras sin fronteras” (*boundaryless careers*) fue propuesto por Arthur y Rosseau (1996) para constatar la nueva forma de relación contractual establecida entre el personal altamente cualificado y las organizaciones científicas. En

dicho modelo prevalece la “agencia” de las personas que investigan, quienes planifican y gestionan sus propios recursos para desarrollar una carrera exitosa, es decir, que se responsabilizan de los resultados logrados en su carrera de investigación (Arthur y Rosseau, 1996; Sullivan y Arthur, 2006). Los investigadores “eligen” su trayectoria laboral mediante la consecución de contratos y becas desempeñadas en diferentes organizaciones que en gran medida, se localizan en distintos países. Así, las organizaciones científicas quedan liberadas de la responsabilidad de ofrecer posiciones de promoción a sus trabajadores a lo largo de su carrera.

Según algunos autores (Roper et al., 2010: 673, Clarke y Knights, 2015), esta dinámica es una extensión de la política económica neoliberal que enfatiza el individualismo frente a la lógica corporativa. En contraposición a los derechos laborales que han sido conquistados por los trabajadores de manera colectiva en las organizaciones, la gestión de recursos humanos neo-gerencialistas se basa en la gestión autónoma de las carreras que consiguen diferentes compromisos y salarios dependiendo de la negociación individual con los gerentes. De esta manera, las instituciones consiguen racionalizar los costes del personal y la fidelización de la élite de trabajadores respecto a los cuales adquieren la responsabilidad de proporcionar unos derechos laborales vitalicios. Ello conlleva una gran presión sobre las personas trabajadoras, que se ven obligadas a demostrar continuamente su productividad (Trow y Clark, 1994; Fassa, 2013).

La extensión de las agencias de evaluación de la calidad (Morley, 2005; Baker, 2010; Mountz et al., 2015) forma parte de este entramado siguiendo la lógica de la contabilización de méritos considerados excelentes. Las instituciones científicas consiguen mejorar sus indicadores gracias al paso de investigadores e investigadoras altamente competitivos que dejan un rastro significativo en las instituciones de acogida en forma de publicaciones, patentes, proyectos financiados y becas conseguidas, pero que han de marcharse cuando finaliza su beca o proyecto. La fuerte competitividad y la falta de posiciones provoca estrategias personales individuales que sustituyen a las estrategias colectivas para enfrentar la precariedad (Clarke and Knights, 2015). Como Morley (2016) apunta, “la academia neoliberal, aunque no esencialmente masculina, puede reforzar masculinidades particulares, produciendo una cultura de la virilidad, que valora las personas en relación a la cantidad de dinero que consiguen – el homo economicus” (Morley, 2016: 32).

De acuerdo con Inkson et al. (2012), las dinámicas globales tensionan las carreras cosmopolitas respecto a las carreras locales. La fuerte vinculación entre la internacionalización y la excelencia devalúa aquellas carreras menos internacionales y centradas en la creación de conocimientos locales. Los centros de investigación y las universidades están obligados a internacionalizar sus resultados para aumentar su competitividad y su posición en los *rankings* (Baker, 2010), por lo que, aquellas instituciones más orientadas a referentes locales y con menor orientación internacional parecen abocadas a producir resultados menos “excelentes”.

En los centros con intensa movilidad internacional no hay apenas personal en posiciones estables (sino contratos cuya duración no supera los cinco años); y las personas que investigan desarrollan su trayectoria optando a becas y contratos en

alguno de los centros que forman parte de la red de “centros excelentes”. Por el contrario, en algunas disciplinas y universidades, la movilidad es temporal y, por tanto, el personal académico retorna a la misma institución (en ocasiones, la movilidad incluso es patrocinada como parte de la estrategia de formación y promoción de su personal de investigación). Del mismo modo, las empresas tecnológicas, a diferencia de las multinacionales, valoran en menor medida las carreras internacionales en contraposición a “la cantera” (es decir, el talento formado en el ámbito local y cuyo trabajo repercutirá en la misma región). Por su parte, las empresas potencian las patentes y la transferencia de tecnología por encima de las publicaciones puesto que su orientación es el mercado y la creación de valor monetario. Los proyectos exitosos permiten evidenciar la valía de los profesionales. Mientras tanto, la jerarquía es mucho más vertical que en los centros de investigación y universidades. En resumen, empresas, universidades y centros de investigación crean diferentes prácticas y discursos sobre la promoción y la captación de talento, que responden a su propia adaptación neo-gerencialista de gestión del personal de investigación.

Además de estas variaciones que provienen del ámbito institucional, hay que añadir la compleja relación entre trabajo y vida personal que influye en las decisiones tomadas por hombres y mujeres investigadores (Brocklehurst, 2003; Ackers, 2004; González y Torrado, 2014). Los hijos y las parejas, la necesidad de reforzar las redes familiares tras un largo período en el extranjero, y la enfermedad o los cuidados de un familiar suelen ser motivos esgrimidos tanto por hombres como por mujeres para retornar (Yeoh y Khoo, 1998). Sin embargo, las mujeres están vinculadas con esas tareas sociales más fuertemente que los hombres. Los hombres que lo hacen son recompensados mientras para las mujeres es una obligación de la cual se derivan consecuencias sociales y emocionales.

La categoría de género está atravesada por factores de clase, origen geográfico y etnicidad, las cuales influyen de manera específica en las trayectorias de investigación. La posición de clase, origen étnico y geográfico repercute tanto en el acceso a los recursos como en la planificación de la carrera y en la estrategia familiar. Ello influye en las metas a perseguir por las mujeres y en los resultados logrados profesionalmente. Hombres y mujeres de distinto origen social desarrollan diferentes estrategias que, en primer lugar, impactan sobre sus trayectorias profesionales y, en segundo lugar, sobre las representaciones sociales que construimos acerca de ellos y ellas. Estas expectativas sobre su capacidad influyen en las metas profesionales que lograrán. Por ejemplo, esperamos que un hombre indio sea bueno en matemáticas pero no esperamos que una mujer iraní ganase la medalla Fields.

