

Reverse age discrimination

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Brilliant scientists of all ages should be able to thrive at universities. Mandatory retirement is, therefore, a form of age discrimination, but its removal or postponement can come at a cost to younger faculty members, as observed in Italy.

In recent years we have witnessed increasing pressure within Europe to lift mandatory retirement, typically fixed at age 65, for researchers and university professors. For the many professors reaching retirement age who are still active and productive¹, mandatory retirement prevents them from continuing to work in Europe and forces them to emigrate to the USA (where mandatory retirement for professors was abolished in 1994). In 2000, the European Council approved an age-discrimination directive, which could possibly lead to the end of mandatory retirement in Europe².

Here, we would like to discuss the case of Italy where the current mandatory retirement age for university professors can reach up to 75. As a result, the age structure of academic staff there turns out to be strikingly different from that of their European counterparts, with very few young professors and an unusually large fraction of older ones (see Fig. 1). This is particularly true in the case of physics professors: in Italy, 41% are aged 60 or older and only 4% are below 40. If we then restrict the analysis to full professors only, we discover that overall in Italy more than 47% are aged 60 or older, but for physicists this percentage reaches 64%.

The peculiar age structure of Italian academic staff is not only due to the high retirement age, but also to the very irregular recruitment flow. Although most of the time very few positions are available in universities, occasionally the government hires by law (*ope legis*) vast classes of non-tenured researchers. Typically, the main criterion for inclusion is whether someone has held temporary positions for

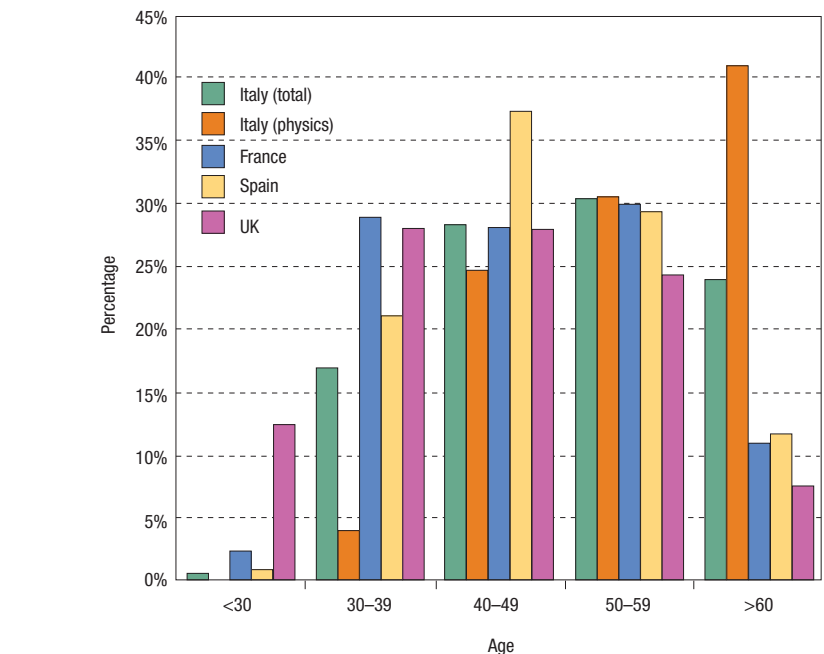


Figure 1 The age structure of academic staff in various European countries in 2006. We also provide the data for Italian physicists. Data are obtained from the Italian Ministry of University and Research (MIUR), Ministère de l'Éducation Nationale (France), Higher Education Statistics Agency (HESA, UK), Ministerio de Educación y Ciencia (Spain).

a sufficiently large number of years. Thus older researchers are privileged with respect to younger ones, irrespective of their scientific merit. For example, the massive *ope legis* recruitment of 1980 still has visible effects today in the age distribution, appearing as an anomalous peak located around age 60. This peak will shift as time passes, in the manner of a soliton, and only very effective recruitment and retirement

policies could possibly normalize the situation in the next few years.

The new Italian government under Romano Prodi has declared its intention to invert this trend with a plan to hire young researchers³, but so far it has acted exactly in the opposite direction. The budget of 2007 contained a clause to 'stabilize' non-tenured researchers working in public research institutions such as the National

Research Council (CNR), again providing tenure based on seniority regardless of scientific merit. Thus the only option left for brilliant young scientists is to move to other countries, such as France, where permanent research positions are traditionally granted at a relatively young age; for instance, this year the French National Research Council (CNRS) selected seven young researchers (CR2) in theoretical physics, out of whom four were Italians. In particular, the top two recently obtained PhDs from Italian universities, which goes to show that Italian universities are still able to attract and train bright young physicists, but the ongoing brain drain may make this hard to sustain in the future.

