

Time is flying: Discussing Time in Academia and Science after Covid-19

Emília Araújo,
era@ics.uminho.pt

Liliana Castañeda Rentería, Universidad de Guadalajara, México
liliana.castaneda@cuci.udg.mx

Márcia Silva, Universidade do Minho, Braga, Portugal
marciasilva.formacao@gmail.com

Susana Figueiredo, Universidade do Minho, Braga, Portugal
sfigueiredo@eeg.uminho.pt

Abstract: This paper examines the advantages, difficulties and challenges of working from home with digital communication as perceived and experienced by junior women researchers during the COVID-19 pandemic. Two hypotheses are discussed: i) with the pandemics, higher education institutions and research centers may sponsor and support the intensification of working time at home, incorporating the increasing use of digital means; ii) within this process of intense valuation of home spaces and times, young academic women might have to deal with increasing levels of time compression as a result of the complex combination of different factors that still ascribe them to family and household temporalities; as well as with decreases in academic productivity that can affect their ability to continue and persist in academia. In order to tackle these two main ideas, the authors will introduce some main points concerning the relationship between time structures in academia and the increasing capability of digital means of communication to provide new types of constraints, new time valuations and new patterns of using and perceiving time which continue to produce differences and inequalities of gender. Empirically, the paper draws on qualitative and quantitative data provided by a survey with 108 young academic women, from several scientific fields focusing on the experience of working at home with digital communications during the pandemic. The results of this research, together with the theoretical contributions on gender time, and academy allow authors to put forward a few recommendations to higher education institutions for rethinking the effects that pandemic-related implications have on time availability, and young academic women's productivity.

Keywords: gender, time, ICT- digital technologies of information and communication, academe, covid-19

Introduction

An OECD report from April 2020 stated there was an urgent need for policy responses that “must account for women’s concerns. Governments should consider adopting emergency measures to help parents manage work and caring responsibilities, reinforcing and extending income support measures, expanding support for small businesses and the self-employed, and improving measures to help women victims of violence. Fundamentally, all policy responses to the crisis must embed a gender lens and account for women’s unique needs, responsibilities and perspectives” (OECD, 2020, p.1). The same report stresses that “there are also concerns around the impact that mass teleworking might have on women’s productivity. Women, on average, have less access, less exposure and less experience with digital technologies than men (OECD, 2019), potentially putting them at a disadvantage when working remotely” (p.15). It points out that “especially when coupled with their greater care responsibilities, women workers are likely to find it particularly difficult to work at full capacity through any period of sustained telework” (OECD, 2020, p.15). Recent public debates about the covid-19 pandemic and academia keep alerting for the increasingly higher level of acceleration in academic work, which is regarded as a source of mental distress and burnout, especially for those with less steady contract positions, or who accumulate many other social responsibilities, as women (Yarrow and Davies, 2020). Data from a 2019 report on digital technologies and gender provides evidence of the inequalities in all levels and spheres of life in the current digital revolution, emphasizing that they can worsen conditions for women in the digital economies of the 21st century and “hinder economic

development and growth, contribute to widen inequalities and jeopardize the wellbeing of society at large” (OECD, 2019, p.10). Amongst others, the report mentions that women are much more vulnerable to time poverty and the cultural biases associated to the use of ICT. Overall, the succeeding reports analyzing gender during the pandemic point to a resurgence of inequalities that puts women in a clearly disadvantaged situation, especially when working at home, using ICT (Junklewitz et al, 2020; Oertelt-Prigione, 2020). On the basis of these concerns about time use and perceptions in the context of work done at home, this paper’s intent is to explore in more depth how women are, in fact, experiencing and living these trends towards the intensification of working time at home, what are their views about their time, how do they evaluate this mode of living, what difficulties do they point out, and what type of measures should universities consider for managing the time diversities uncovered by gendered time. The paper is divided in four sections. First, a short overview about the existing literature is provided. The second section describes how data were collected and analyzed. Thirdly, the paper describes the data collected, following through the dimensions addressed in the paper: i) women’s views about their time; ii) advantages and difficulties encountered by women when dealing with the need to accomplish work at home, through ICT and iii) the women’s views about the influence of ICT on time intensification at home. Finally, the authors present ideas concerning the implications that existing data can represent for policy making, especially at institutional level.