Sobre este tapiz lleno de posibilidades, las personas trazan distintas trayectorias de investigación. La objetividad y la transparencia de los procesos de evaluación -que se identifican con la excelencia científica- refuerzan el esfuerzo realizado por los jóvenes para avanzar a lo largo de la trayectoria laboral (Rees, 2011). A pesar de ello, los sesgos producidos por expectativas estereotipadas de género, clase y etnia producen desviaciones respecto a los principios de identificación del talento (Bagilhole y Goode, 2001; Van der Brink y Benschop, 2012; Scully, 2002). Además, la crisis económica justifica la modificación de las normas que regulaban la progresión profesional, puesto

que, aun cumpliendo los requisitos meritocráticos, la estabilidad laboral y la promoción profesional no están aseguradas. Uno de los efectos de la crisis ha sido la “cola” de candidatos y candidatas con acreditaciones y cumplimiento de méritos suficientes, que se están viendo obligadas a prolongar el tiempo de espera hasta lograr una posición superior o que, en el mejor de los casos, se han visto obligados a encontrar becas en otros países (la llamada fuga de cerebros). En el peor de los casos, algunas personas desistirán de continuar una trayectoria inestable e incierta, abandonarán la investigación, y aceptarán una posición técnica, de gestión de proyectos o, simplemente, cambiarán completamente de profesión. Estas personas, como veremos en los resultados de este trabajo, son mujeres en mayor medida (a veces, parejas de un compañero científico que, sin embargo, continúa progresando académicamente).

2. METODOLOGÍA DE INVESTIGACIÓN

El presente trabajo está basado en los resultados de diez estudios de casos realizados dentro del marco de un proyecto más amplio, GENERA: Generación de una economía del conocimiento más inclusiva y competitiva (FEM2013-48225-C3-1-R), que tiene como objetivo identificar los sesgos de género en las instituciones científicas. Con el objetivo de identificar las estrategias de hombres y mujeres en distintas instituciones científicas y qué modelos de trayectorias adoptan de acuerdo a su cultura, políticas neo-gerencialistas e impacto de la crisis económica se ha llevado a cabo diez estudios de casos. En concreto, se eligieron dos instituciones del campo de las tecnologías (informática y telecomunicaciones), dos de ecología (marina y forestal), dos de ciencias de la salud (biomedicina y biología molecular), una de ciencias experimentales, una de humanidades, una de ciencias sociales y una de arquitectura. Cuatro de esas instituciones pertenecían al ámbito académico universitario, cuatro a centros de investigación con financiación mixta, una al CSIC y una empresa de innovación, situadas respectivamente en Cataluña, Madrid, Andalucía, País Vasco y Galicia respectivamente.

La cultura institucional de estos centros demuestra una gran variabilidad respecto a su productividad, internacionalización y competitividad lo que influye en las prácticas de gestión del personal de investigación y en la autogestión de las carreras científicas. Así pues, las unidades de observación presentan perfiles muy variados que podemos situar en algún punto concreto de entre estos tres tipos de centros:

- Centros de investigación (con financiación privada y pública) altamente competitivos y orientados a la internacionalización de su investigación, con un porcentaje de posiciones estables muy reducido, y un bajo nivel de compromiso en la promoción de las carreras de investigación de su personal.
- Departamentos de universidad, desde algunos altamente competitivos y claramente orientados a la investigación hasta otros más orientados a la docencia de grado y no a la investigación; con un elevado número de funcionarios y posiciones fijas o con un alto número de ‘falsos asociados’ y, en general, de investigadores contratados en condiciones precarias.

- Empresa de innovación con una fuerte orientación hacia la investigación nacional requerida por el mercado local (puesto que no pertenecía al grupo de empresas multinacionales) y con una fuerte participación en consorcios internacionales para llevar a cabo proyectos de investigación. El personal de investigación trabaja con ritmo empresarial, ejecutando proyectos solicitados por los clientes a los que tiene que “vender el producto”. Los equipos de trabajo son jerarquizados y su plantilla es mayoritariamente local que, en cambio, cuenta con bastante probabilidad de estabilidad laboral.

La aproximación metodológica a las unidades de observación fue la misma para todos los casos de estudio. Una vez realizado el contacto y adquiridos los compromisos de colaboración entre la institución y el equipo de investigación, se emprendió una fase de investigación sobre la documentación institucional. El análisis se centró en la normativa y los materiales informativos sobre el centro, los medios de difusión on-line y off-line de cada centro (página web, trípticos, dossieres, etc.).

En segundo lugar, se realizaron entrevistas personales para conocer las trayectorias de los hombres y las mujeres investigadoras. El número de entrevistas era variable en cada centro dependiendo de la dimensión de la unidad elegida (la unidad esencial en la universidad era el departamento y el centro de investigación en el resto de los casos, por lo que el número de personas integrantes de cada unidad era diferente). En cada centro se eligieron un hombre y una mujer de cada categoría laboral que representaban posiciones significativas de la carrera profesional en la institución (por ejemplo, líder de grupo, *staff scientists*, postdoc; catedrático, titular de universidad, contratado doctor y ayudante doctor). Por tanto, contamos con el relato de personas situadas en diferentes momentos de su trayectoria científica. En las entrevistas, se exploró tanto el pasado, como el presente y las expectativas futuras. En total, se realizaron alrededor de 80 entrevistas de una duración de una hora a dos horas, completamente balanceadas en términos de género.

En tercer lugar, la persona encargada de cada estudio de casos elaboró una representación gráfica de la carrera profesional de su informante (egogramas) y lo retornó a cada persona de manera que pudiera validar la información contenida en ella. De este modo, también se validó la interpretación que la entrevistadora sobre los discursos de las personas entrevistadas. En los egogramas se señalaron los principales hitos personales y profesionales, reflejando las interrupciones o continuidades en la trayectoria laboral, y las personas o elementos que facilitaron o dificultaron su trayectoria profesional y su vida personal. Una ventaja de esta metodología es que permite validar la interpretación que la entrevistadora hace sobre las biografías de las personas entrevistadas. La limitación de esta metodología se ciñe a la dificultad de sistematizar la información de manera analítica. En cambio, supone un documento de trabajo adicional de debate y de reflexión sobre la estrategia descrita por cada informante en un momento determinado (durante el proceso de implementación de la entrevista) que se extenderá en un momento posterior.