It is also not surprising that the fraction of non-Italian academics in Italian universities is extremely tiny, and that Italy (as opposed to France, UK and Spain), is usually not considered as a viable choice for young foreign scientists. What we need, to avoid serious consequences of the massive wave of retirements expected in the next ten years, is to establish a continuous flow of recruitment for young researchers based on scientific merit rather than seniority.

One analysis shows that the age-discrimination problem is affecting young people rather than the old ones. The problem with this situation is that scientists in the most productive part of their career have no permanent position and often suffer from lack of independence. In addition, given the age structure of full professors, all strategic academic decisions are taken by persons in the final stages of their career. Notice also that in Italy the salaries of professors depend only on their seniority and thus old professors earn considerably more than the younger ones, whose salaries are typically lower than those in other European countries.

It is interesting to compare the Italian system with those of two countries, which for different reasons, do not exhibit this ageing problem: France and USA. The academic system in France is similar to the Italian one, with a career and salary progression that is mostly dependent on seniority. The important differences in France are the lower retirement age and the regular flow of new recruitment for young

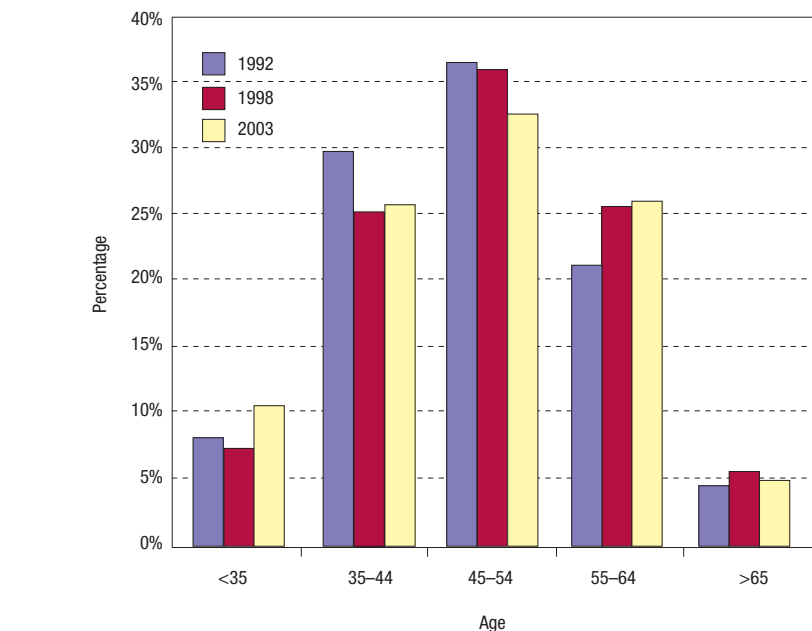


Figure 2 The age structure of university faculty in the USA for different years. Despite the 1994 abolition of mandatory retirement, the distribution has not really changed over a decade. Data from US department of Education: National Center of Educations Statistics. Available at <http://nces.ed.gov/index.asp>.

staff. In the USA mandatory retirement has been lifted, but the salary system is more flexible and correlated with merit and grants (summer salary) rather than based on seniority alone; dropping mandatory retirement has so far not altered the age distribution in the USA (Fig. 2). Most European academic systems, however, are more similar to the Italian and French ones. Hence, Italy's example shows that removing mandatory retirement could be a dangerous step if not accompanied by other major structural modifications.

What we need is to establish a continuous flow of recruitment for young researchers based on scientific merit.

To conclude, we acknowledge that some older scientists are active and productive, and that European countries should do something to keep them

engaged. In Italy, the Polytechnic School of Turin has recently offered contracts for teaching and research to those professors who agree to retire early. This initiative has not been extremely successful so far, indicating that there are other important reasons for remaining a professor, such as promoting the careers of junior collaborators, besides the joy of teaching and research. (If so, one might try to reduce the importance of senior mentors in the careers of junior collaborators.) The broad question of how to use the experience of older faculty without hindering the advancement of the younger generation remains an important challenge.

Acknowledgements

We would like to thank J. P. Sethna, M. Zaiser and E. Zamponi for useful discussions and remarks.

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