Race to the top

At last September's EMBO Meeting in Amsterdam, I was struck by the almost complete absence of non-white faces, save for a few invited speakers from other continents. How can it be, in the first decades of the twenty-first century, that the 10% or so of the European population with recent roots in other parts of the world is almost completely absent—or absents itself—from the molecular biology community? As our society prides itself on racial equality and universal rights, this is both morally disturbing and a huge waste of talent.

The access of European ethnic minorities to higher education, and to the top echelons of academia in particular, seems to suffer from a classic 'glass ceiling effect'. The higher one looks, the lower the degree of representation. Although it is not easy to obtain reliable statistics, Africans, African-Caribbeans and many Asians, plus Europeans born into those communities, are at the bottom of the skills and education ladder in almost all European countries. Only the Roma fare worse, having been subjected to systematic discrimination for centuries. Even in multi-ethnic countries such as the UK, France and the Netherlands, where the number of non-white university students is slowly increasing, few seem to be studying biological sciences. Of those who do, even fewer go on to do doctoral research and hardly any seem to end up in faculty positions.

Sociological studies (Graham & Robinson (2004) *J Black Stud* 34: 653) demonstrate that the problem is deeply ingrained in the educational system at every level. The result is massive underachievement by specific groups, such as young black males. The main issue is the long history of racism in the wider society, which shapes everyone's expectations. The reality is that access to university is determined mainly by social class and that race and class are closely intertwined.

Even among immigrant groups, which traditionally place a high premium on education as a passport to social acceptance and prosperity, the situation is bleak. In such communities—for example, South Asians in the UK—there seems to be a natural bias towards the 'professional disciplines', such as medicine, law or engineering, which lead to a recognizable career. The fact that molecular biology is not seen as an attractive option is perhaps a mark of how little it is esteemed as a profession, if indeed it is viewed as a profession at all.

Is molecular biology perceived as being in some way inherently racist and therefore unsuitable as a career for a person with dark skin? It is certainly true that a few oddball scientists have made statements that seem to validate racist ideas, although James D. Watson claimed to be mortified that his self-confessed political incorrectness in 2007 was misinterpreted as racism. Perhaps there is a perception that genetics, one of the founding disciplines of molecular biology, is too rooted in determinism, which is seen as the enemy of social opportunity. It must also be deeply alienating to look up the academic ladder and see only white faces.

Regardless of its causes, it is far from obvious how to solve the problem. Scandinavia has been a pioneer of gender equality, but it has not achieved this through critical editorials and speeches. Rather, it has implemented concrete policies that met initial resistance in some quarters. The argument against a quota system is that it creates a second tier of individuals who are considered to have achieved their positions unfairly, simply because of some external factor such as their X chromosome count or mitochondrial haplotype. Arguably, this makes them more, not less subject to discrimination. Yet in Norway, the requirement for at least 40% of company directors to be female has had a hugely beneficial effect. Many highly talented women have come forward, and business administration has become much more professional and effective.

At the level of the individual scientist, there is rather little we can achieve. PhD applicants come in small numbers, and postdocs are largely self-selecting. Larger bodies such as EMBO could perhaps make a difference, as it has attempted for gender issues, but its general approach has been one of encouragement rather than enforcement, which is natural in any 'voluntary' organization with a broad membership.

Given that the main problem is at the university entrance level, an obvious pressure point is in high school classes, when people are choosing whether to apply to university and for which subject. As scientists, we could be doing ourselves a big favour by spending more time in schools talking about our work, about how to make a career in science and, most importantly, conveying its global aspects. Someone with a parent or grandparent born on another continent is more likely to be attuned to the wider world, so this is an obvious way to arouse interest. Role models are clearly important, but a postdoc or faculty member from Ukraine or Argentina can convey the global reach and ramifications of molecular biology just as well, if not better, than a non-white scientist from Sarcelles or Bexley.

As might be expected, the USA, where ethnic 'minorities' will soon be the majority in the high school population, is way ahead of Europe in recognizing the consequences of inaction and is devising workable solutions. There, the private sector, which is seeking to guarantee its own future in a changing 'market', seems to be performing best. Tailoring recruitment, student support and actual education to the background of the students is the best formula for success. Europeans should be building on this experience in their own universities and graduate schools, to attract the best brains into molecular biology as well as promoting human rights.

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