En cuarto lugar, se realizó una reunión colectiva con investigadores senior que usualmente son elegidos como miembros de los comités de selección y contratación del centro. Dependiendo del tamaño de la unidad del centro, los comités están formados

entre 3-5 personas, siempre prefiriendo número impar de componentes total y con la mayor diversidad de género (por ejemplo, dos mujeres y hombre o tres mujeres y dos hombres). En dicha entrevista se simuló un proceso de selección entre dos candidatos imaginarios, lo más parecido posible a la dinámica utilizada en cada centro para incorporar personal doctor. Para ello, se les mostraba dos currículos, de un hombre y de una mujer, con características diferentes (se introducía un elemento de variación dependiendo de la disciplina y de los factores que se juzgaban más significativos para cada centro). Así, por ejemplo, se introdujeron diferentes factores, como que fueran candidatos internos o externos, que estuvieran más orientados a la docencia o a la investigación, que presentaran cartas de recomendación más o menos extensas, pobres o detalladas en información personal, etc. Durante la reunión se invitó a los supuestos miembros del tribunal a discutir sobre sus perfiles y a consensuar un candidato. Una vez tomada la decisión, se daba por finalizada la reunión, y se les pedía que respondieran a un pequeño cuestionario (individual y anónimo) en el que se les preguntaba por el proceso de decisión (si estaban satisfechos con el acuerdo, si consideraban que el consenso había sido fácil o difícil, quién y con qué argumentos había influido en su voto final).

En último lugar, se elaboró un informe describiendo el clima de la unidad de estudio de casos, las principales características respecto al equilibrio de género y la igualdad de oportunidades. Este documento, además de responder a la necesidad de devolver la información a la población de estudio (Taylor y Bogdan, 1984), valida la interpretación realizada por parte de la persona encargada del estudio de caso, suscita nuevos comentarios de los participantes en el estudio y a una nueva reflexión sobre los discursos contruidos por las personas involucradas y la investigadora.

La información obtenida a través de esta metodología es muy amplia y, por tanto, difícil de sistematizar en un sólo artículo. Así que, en este trabajo se enfatiza aquella información obtenida sobre el impacto de las prácticas neo-gerencialistas en cada una de las metodologías aplicadas y acerca de la excelencia en los procesos de incorporación y promoción. También se refleja aquellos rasgos emergentes debido a los efectos de la crisis que impregnan las políticas de (in)estabilización y las condiciones laborales del personal de investigación. Por esta misma complejidad de la información, se muestran las citas de las biografías y no de las interacciones posteriores o de las reuniones grupales que serán expresadas en trabajos posteriores.

3. ESTRATEGIAS DE ÉXITO, ESTRATEGIAS DE RESISTENCIA

Aunque el título de esta sección refleja dos situaciones antagónicas, las dos ideas sintetizan una realidad comúnmente experimentada por los investigadores e investigadoras a lo largo de sus trayectorias científicas de manera secuencial y continuada. Durante la carrera de investigación se producen diversos acontecimientos que terminan por dibujar su trayectoria profesional (González, 2014), factores externos que determinan sus oportunidades laborales (la creación de nuevas universidades y centros de investigación o la ausencia de recursos, el número y el nivel de los candidatos en competencia, el apoyo o la obstaculización de los colegas y supervisores,

etc.) más allá de sus méritos y acreditaciones. Dichas variaciones también están ligadas a factores culturales (de organización de las instituciones y de las disciplinas de conocimiento) e individuales (desde rasgos de personalidad hasta condiciones personales y familiares). Incluso ante situaciones parecidas, hombres y mujeres abordan las decisiones de manera diferente según sus roles de género. En esta primera parte de los resultados, diversos ejemplos ilustran esta circunstancia.

Generalmente, las personas que se dedican a la investigación suelen mostrar una fuerte implicación en su trabajo científico, unas expectativas altas respecto a sus competencias, y una fuerte determinación respecto a sus metas profesionales (Fusulier, 2016). Dicha actitud les permite afrontar numerosas dificultades y decepciones a lo largo de su trayectoria científica. El sacrificio y la superación de las dificultades forman parte de las trayectorias de investigación tanto como los éxitos. Así relata su incorporación al mundo de la ciencia, un investigador senior en un centro mixto de investigación centrado en la ecología:

[Sobre la beca de doctorado] "...y el primer año no me la dieron. El segundo tampoco. El tercero tampoco. Y el cuarto año, sí. El último año que me la podían dar, me la dieron [risas]. Porque también tenía claro que, si podía, quería hacer investigación" [Hombre, 45 años, sin pareja ni hijos, director de proyectos, centro mixto].

Las decisiones sobre las relaciones personales no son independientes de las estrategias profesionales (González y Vergés, 2013). Los investigadores sienten estas dos circunstancias como factores entrelazados que impulsan o limitan sus carreras profesionales en momentos decisivos de su trayectoria profesional. Estas encrucijadas entre su vida profesional y personal están relacionadas con el cuidado, retos profesionales estimulantes, negociaciones con la pareja, preferencias por un país y estilo de vida determinados, entre otros factores. Además, como ya afirmamos en un trabajo anterior (González y Torrado, 2014) las razones aparecen entremezcladas en su discurso sin poder discernir la primacía de unas sobre otras.

Entrevistado [E]: "En la Universidad del Estado de Louisiana. Louisiana State University, que está en Baton Rouge. Y estuve allí, bueno, 15 días. Después de 15 días cogí y dije 'Este pueblo no me gusta... y me marchó' Y..."

Investigadora [I]: Y ¿por qué no te gustaba?

E: Bueno, a ver, Louisiana es uno de los Estados de Estados Unidos más oprimidos. Es uno de los 3 Estados, junto con Mississippi y Alabama seguramente más... más... eh... más pobres, donde también han robado más, pero eso es históricamente, no viene al caso. Y... y bueno, luego también, en esa época tenía un problema fa... familiar, porque mi madre se había puesto enferma. Entonces, eh...justo... justo en aquella época le habían operado por tercera vez un cáncer y le tenían que volver a dar quimioterapia. Y...y bueno, en ese momento pues, en plan, sumé todas las variables, puse en la balanza las cosas que me importaban en ese momento y dije: "mira, yo prefiero marcharme de aquí... y... ¡y cuidar de mi madre!". También es cierto que... tomé la decisión... creo que fue en septiembre, cuando una tormenta tropical llegó a Baton Rouge y... yo estaba

Ana González, Ester Conesa y Agnès Vayreda *Impacto de las prácticas neo-gerencialistas*

sin coche y... bueno, estuve como una hora caminando bajo el agua... tuve que andar en plan... tres millas, o a no sé cuántas, hasta donde estaba el departamento. Y dije: '¡Esto no es vida!'. O sea, simplemente... Entonces, fue cuando dije 'yo me voy de aquí'" [Hombre, 34 años, sin pareja ni hijos, programador, empresa tecnológica].