Theory

Studies have underlined some of the repercussions of the uses of digital technologies in the academic milieu (Ben-Elia and Zhen, 2018). The conclusions are not unanimous but demonstrate that digital technologies are shifting the ways academics and scientists cooperate and build interactions, impacting on mobility costs reduction, as well as on time savings, as they may engender multitasking and enhance productivity (Araújo and Chagas, 2019; Junco and Cotton, 2012; Ramirez, Collazos and Moreira, 2018). In addition, studies about work at home indicates that being at home allows people to take breaks, avoiding noisy environments and be able to discipline time. At the same time, they predict the escalation of time dispersion, distraction, fragmentation and increasing experience of making all time “ever-available” associated with working at home (Hubers, Dijst and Schwanen, 2018). In fact, the time-compression and time-disappearance phenomena (Harvey, 2001; Hassan, 2003, Nowotny, 1996) assume specific contours in the case of academic work because it involves many different, uncertain, and non-standardized tasks and is highly dependent on networking, bio physiological and individual times (Noonan, 2015). Studies also emphasize the implications that ICT may have on physical and mental health, as well as in the increased distraction caused by the constant temptation to access e-mail or mobile phones, breaking the workflow, and a greater tendency to waste time on non-priority activities, impacting negatively both in free time, and productivity (Araújo et al., 2017). In summary, it can be said that before the pandemic, studies on academia and science had raised a variety of questions about the implications of increasing use of ICT (Araújo and Chagas, 2019). Part of them also gave evidence about the future of gender equality in increasingly competitive environments, where women still see their time being undervalued (Moss, 2006, Pereira, 2016). Nevertheless, it is ever more demonstrable that the pandemic has exacerbated the multiplicity of time demands which academic women are required to answer, particularly when they are at home, and with children (Aydemir and Ulusu, 2020; Ling, 2020; Silva and Araújo, 2020). The pandemic has obliged them to adapt in their personal lives (family time, illness, new habits, alteration of the workplace) and research projects (inability to continue projects already started, collect data, etc.), in many cases lowering productivity and increasing health problems (Blaskó, Papadimitrioui and Manca, 2020; Silva and Araújo, 2020). Intersectional approaches on gender and time in academia have demonstrated that time uses and valorizations are a result of several effects that are commonly associated to social class, age and career situation (Araújo and Barros, 2017). Therefore, for the case of young researchers, given unstable and uncertain working contracts (data from She Figures, 2018), the struggle for productive time appears to be ever tougher during the pandemic, as long as home time and space combines a multitude of temporal demands which are still socially regarded as women’s responsibility. In line with many important previous works (Adam, 2002, Kristeva, 1981) authors stress, cultural bias and continuous processes of intense trend towards academic capitalism, make women dispossessed from their own rights over time, having their identity assigned as time givers at home (Castañeda-Rentería, 2019a, 2019b, 2020). That is why it comes to be important to look at this pandemic time, not only with a view to analyze what is happening now, and how women are managing and understanding time at home; but also a way of understanding what implications the crisis may bring for the future of academic women, due to the consequences over their careers, health and productivity. In fact, as stated by other authors, more than ever, it is relevant to politicize the use of time

and space at home for working purposes, and to consider the need to contemplate a specific place to time politics in gender equality plans at the Higher Institutions. It is also relevant to foster knowledge about women's practices, and the ways to make them more empowered to respond to structural orders of time that reproduce traditional male dominant patterns.

Method

The data analyzed in this paper are provided by an ongoing research initiated in September 2020 and which included two surveys: one sent to PhD students, and one sent to young researchers working in research projects (not all PhD holders). Its initial objective intended to map the conditions in which PhD students developed their research projects during the pandemic. The conclusions of this first survey allowed us to formulate the hypotheses that are the basis of this paper. In fact, it uses the results of a second survey, undertaken during January 2021, through a questionnaire sent through social networks and mailing lists of researchers of several scientific fields. This survey had the specific purpose of characterizing the advantages and the disadvantages associated with working from home as understood by young academic women, and demonstrated the effects on their time both by the increasing need to work at home, and the use of ICT. This survey was made using the *google forms* platform, and the questions addressed were mainly open. The intention was to invite women to describe their experiences, and the way they feel about it; more than give them pre-established answers. In order to better specify the conclusions obtained, the answers to the open questions were subjected to a categorical content analysis, allowing for a quantitative view about the regularities found. Extracts from the open questions are used for sustaining the arguments. In the next section, the results are displayed according to the dimensions analysed. In total, 108 women responded to this survey. Almost all of them have working contracts as fellowships in research projects funded by national science council, or by other international organizations (83,7%), only 16,3% have more steady positions, as auxiliary professors.

