Temporalities and Care: Gendered Tensions in Scientific Practices

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Abstract[1]

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.

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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 read[1]. 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 importance[2], as if the aim of science were not the scientific content itself but personal

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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).

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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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