La pasión y los éxitos están acompañados por momentos de sacrificio (Vázquez y Elston, 2006), sobre todo, en el caso de las mujeres. Por lo que se refiere a la movilidad, la estabilidad emocional, la negociación con las parejas y el cuidado de las familias marcan profundamente la decisión de retornar al país de origen (Yeoh y Khoo, 1998; Xie 2010; González y Torrado, 2014). Debido al rol de género adjudicado socialmente, este tipo de decisiones se viven de manera aceptada y menos cuestionada (Baker, 2010). Incluso en casos como el siguiente en que la investigadora entrevistada recalca previamente el sentimiento de bienestar y buen ambiente científico en Alemania donde desarrollaba satisfactoriamente su carrera científica:

E: "Son muchos años en un país. Entonces pensé, ¿bueno nos volvemos o nos quedamos?"

I: ¿y tu pareja había venido contigo?

E: No, nos conocimos allí en [centro prestigioso]. Él había llegado creo que un año antes que yo (...). Y luego pensamos, "¿qué hacemos?" porque... O sea hay un momento en el que tienes que... ¡Nos organizamos la vida! Entonces a mí me ofrecían en Berlín un trabajo, y en el mismo instituto también le buscaban a él opciones. Y después surgió esto de [centro prestigioso español] y bueno, a [él] no le gustaba mucho Berlín y me pareció que era mejor movernos. (...). Entonces nos vinimos, yo con una plaza de ICREA [programa de excelencia catalán] y [él] sacó... Primero tenía un Ramón y Cajal y luego sacó la plaza en el CSIC y ya nos organizamos aquí la vida. (...). Es que llega un momento en que empiezas a pertenecer al sitio donde vives. Y... A mí me gustaba, aún sigo yendo, sigo manteniendo mucho contacto con Alemania y me sigo sintiendo en casa. Pero claro nos tiene que gustar a los dos... Y bueno también, claro, yo ya tenía a mi madre que ya se iba haciendo mayor aquí en España y llevarla a Alemania tampoco era una cosa... no es un país... no es un idioma sencillo. Y bueno, al final decidimos que aquí.

I: Pero por lo que veo por ti te hubieras quedado, ¿no?

E: Sí, me hubiera quedado, sí (risas). Si no hubiera tenido que pensar en otras personas me hubiera quedado sin duda, sí." [Mujer, 52 años, con pareja, sin hijos, líder de grupo, centro mixto].

4. TRAYECTORIAS CON REDES DE APOYO Y TRAYECTORIAS INDIVIDUALIZADAS

Las carreras científicas son el resultado de un proceso, a veces consciente (vocación), a veces, inconsciente que se va construyendo poco a poco: "Fue la vida

Ana González, Ester Conesa y Agnès Vayreda *Impacto de las prácticas neo-gerencialistas*

que me fue llevando por allí” [Mujer, 49, casada segundas nupcias sin hijos, ecología, centro mixto]. Están fuertemente ligadas a las oportunidades laborales, y a la obtención del apoyo necesario para conseguir una posición sólida: “...Y me llegó una oferta porque había trabajado con ellos dentro de la universidad, de una empresa conocida en... en Bilbao, y la acepté” [Mujer, 32 años, en pareja, sin hijos, programadora, empresa tecnológica].

“Entonces, yo entré guiada, pero yo me ‘jarté de currar’. Entonces, se presentó la beca, yo solicité la beca y, nos la dieron a varios, no sólo a mí. Varios entramos y hicimos... había que diseñar un laboratorio, una red de un laboratorio... Pues, entre varios lo hicimos. Yo cobré mi beca y ya tenía mi mérito. Y después me dijo el director [del departamento], antes de que hubiera plazas libres: ‘Mira, hay un... yo tengo un proyecto, tengo que contratar a alguien...’. Me lo ofreció a mí. Se lo podía haber ofrecido a otro, pero lo me ofreció a mí. Y me contrató tres meses para hacer un trabajo, y yo lo hice, cobré y ¡ya está! ¡Y ya tenía esos puntos! Cuando llegó la hora de que había plazas libres, cuando la gente se presentó, yo era la que tenía más puntos”. [Mujer, 39 años, divorciada, un hijo, ayudante doctor, universidad].

Las carreras profesionales son más fluidas si se cuenta con personas que las apoyan, orientan a la persona candidata sobre los próximos pasos a dar o, simplemente, las incluye en proyectos del grupo. Las relaciones personales con profesionales sénior son en unas ocasiones más visibles que en otras en los discursos de las personas entrevistadas, curiosamente, tanto si han ejercido una influencia positiva como si han ejercido una influencia negativa en sus carreras profesionales. Es posible encontrar casos que han conseguido una posición permanente a pesar de carecer de apoyos personales en la institución. Estas personas han hecho valer los méritos alcanzados, necesariamente superiores a los del resto de personas candidatas, gracias a la aplicación de un baremo objetivo que les sitúa por encima del resto. Todo ello a pesar de que la situación de crisis no ofrece oportunidades de incorporación que puedan aprovechar las personas con los méritos necesarios (a veces muy superiores) para cubrir esas posiciones de promoción. Muchas veces incluso a pesar de tener un sistema de apoyos positivos y circunstancias favorables en sus centros de trabajo.

La mujer de la siguiente cita ha encontrado diversos problemas a lo largo de la carrera porque carecía de una red que la apoyara en su departamento:

“El director de mi tesis era el director del departamento, que no me había avisado que salía la plaza, aunque yo le había dicho que estaba interesada. Pero es que el que la había ocupado antes era su favorito. Y, entonces, que pasara yo a ocupar esa plaza... pues era muy duro. Por eso no me avisaron. Y cuando pasó todo eso, yo conseguí quedarme, y este hombre me dijo que no me seguía dirigiendo la tesis y tuve que cambiar de director de tesis” [Mujer 52 años, con pareja, sin hijos, arquitectura, titular de universidad].

Por tanto, ha realizado una carrera discontinua, ya que ha “abandonado” la carrera científica en diversas ocasiones, desviándose de la trayectoria lineal que supuestamente debía desarrollar un investigador excelente. Sin embargo, ella ha estado desvinculada

varias veces de la universidad, tanto para realizar estancias duraderas en el extranjero como para ocupar puestos en instituciones no académicas. A pesar de la oposición de los grupos de interés en su departamento, ha alcanzado la plaza de titular, y sigue trabajando para lograr la posición de catedrática. En su caso podemos confirmar que, pese a la falta de apoyos, una evaluación objetiva de los méritos ha permitido una evaluación positiva. Sin embargo, la mayoría de los relatos de las personas entrevistadas dejan entrever que, incluso sin haber nepotismo en la asignación de plazas, el conocimiento previo de la persona candidata es una ventaja fundamental para ser evaluada positivamente e, incluso, contar con la información necesaria para participar en el concurso de méritos es una condición previa para promocionarse. Por otro lado, también se puede afirmar que conforme las carreras son más individualizadas, la capacidad de dirigir una carrera de investigación hacia una posición de cátedra o dirección en la universidad tiene menos probabilidad de éxito para esas personas. En algún punto de la carrera tienen que conseguir redes suficientemente influyentes para que apoyen su candidatura, hecho que está cargado de connotaciones de género.