Findings

Women and time at home: women's point of view

For the most part the women (with and without children at home) who responded the questionnaire agree that time demands of working from home vary between man and women (about 60%). Nevertheless, 80% of the women agree that there is a disparity on the way academics reproduce gender division of time at home and within the family, declared children at home that they need to take care of. Thereby, taking care of children, and domestic chores are the main motives presented by women to justify that difference that part of these women consider in fact "natural", and inevitable. The following sentence typifies the answers given by young academic researchers for explaining the multiplicity of time demands existing at home and which they assume to be socially expected as being under women's responsibility.

"I think the burden is greater for women, at least for those women who have children. As it is well known, women are the care-givers as regards household and children. I think that these differences cease to exist when neither man, nor women have children"

Women also say that:

"Unfortunately, the role of women is still very much linked to the care of children or the elderly, as well as to domestic work. In addition, scientific studies show that women are more likely to suffer depression than men."

Importantly, if these differences are seen to be naturalized, women criticize them, saying repeatedly that "of course" that women's time at home turns out to be much more fragmented than men's, because women have to cope with many attributions that call on their attention, and request their intervention in a continuous time.

“Yes. Child care tasks tends to be further developed by women, and this bring a considerable waste of time and of focus”;

“Yes, women researchers, because of living in a patriarchal society, have, for the most part, more tasks to perform at the same time” [when being at home].

Implications of ICT on time: women’s point of view on advantages

The table below shows the results concerning the main advantage identified by women in working from home. Most of the women say that working from home with ICT during the pandemic had important positive points for their time, as they consider that it allowed them to save time and money on transport (43,5%). Additionally, they say that while remaining at home they have more chances to use the time as they needed, gaining “greater flexibility in working hours; not necessarily to be in the workplace at all” and also “schedule flexibility, travel/food savings/productivity increase/more laboratory space for work”. 26,9% refer to flexibility also considering the chances provided by ICT to be present at home, and taking care of children, and other domestic chores. In addition, comfort and reduction of costs are also important motives identified by women for perceiving the experience at home as positive. Of the total (108), however, only two women say that working at home has provided them with more time for the family or children. A few also refer that working from home has allowed them to change food habits, do sports and experience more control over time.

Table 1: Motives for signaling advantages of working from home

Motives for signaling advantages of working from home	N	%
Time saving	47	43,5
Confort	11	10,2
Flexibiity	29	26,9
Costs	11	10,2
Family and housework	2	1,9
Other	3	2,8
No answer	5	4,6
Total	108	100,0

Implications of ICT on time: women’s point of view on difficulties

In accordance with the above regularities, women state that the greatest difficulty they have at home as academics and scientists relates to difficulties in having continuous time to concentrate, avoiding work time dispersion, and distraction with other tasks, and separate times and spaces, which they find to be very hard, as the home is a unique space time, susceptible to being invaded and make available for several other extraordinary purposes. Alongside the difficulties in sparing times (32,4%), there are specific annotations women make as regards the domestic tasks and other needs of the family members. They also note the interruptions brought about by neighbor’s noise,

“Length of working hours, distraction with household chores, low concentration (noises from neighbors and outside), water/light expenses”

“Almost everything: environment and unsuitable work materials, having a baby at home that requires constant attention, having to make everyone's meals, not being able to disconnect from homework, lack of socialization”

In fact, women also give account the reduction of time for networking (30,6%), from their colleagues, supervisors, and so on. Therefore, isolation is one of the disadvantages of working from home:

“There is little interaction with colleagues that is fundamental to the development of some work. The impossibility of repeating experiments or verifying experimental results. Little support from the supervisors (already reduced). I believe that online meetings are not always productive”.

