

## **The young and the restless. A discussion about age in the early career stages.**

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In the early stages of a scientific career, age can be a determinant factor for gaining a fellowship or a research position. This paper addresses the issue of arbitrariness in such criterion, in the case of Argentina's policy of scientific assessment. There are specific age limits for the lowest levels in the hierarchy, and even though sometimes exceptions can be made, it could lead to discrimination or unfair evaluations towards the candidates of both extremes of the distribution.

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“C’mon, seriously, how old are you?” followed by an incredulous “really?” is a common question I am asked when meeting colleagues. Of course, it is not the first issue addressed, and it usually arrives after a series of conversations, but a few pop culture references is all it takes for people to realize that I am younger than I seem.

Fortunately, it is not that I appear to be that much older –since people outside the Academia tend to guess properly- the reason behind their surprise has to do with me being a post-doc since I was twenty-seven when the most common age to finish the PhD in Argentina is at least thirty. This is evidenced in the public statistics like the 2009 report from the National University of La Plata (Azpiazu et al., 2009), where it shows that less than the fifteen per cent of the graduates from the Natural Sciences and Museum School, University of La Plata graduates finish their first diploma under twenty five (Azpiazu et al., 2009), and the fact that it takes approximately five years to complete the doctorate when taking the

Argentinean fellowship systems as a parameter: the Consejo Nacional de Investigaciones Científicas y Tecnológicas (CONICET)<sup>1</sup> offers two stages of graduate fellowships, *Beca Doctoral Tipo I* (to start the doctorate, lasting three years) y *Beca Doctoral Tipo II* (of two years, to finish it) adding a total of five years for acquiring the PhD ([www.conicet.gov.ar](http://www.conicet.gov.ar)).

At first glance, it would seem that I have a considerable advantage over older colleagues given that many fellowships and research positions have an age limit. For instance, the maximum age for a post-doc CONICET fellowship submission is 35 years old, as is the limit for entering in the researcher career in the lowest level, *Asistente*, in the same governmental institution. However, the sole benefit is the possibility to try again for more

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<sup>1</sup> Even though there are other institutions that offer fellowships, and may have different criteria, this article will focus on the CONICET considering that it is the main source of research funding and positions of Argentina.

times than most, which only is of use in the unfortunate circumstance of having the career/post-doc submission rejected –which means either spending a full year unemployed (regarding research) or leaving to work abroad. In these first stages, there is uncertainty if evaluation criteria that put in perspective the amount of papers with the years spent researching exist so, in a given selection process, elder candidates may have the advantage of a larger production if, and only if, they started their university studies and careers at the same time.

Still, the other side of the curve is not fair either: candidates older than the limit are discriminated against without considering the reasons why they aspire to such positions at their age. Late vocational awakening, long term illnesses, pregnancy and maternity leave and taking care of ill relatives are not contemplated on this ruling, thus making an idle 35 year old a candidate, but leaving out of the selection process a 36 year old hard working one that “lost” professional years for valid reasons.

An important clarification should be made in this instance: the national decree-law N°20464/73 modified Law 22.140 and 24.729 that rules the CONICET comments under the Article 12 that an exception regarding the age limit for entering the career can be made if the candidate’s background justifies it and two thirds of the total votes in the Directory agree. However, this only shows that the elder candidates can be considered exceptionally, not that they would be evaluated under the same circumstances than the younger ones.

Evaluating the many candidates for the few available research positions is a hard process, which demands those researchers involved in it to spend precious time assessing each candidate, so it is likely that some prefer to employ a standardized limit than look for ways

to improve the selection. For achieving a fairer system, it would not only require to eliminate the age maximum, but also to consider each candidate’s efficiency regarding the real time employed in research. For instance, leaves such as illness, maternity or guard of sick relatives should be considered, and there should be ways to calculate an esteemed production for a given time, depending also on the nuances of each scientific field. If not, some good candidates would be left out while mediocre ones remain.

In the case of special leaves, the fellow is benefited with some extra time at the end of the fellowship. For instance, maternal leave gives the fellow 100 more days after the 31<sup>st</sup> of March (time of the year when fellowship’s end) of her last year with the fellowship<sup>2</sup>. This may look like a proper way to compensate her being away from research due to the leave, nevertheless these candidates have to submit their proposals for evaluation at the same dates the others do, and are measured against the same criteria, so the only benefit of those extra days is of use in the case that the candidate does not gain the new fellowship and has to wait for another year to apply again.

Perhaps those more advanced in their careers do not think that 100 days of work can make a significant difference between two candidates, considering their many years of work. Nonetheless, in the case of fellowships and early career stages, that amount of days can make a great difference, since it is 100 in three (first fellowship), in

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<sup>2</sup> It should be noted that the actual time needed by most mothers exceeds the days granted by the leave, not only by all the extra tasks and worries that maternity includes, but also for how difficult it can be to restart research after a couple of months without working. However, the issue of working parents and how these responsibilities tend to affect differentially both sexes should be addressed in further detail in papers focusing on this issue.

two (second fellowship, post-docs) or five years at most (to enter the career).

As an example of the disparities the current assessment produces, let us take three imaginary candidates aspiring for the same post-doc position. To rule out other factors, and make it the simplest, I will propose that all three publish in the same journals and receive the same citations, none had to stop researching since they began, and all finished their doctorate on the same year.

Candidate A: 36 years old, started his/her PhD at 32, and has five papers published.

Candidate B: 35 years old, started his/her PhD at 25 and has five papers published.

Candidate C: 29 years old, started his/her PhD at 26 and has four papers published.

Following Argentina's current selection process, the candidate chosen for the position would be B since he/she has one publication more than C, and A is left out given his/her age. However, if one estimates their efficiency, candidate B is the most inefficient one, since he/she has an average of a little less than 1 publication every two years while the other candidates' averages are 1 publication per year. It should be said that maybe efficiency is considered when deciding to grant exceptions, yet the regular post-doc selections do not take it into account, at least considering the 2009 post-doc criteria. These criteria consist in an assignment of points depending on the amount of papers published, scientific meetings attended to, etc. all considered per unit, not in relation to time.

In this example, perhaps A will be granted an exception if there are enough funds to expand the call to two positions instead of one, but C will have to wait a full year without receiving any pay.

Of course, reducing arbitrariness and developing more adjusted criteria requires a deeper debate, and a lot of time and effort, something evaluators are already spending when they need to assess thousands of applications within the time frame they are given. This is why the discussion should not only involve those that take part in the decision process but the whole science community.

Scientific performance evaluation is not an easy task, not only for the complex subtleties of the real candidates, but also for the key role it has on determining who can research and who cannot. The importance of this debate was such that even a journal such as Nature decided to dedicate several articles about it on the same issue (Van Noorden, 2010, Abbot et al., 2010, Braun, 2010, Bergstrom, 2010, Frey and Osterloh, 2010, West, 2010, Pendlebury, 2010, Rohn, 2010).

Each region has its own way of assessment, so I believe that learning about foreign criteria can help to improve our local ones. Of course, it would not be as a direct transposition, but by gaining new visions that may contribute to disentangle the issue. It is in the diversity of points of view where we could find how to address unsolved matters such as this one.

Perhaps some countries do not consider age as a limiting factor, basing solely their selection in other qualitative traits, since it can be considered a form of discrimination. So, as a final note, I would like to ask the different readers how the panorama in their regions is, do they consider it a fair system? How would they improve it?

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