Las “carreras sin fronteras” (Arthur y Rosseau, 1996; Sullivan y Arthur, 2006) son un ejemplo de carreras individualizadas pero debidas a una dinámica institucional. En tres de los cinco centros de investigación incluidos en este estudio, la mayoría de las figuras contractuales son temporales y las carreras de investigación se construyen a partir de la movilidad entre centros pertenecientes al mismo campo de especialidad. A través de estas movilizaciones sucesivas se transfiere el conocimiento entre los grupos de investigación, el candidato adquiere experiencia, acumula los méritos curriculares deseados y, finalmente, consigue autopromocionarse en las redes de influencia (Roper, 2010; Inkson, 2012). De este modo, los y las jóvenes doctores van sumando numerosas becas postdoctorales en diferentes países. El siguiente investigador es, justamente, un contraejemplo pero con su discurso nos muestra cuál es la “norma”: “Soy un postdoc atípico porque he hecho una postdoc de nueve años en un sólo sitio. Esto no es típico” [Hombre 34 años, sin pareja ni hijos, postdoc, centro mixto].

En los centros red, donde incluso los directores y las directoras de los grupos de investigación desarrollan carreras nómadas, es fundamental contar con la confianza de los superiores para continuar la trayectoria de investigación. Si un o una líder de grupo se traslada a otro laboratorio, puede llevarse consigo a uno o más miembros de su equipo. Los miembros que no son “convocados” por el o la líder del grupo, no sólo pierden su contrato sino todo el trabajo de investigación que estuvieran desarrollando; puesto que el experimento no puede continuar sin el laboratorio, que desaparecerá con el líder del grupo, esta persona se quedará sin su línea de investigación.

La crisis económica y la menor aportación financiera conseguida a través de los proyectos ha perjudicado la incorporación de un mayor número de personas en los últimos años. Las trayectorias de las mujeres se resienten en mayor medida por esta circunstancia, puesto que los y las líderes de grupos (la mayoría hombres) no suelen elegir las ni siquiera valorarlas como investigadoras potentes: “yo no he oído nunca, nunca jamás en este centro que a mí se me alabe por mis dotes de investigadora, en cambio sí que se valora mucho mis dotes de gestión” [Mujer, 47 años, con pareja, sin

hijos, ecología, centro mixto]. Como se afirma en esta cita, las trayectorias de otras mujeres también confirman la influencia de las decisiones de sus jefes y las expectativas que tienen sobre ellas. Son ellos quienes les han encargado de la organización del laboratorio, la puesta en marcha de las aulas de prácticas o el desempeño de tareas burocráticas en lugar de apoyarlas para que tomen responsabilidades relacionadas con la investigación. Las mujeres no suelen otorgar a esta situación una categoría de discriminación, puesto que consideran que es una situación circunstancial asociada únicamente a ellas mismas (Kelan, 2009); sin embargo, la repetición de esta pauta de comportamiento permite constatar que no es una práctica aislada sino un sesgo de género.

5. NEO-GERENCIALISMO Y EXCELENCIA EN TIEMPOS DE PRECARIEDAD

El neo-gerencialismo ha modificado la relación contractual del personal investigador con las instituciones científicas. Sirva como ejemplo el caso de un centro mixto, con fuerte financiación del gobierno autonómico, donde la falta de financiación ha cambiado su modelo de gestión económica:

“Lo que pasa que ha ocurrido... lo que ha ocurrido, es que ha habido recortes y... ya... ahora lo que nos ha ocurrido a todos los investigadores de plantilla... es que una parte de nuestro sueldo, de alguna manera, depende de proyectos; que hasta entonces, más o menos [la partida de personal] quedaba cubierta simplemente sin... Teníamos proyectos, obviamente pero no dependíamos de estos proyectos. Ahora sí” [Hombre, 42 con pareja, sin hijos, segunda postdoc, centro mixto].

Las políticas de austeridad suscitan una gran presión entre el personal de investigación puesto que les exige resultados cuantitativos, de acuerdo a la “excelencia” y meritocracia, mientras también se agudizan las situaciones de precariedad e inestabilidad laboral. En este sentido, un investigador de un centro del área experimental afirma:

“Antes eran contratos de tres, cuatro años, ahora se va reduciendo y, entonces, quieren gente tan especializada que al tercer día ya estén rindiendo. Incluso ahora te ofrecen una postdoc de 10 meses que no tiene ningún sentido porque entre que te acostumbras al llegar y que buscas trabajo para cuando se acabe, ¿cuando trabajas?” [Hombre 34 años, sin pareja ni hijos, postdoc, centro mixto].

La consecución de resultados rápidos a pesar de ser conscientes de que los experimentos requieren tiempo genera frustración y desánimo entre las personas que se dedican a la investigación. En su conjunto, se genera un entorno hostil debido a la alta competitividad que promueve la emergencia de estrategias individualistas (Clarke y Knights, 2015; Morley, 2005). En la siguiente cita, un investigador reflexiona sobre la precariedad y la lógica de la competitividad en la ciencia, cuya consecuencia es una menor atención a la calidad de la investigación:

“¿Cuál es el problema del postdoc? Es que tiene una vida media de dos o tres años, y si quieres hacer una ciencia... experimentos que son muy de impacto, es

normal, es muy probable que tengas que invertir dos años. ¿Y si no me salen o me salen mal? Que en dos años no sacas nada ¿Quién me va a garantizar una plaza? Esto te motiva pero de otra forma, puede fomentar a largo plazo el hecho que los postdoc se hagan cada vez más individualistas y miren objetivos a medio o corto plazo” [Hombre, 40 años, sin pareja ni hijos, postdoc sénior, centro mixto].