“An advantage of online meetings has been collaboration with colleagues from various countries and debates or seminars that usually required a move. But face-to-face contact is not replaced in all cases. I think it's good that in the future more conferences will have a hybrid format”.

This is an important feature, as they also consider that at home they feel they have more solicitations from the outside, from the university, and that they experience the lack of time, and they get the impression that time has been shrinking for doing all the increasing tasks (8,3%). Women also point out the lack of suitable working conditions as an important difficulty of working from home (12%). In their opinion, “More time means more work. Not being able to have leisure time”. Interestingly about 14% of the women surveyed, emphasize the importance that family and housework have on their times at home, when conjugated with and increasing pressure from the university to respond to increase demands made at any time. One of the sentences that demonstrate this is the following one:

“Meetings on online platforms from morning to night and for those who have small children at home, without having to leave them (closed preschool times) ... it becomes impossible to reconcile working on a computer with taking care of a child”.

“ICT doesn't increase time, they steal time, because we are supposedly more available and spend even more time on the internet”.

“There is a need to be always "connected" and contactable and this worsens mental health. Digital technologies can become prisons, since they are not only work tools but have become ways to interact with anyone”.

Table 2: Motives for signaling disadvantages for working from home

Motives for signaling disadvantages of working from home	N	%
Separation of times	35	32,4
Increase work	9	8,3
Lack of conditions	13	12,0
Isolation	33	30,6
Family and housework	15	13,9
Work delay	2	1,9
Other	1	,9
Total	108	100,0

Conditions for managing time at home

About 80% of the women say that they lack the right conditions to work at home that enable them to manage time, and respond to the solicitations from the projects, and research centers. In the line with the difficulties already mentioned, the majority of them claim that they do not have a specific time or space at home reserved to the work they need to develop (32%). The ideal world for most of them would be to have a specific compartment, quite separated from the rest of the house, that helps them to separate time, and space, and create the routine of beginning and end different tasks, of different nature.

Table 3: Lack of conditions at home for organizing time

Conditions missing	N	%
Nothing is missing	33	30,6
Computer, internet access and software	24	22,2

Having a specific room for working at home	35	32,4
Have support for family needs	6	5,6
Being able to do laboratory work	10	9,3
Total	108	100,0

Subsequently, 22,2% have signaled the lack of technical conditions associated with the lack of software, access to the internet, and the lack of knowledge to operate with certain types of collaborative platforms.

“Some software only exists in research centers and licenses are not adequate. Even if you're going to VPN the university, for system errors, not all sites are available. The internet connection is slower. Due to online classes and the passage of teaching style, teachers/advisors are less available. Confinements cause delay in empirical research”.

About 5,6% refer to the lack of support for responding to family and children needs. They state that they would need support in babysitting and schools, so they can manage to have enough time to accomplish their academic work. Women working in STEM related areas also claim about the lack of actual conditions to develop their work, mentioning the weakness of supervision, or the difficulties in doing filed work.

Specific queries about ICT time, “women’s time” and home

For some women, the pandemic has allowed them “to read and write more that was required”, ending up being “an important period of reflection and reading”, facilitating having “more time and fewer distractions”. Nevertheless, it is hard for women to clarify if it is the ICT having positive or negative impacts, as they agree that ICT allows for a better rationalization of productive time, nurturing the chances to occupy more time with more activities, however they also make negative comment about this. Indeed, some researchers stated that staying at home was an opportunity to accelerate their work and focus on the tasks. They declare that “in reality, I got more rest, even if I worked maybe slightly more” [than before the pandemic]. One woman declared that “I can't even imagine my work without the support of digital technologies. They save time and speed up investigation processes”. Overall, women state that ICT has a positive impact in reducing the time that they consider lost in mobility, and transport, contributing to reduce associated costs. They tend to describe the implications of ICT as a naturalized means of transforming and adapting academic work to new trends, stating also that ICT had allowed them to participate more in scientific meetings and activities that are held at distance. These women that stress the positive impacts of ICT have no children (of 46 women stating that the effects are positive, 37 have no children). However, at the same time, they look at the transformation of home into a working time space as also being negative. Longer hours of work and difficulties in defining barriers between times to work, are the core motives why they disdain from academic work at home.