La crisis ha potenciado la situación de precariedad laboral de las personas que se dedican a la investigación, en cualquiera de los centros de investigación incluidos en este estudio. En las universidades con tradición de apoyar las carreras científicas según un modelo meritocrático, se han paralizado las convocatorias de promoción y la de incorporación de nuevas candidaturas. En los centros de investigación los salarios de las becas y contratos de investigación han sido menos atractivos, por lo que las personas se han encontrado con el dilema de aceptar contratos en España aceptando peor salario o en otros países donde los salarios y las ventajas para investigar son más competitivos. En algunos centros, las personas entrevistadas han manifestado quejas sobre la desigualdad salarial entre el personal de investigación de origen extranjero y local puesto que sospechan que para atraerlos se les ofrece mejores condiciones laborales. El hecho de que los sueldos y las condiciones de trabajo sean negociados individualmente asegura esta sospecha entre todas las personas de los centros de investigación. Ello pone de relieve la tensión existente en la política científica sobre la necesidad de atraer talento del extranjero y la de estimular a las personas que conforman la “cantera” local.

La situación es especialmente delicada para las personas que sostienen un largo período de espera sin conseguir una plaza de promoción que les permita abandonar las condiciones de inestabilidad y les proporcione el reconocimiento que merece su esfuerzo: “Estoy intentando aguantar... porque ya no tengo edad de... no tengo ganas de cambiar...mmm... pero sinceramente el mundo de la ciencia, en este momento, es bastante deprimente porque hay falta de crítica...” [Mujer, 49 años, casada segundas nupcias sin hijos, centro mixto]. Para ellas no es sólo una cuestión de justicia meritocrática sino de poder realizar un trabajo de mayor calidad con una menor presión sobre el tiempo de trabajo (Lyon y Woodward, 2004). Poner la ciencia en el centro del trabajo de investigación en vez de la metrificación de los resultados científicos.

Por último, queremos enfatizar el tema de la brecha de género en las posiciones de mayor responsabilidad de la escala profesional, puesto que la ausencia de plazas de promoción por razones económicas ha impedido avanzar en su eliminación o, al menos, la disminución de posiciones disponibles. Como no ha habido una oferta de plazas para estas figuras contractuales, las mujeres han tenido muy pocas oportunidades de alcanzar las categorías de catedrática, profesora de investigación o líder de grupo. Por tanto, los hombres siguen siendo mayoritarios en estas posiciones laborales. Esta investigadora del área de la informática lo expresa así:

“...Entonces, es gente que ha tenido una carrera profesional que empezó en su momento, y que consiguió su puesto, y sigue en él. Entonces, como no hay vacantes... ¡siguen los que estaban! Y en ese momento eran casi todos hombres...” [Mujer, años, sin pareja ni hijos, centro tecnológico de innovación].

6. CONCLUSIONES: PONER LA VIDA Y LA CIENCIA EN EL CENTRO DE NUESTRA ACTIVIDAD

El establecimiento de un modelo de carrera científica sirve como garantía de estabilidad, promoción y reconocimiento de los méritos científicos. Sin embargo, tanto la crisis como las prácticas neo-gerencialistas han modificado de manera sustancial las trayectorias profesionales. Por una parte, la falta de recursos económicos ha disminuido las oportunidades laborales de hombres y mujeres en la investigación: disminuyendo el número de ofertas laborales, precarizando las condiciones laborales y los salarios, aumentando la inestabilidad laboral y sosteniendo el techo de cristal de las mujeres investigadoras. Por otra parte, la aplicación de un modelo de excelencia ligado a las prácticas neo-gerencialistas de gestión de los recursos humanos sostiene una dinámica donde se premia la rapidez y cantidad de los resultados científicos en vez de la calidad del trabajo y la armonización con los tiempos requeridos para lograr hallazgos significativos en ciencia. La exigencia es tan alta que los y las investigadoras expresan disconformidad respecto a esta lógica extrema de competitividad, que ha convertido las organizaciones científicas en un ambiente hostil para el conocimiento científico. La rapidez y metrización de los resultados de investigación están generando crecientes críticas sobre el modelo de producción científica que, necesariamente, perjudica a la calidad de los resultados y las condiciones de trabajo en los que se producen.

En este artículo también hemos constatado la diversidad de estrategias de progresión científica entre hombres y mujeres, debido tanto a razones objetivas como subjetivas, donde las razones personales y profesionales se entrecruzan constantemente, dificultando la identificación de una motivación prioritaria por la cual las trayectorias se ralentizan o interrumpen. Las lógicas de cada cultura científica, marcadas tanto por la disciplina como por la institución o instituciones de socialización, definen los retos a los que se enfrentarán y las estrategias de promoción (con una carrera más o menos internacionalizada de sus trayectorias, desarrollada en un solo centro o sin fronteras entre países y laboratorios, etc.). Al esfuerzo personal y la pasión por el trabajo, imprescindibles para desarrollar una carrera en ciencia, hay que añadir la influencia de las redes de apoyo que ejercen una influencia positiva o negativa en sus trayectorias. La aplicación objetiva de los méritos de investigación se presenta como una garantía para asegurar la progresión basada en la meritocracia pero, en general, el conocimiento del entorno y la ayuda de los compañeros y superiores favorecen la consecución de una trayectoria profesional exitosa.

Por una parte, hombres y mujeres investigadores son afectados desigualmente por procesos de valoración de sus resultados, puesto que se reconocen más difícilmente los méritos de las mujeres, se prescinde de ellas en los equipos de trabajo sin razones aparentes o se les encarga tareas menos competitivas (administrativas más que de dirección de la investigación). Estructuras de género organizan las vidas personales de hombres y mujeres, dejando una mayor responsabilidad a las mujeres. Sin embargo, éstas son obligadas a seguir las lógicas y prácticas institucionales que aseguran la progresión de modelos ideales masculinos. Aunque la familia es un factor que incide tanto en las carreras de los hombres como de las mujeres, éstas últimas están marcadas

por el rol de género adjudicado socialmente, que influye tanto en sus propias decisiones como en las decisiones que se toman acerca de ellas. De este modo, algunas mujeres se quejan de la falta de atención que merece su perfil de investigación para las personas que dirigen los equipos, quienes las relegan a papeles relacionados con la burocracia y la organización del centro. Así, no disponen del estímulo y el tiempo necesario para dedicarse a la creación científica, que impulsará sus carreras profesionales. Es posible que este sentimiento de frustración sea el resultado de una mayor concienciación de las mujeres frente a las dificultades con las que se enfrentan. Es una dinámica que viene de lejos, fruto de la dinámica de subordinación que las mujeres sufren sistemáticamente al incorporarse en los contextos profesionales masculinos.

En definitiva, las personas dedicadas a la investigación viven las tensiones del modelo neo-gerencialista y basado en criterios de excelencia de manera paradójica. Por una parte, se les presiona para generar un mayor número de resultados científicos en un período de tiempo más breve, por otra parte, el ambiente se vuelve más hostil por la elevada competitividad y se precariza su situación laboral. Es más, la inestabilidad laboral se instituye como modelo de progresión en los centros de excelencia y en las universidades al no estar aseguradas la financiación económica de sus plazas de promoción. La movilidad se vuelve una exigencia para el desarrollo de una trayectoria excelente, pero en muchas disciplinas esta dinámica no tiene fin debido a la alta especialización tecnológica y a su modelo de excelencia. La falta de recursos y plazas también extiende esta dinámica a otras áreas, fenómeno que corre en paralelo con la “fuga de cerebros” debido a la crisis. Todos estos factores afectan seriamente a los proyectos vitales y personales, a veces poniendo en una disyuntiva la carrera o los cuidados en sus vidas personales.

Desde el momento en que las mujeres son quienes tienen que demostrar que la vida personal no es un impedimento para lograr los mismos hitos profesionales, son ellas las que deben esforzarse más, demostrar en mayor medida su determinación. Dicho esfuerzo no se reconoce suficientemente, ya que no se valora lo personal como parte de la vida profesional. La separación entre estos dos ámbitos se realiza desde un paradigma de neutralidad que mantiene a las mujeres en una situación de inferioridad. No es que la movilidad internacional sea un impedimento para que las mujeres desarrollen trayectorias científicas excelentes, es que se omite sistemáticamente el hecho de que han tenido que realizar un mayor esfuerzo. Las agencias de evaluación, por ejemplo, justifican que las evaluaciones son totalmente objetivas razonando que los miembros de las comisiones de evaluaciones no deben tener en cuenta incidencias personales que afecten a las trayectorias profesionales de las personas evaluadas. Por tanto, la objetividad consiste en ignorar a las personas que, justamente, son el objeto mismo de la evaluación.

Se vuelve indispensable volcar nuestra atención sobre los derechos laborales del personal investigador, así como en los factores que agudizan la brecha de género, puesto que el contexto de crisis agudiza las dificultades que las mujeres encuentran para incorporarse en figuras de estabilidad científica y posiciones de responsabilidad. A pesar de que encontramos disconformidad con el sistema científico actual, sobre la

Ana González, Ester Conesa y Agnès Vayreda *Impacto de las prácticas neo-gerencialistas*

dinámica neo-gerencialista y de excelencia, estas lógicas se aceptan sin casi cuestionamientos. En este punto es importante reivindicar la situación precaria y desigual del personal de investigación para generar espacios colectivos de resistencia y transformación. La entrada de mujeres a posiciones estables y en puestos de responsabilidad es más difícil por el estrangulamiento del número de plazas. Socialmente, las mujeres son consideradas menos resistentes en posiciones de presión que los hombres. En consecuencia, se actúa prefiriendo a los candidatos masculinos puesto que tradicionalmente sólo los hombres deben mantenerse en el mercado laboral, especialmente cuando el mercado laboral es precario. Si las mujeres se retiran no es un problema socialmente preocupante ni un defecto del mercado laboral, por el contrario, se considera que es el resultado de la voluntad de las mujeres o de su quiebra ante las dificultades. Este discurso se repite sin cesar en nuestro imaginario colectivo construido con diferentes retóricas por hombres que imaginan a las mujeres llevando una pesada carga y de las propias mujeres que, desde una posición de seguridad profesional, consideran débiles a las que abandonan.

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ANNEX V.
GENERA METHODOLOGICAL
DOCUMENTS



**Proyecto de Investigación Coordinado del Programa Retos FEM2013-48225-C3-1-R:
"GENERA: Generación de una economía del conocimiento más inclusiva y competitiva"**

GUIÓN DE ENTREVISTA A INVESTIGADORAS/ES: TRAYECTORIAS PROFESIONALES		
<p>Nombre de la institución:</p> <p>Nombre del entrevistado/a:</p> <p>Categoría:</p> <p>Código entrevista :</p> <p>Fecha:</p>		
Aspectos formales de la trayectoria investigadora	Aspectos no formales de la trayectoria investigadora	Observaciones
Aspectos relacionados con la formación académica		
<p>Titulación y fecha (calificación)</p> <p>Premios extraordinarios, becas de colaboración u otras</p> <p>Grado de Doctor/a y fecha, nota, universidad (pública/privada)</p> <p>Otras titulaciones universitarias o formación posgrado (máster, experto)</p>	<p>Edad a la que empezó a estudiar y a la que terminó el Grado o Licenciatura</p> <p>Aspectos que facilitaron o dificultaron la graduación (Apoyo familiar, apoyo docente, becas, situación familiar holgada, migración, cargas familiares, otros)</p> <ul style="list-style-type: none"> - Estudio en la misma ciudad donde nació o residió - Tenía cargas familiares o desarrollaba otros trabajos junto con el estudio - Algún familiar pertenecía al ámbito de la universidad o había estudiado la misma carrera - Tenía claro la vocación investigadora o alguien le orientó 	<p>Especificar si fue la primera carrera que estudió hubo algún tipo de cambio (razones)</p> <p>Especificar qué aspectos fueron los más influyentes en la decisión</p> <p>Qué aspectos facilitaron su formación y que aspectos lo dificultaron (materiales, humanos, familiares u otros)</p>
Aspectos relacionados con la obtención de becas y Contratos		
<p>Especificar si recibió alguna beca de formación investigador MEC, FP1 Comunidad Autónoma y otras becas reconocidas por Agencias de Evaluación</p> <p>Especificar si recibió otros tipos de ayudas o apoyo al estudio</p>	<p>Quién le informó o propuso como candidato a esas becas o ayudas</p> <p>Que supuso en su carrera científica:</p> <ul style="list-style-type: none"> - Conocimientos de redes, ingresos, contratos, otros 	<p>Aspectos personales, familiares y sociales que según su opinión facilitaron la obtención o denegación de becas (información, cercanía con los recursos, otros)</p>