“Digital technologies have in recent times increased the requirement to be available on any day, anytime and under any conditions. This did not represent an increase in my time, but an increase in the demands of being available online, for all kinds of activities. Deep down, I think I have less time”.

“The technologies contributed to me working longer than normal, because there is no adequate separation of working time and leisure time. While, in access to university facilities it is possible to define a schedule and a work schedule, between 8am and 9am daily, at home, due to various constraints and awareness that work is not advancing as it should or productively, there is a tendency to work many more hours to try to compensate”

Indeed, for them, ICT at home fosters time compression and time disappearance experiences, leading them to experience distress and sense of disorganization. These negative effects are similarly pronounced in the answers given by women with and without children (of the 37 women saying that there are negative effects, 19 have children and 18 do not).

Discussion: Time is flying in Academia and Science after Covid-19

When combined with intense use of ICT, academic work at home provides contexts for increasing intensification of time uses, with institutions reclaiming the suspension of any type of boundaries between private, personal, family, and professional times and spaces. Content analysis gives evidence that these women are strongly reflexive about their situation and about the way time neoliberal structures are now being reproduced at home, making already inequalities in time uses and valuation even more pronounced. A gender approach with more comparison between men and women with and without children is needed to better discern to what extent the present day modes of organizing and structuring time with ICT are transforming concepts of productive time for academics, in general, and what is the actual weight of gender and family situation (mainly having or not children under 12 years old) in time uses. In fact, one women says, for instance, that academic work at home represents a process for by which state is “transferring costs to researchers, conjugation with family life, increased isolation”. Indeed, the measures adopted during the COVID-19 pandemic by many governments and institutions are still given less attention to issues that interfere with academic women’s productivity, particularly when they are mothers. This is even more relevant if considering that the pandemic is proving to be a moment of special demand on women, as they are still considered the primarily care givers and responsible for home times and spaces. As hypothesized, women report that the effects of increasing work at home with ICT are paradoxical: at the same time that they feel time augments and enlarges, allowing women to make choices concerning the allocations of time; they also feel that time is increasingly flying and disappearing, for responding to the academic work, as well as to their families, or to themselves. It seems that, despite the considerable way towards the consolidation and implementation of gender equality plans, the matters of time and space conditions are still left aside, and considered as a private responsibility to women to revolve and tackle with, particularly when these women are also mothers.

Conclusion

In the end, it can be said that ICT time qualities (continuity, fluidity and spontaneity) are being overlaid onto the existing structural sexual division of work. In this way, women recognize ICTs as an important and fundamental means for doing their work, but they also admit it also as a way to fulfill other socio-cultural mandates such as care (Castañeda-Rentería, 2020). Therefore, at the same time that they value ICT time and working at home, because it allows them more “flexibility” for attending multiple and different temporalities, they also feel that more challenges are now brought about for responding to productive standards, in a digital academia. In this perspective, the fact that women report strong identification with working and home, and taking advantage of ICT times, this does not mean they effectively gain more space and time, or that they can better consolidate their trajectories and be in better recruitment positions, as the time structures in force keep reproducing diverse forms of “women’s time” undervaluation. One of the main signs of this is the type of schedules for meetings which tend to increasingly overlap any type of borders between working, and non-working times. Incidentally, the decrease in time for networking, doing collaborative work, engaging in the dissemination of their research which will (continue to) have impacts on their career path, especially for those who are mothers, but for all women, in general. Consider a study done by Catalyst (cit in Nadal, 2020) reporting that 45% of the women have serious difficulties in taking the voice in virtual meetings; the same study reports that one in five women consider that their professional expectations have been even further lowered with telework. Issues linked to time use and experiences are complex, and demand further analysis. However, it seems clear that more work needs to be done at the level of the institutions in order to provide means for women to consolidate their work plans at the university, reducing the levels of tension associated with this. The possibility of thinking much more deeply about the need to provide specific spaces at universities dedicated to women with family demands, providing childcare services and other means of giving time to academic women is at the heart of new reconfiguration of gender equality plans. However, a more profound cultural change is urgent at the core of university management for implementing gender equality plans that actually consider the time disparities that ICT is now exposing. .

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