	- Tuvo que rechazar alguno de ellos o fue excluido por alguna circunstancia	
Aspectos relacionados con Estancias, Estudios en el Extranjero o asistencia a Congresos		
<p>Participó en proyectos y Estancias en el Extranjero</p> <p>Habla idiomas (circunstancias que se dieron en el aprendizaje de idiomas familiares, educativas u de otra índole)</p>	<p>Quién lo propuso</p> <p>Quien lo financió</p> <p>Que supuso en su carrera</p> <p>Tuvo que rechazar alguno de ellos por circunstancias familiares y otras</p>	<p>Especificar si contó con recursos privados o públicos para el desarrollo de estancias, aprendizaje de idiomas, asistencia a congresos</p> <p>Especifica si se dieron circunstancias adversas o facilitadoras para el desarrollo de estas actividades (personales, familiares, institucionales o de otra índole)</p>
Aspectos relacionados con la actividad Investigadora-profesional		
<p>Centros en los que ha trabajado</p> <p>Tipos de contratos</p> <p>Tipo de acceso, concurrencia pública u otros</p> <p>Cuales han sido sus primeros contratos: duración, fecha e institución</p> <p>Los centros se encuentran ubicados en la misma área de residencia suya o tuvo que migrar (especificar si en ese caso tenía familia o personas a su cargo)</p>	<p>Que personas o circunstancias le han beneficiado en su trayectoria profesional</p> <p>Que personas o circunstancias le han perjudicado en su trayectoria (personal, profesional, o familiar)</p> <p>Cuales cree que son los aspectos más importantes para llegar a tener éxito en la carrera investigadora: conocimientos, redes, talento, suerte, otros</p>	<p>Especificar el tipo de apoyos con los que ha contado para el desarrollo de su carrera profesional. Personales, de pareja, familiares, de mentores/as otros</p>
Situación profesional actual		
<p>Tipo de contrato</p> <p>Futuro profesional, perspectivas</p>	<p>Los horarios le permiten compatibilizar o no la vida personal y familiar</p> <p>Cuenta con apoyo familiar para el desarrollo de carrera profesional u otros tipos de apoyos</p> <p>Desarrolla otros tipos de actividades paralelas a la carrera profesional, cuidado de familiares dependientes, participación en organizaciones y movimientos sociales, otros</p>	<p>Especificar aquellos aspectos que le han permitido o no consolidar su posición en la carrera profesional científica</p>



SCRIPT FOR THE FOCUS GROUPS: SIMULATION OF A SELECTION PROCESS

Presentación

Explicación de qué estamos investigando.

Cómo se valoran los méritos/ el mérito de los candidatos/ su valía para el departamento

Diversos métodos de investigación para descubrir aspectos que son inconscientes, para hacerlos emerger- evidenciarlos

En esta ocasión he cogido dos cv de la web y los he manipulado, he cortado y pegado de manera que no sean de nadie y que fueran del área.

Procedimiento: os dejaré unos minutos para que podáis ver individualmente los cv y haceros una idea de sus méritos. Más tarde, lo que haré es preguntaros cuál es el mejor candidato y dejaros debatir, no hablaré demasiado porque lo que me interesa es escuchar vuestras opiniones. Más importante que el resultado es vuestro debate.

Ejecución

Preguntas inicial:

¿Cuál es vuestro preferido? ¿Por qué?

Qué opináis de sus expedientes **académicos**, experiencia **investigadora** y experiencia **docente**. Otras circunstancias personales de su trayectoria, redes, movilidad, influencia, edades, origen geográfico, si se quedarán en el dpto, si se adaptarían al departamento, al tipo de tareas que se hace/perfil del resto de los compañeros, etc.

Al finalizar el debate y llegar al consenso, pasarles el papel de autoevaluación (avisarles de que pueden dármele en el acto o responder más tarde y enviármelo por correo de manera anónima).

Preguntarles si les ha gustado la experiencia, si les ha parecido un ejercicio divertido.



SCRIPT FOR THE FOCUS GROUPS: 'IDENTIFICATION OF EXCELLENCE AND TALENT'

Pregunta inicial para provocar el debate:

¿Qué entendéis por excelencia en vuestro campo del conocimiento? ¿Quién o quiénes son los científicos más relevantes? ¿Coincide con la excelencia o está relacionado con otros elementos? ¿Cuál es la relación entre excelencia y calidad?

Cómo se identifica entre los jóvenes. Se puede apoyar, fomentar, incentivar el talento

Cuáles son los mecanismos de éxito y fracaso en una trayectoria profesional: Cuándo se fracasa, cuándo se tiene éxito, quién fracasa o tiene éxito.

Cuándo se decide qué tipo de carrera se podrá desarrollar, en qué momento o porqué hitos, acontecimientos, apoyos, hay algún momento decisivo o es progresivo...

Qué consejos darían a un candidato con grandes posibilidades para fomentar su excelencia

Qué relación existe entre excelencia y características personales de los/as investigadores/as: edad, género, origen social, origen país, identidad cultural o sexual, disabilities...)

Qué grado de incidencia tiene en conseguir una mayor excelencia científica:

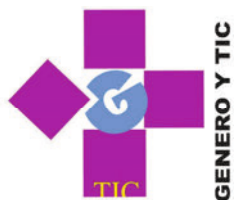
- el que la información de las convocatorias y concursos sea transparente y accesible en una competición justa
- la composición de los tribunales, relacionados con distribución por escuelas, género, representación de universidades, etc

Qué meritos son más importantes y porqué. ¿Es la utilidad social (el impacto algo relevante en la ciencia)?

Ser excelente tiene que ver con el progreso en la carrera investigadora o con descubrir/proponer/generar conocimiento/tecnología, etc. relevante para la sociedad

Por último,

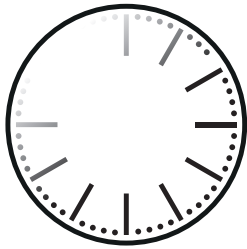
En qué medida medidas o políticas de promoción de igualdad de género inciden en la consecución de la excelencia (inclusión de mujeres en los equipos de investigación, comités de contratación o entre liderazgo de los mismos). ¿Favorece la igualdad de género una I+D+i mejor o que contribuye a generar resultados más relevantes en la investigación para la sociedad?



* * * *

Objetivos señalados en el proyecto:

- Cómo accedieron a la carrera investigadora, cuál fue el momento o paso decisivo para ellos/as, qué y/o quiénes facilitaron su carrera investigadora y qué o quiénes la obstaculizaron.
- Qué candidatos eligen y porqué, qué méritos consideran que hace de un candidato excelente, cómo apoyan su trabajo a lo largo de sus etapas de formación y consolidación profesional, qué elementos facilitadores individuales o institucionales ponen en funcionamiento, qué consejos darían a un candidato con grandes posibilidades para fomentar su excelencia, qué factores o personas obstaculizan el avance en la carrera profesional de sus candidatos.



CARE, TIME AND GENDER IN NEW MANAGERIAL SCIENCE AND ACADEMIA

From accelerated rhythms
to caring temporalities