These are your rights

Over centuries, the labour movement fought to establish basic rights for workers, combatting the vested interests of avaricious capitalists and the cynicism of the state, which consigned to the workhouse those unable to find employment in the mines and factories. Through collective action in the form of trades unions, then later through the political parties that were established in their wake, the basic principles of modern social democracy took root. While these values remain far from universal, and the detailed structures by which they are implemented vary widely, they are enshrined in law in most of the developed world. States as far apart as Sweden, California and Japan enforce laws that limit working hours, ensure fair salaries, paid holidays, entitlement to sick leave, basic insurance against unemployment and protection against workplace hazards or harassment. Theoretically, these rights apply equally to research institutes and biotech startups as to banks, restaurants or mobile phone manufacturers.

Scientists enjoy many privileges, not least of which is the joy of discovery; yet building a successful career in science is a painful process. It entails a long time spent with miserable remuneration—often without pension rights—little or no job security and a low probability of success. The British politician J. Enoch Powell once famously observed: “All political careers end in failure.” Exactly the same might be said of academic careers. Perhaps this was less obvious to the meteoric Powell, who achieved a full professorship in classics at the ripe old age of 25. Even for many ambitious and brilliant young scientists, the long hours and meagre stipend—compared with the earning power of their contemporaries who instead chose the professions or a career in business—often lead nowhere. At some

point, the vast majority of them ‘rejoin’ the workforce, often locked in to poor salaries and conditions. Because of the years of lost pension contributions—especially if they went abroad as a postgraduate student or postdoctoral trainee—they typically have to work longer to achieve their pension entitlement (or might never do so, something that surely applies to me personally). Their partners, who have married into this culture, often feel even more aggrieved and undervalued, since they typically find themselves bearing the brunt of family duties while also being the family’s main breadwinner.

To combat this blatant discrimination, in which anyone aspiring to a career in science is automatically and substantially penalized regardless of how far they succeed, advanced societies have bravely tried to extend the embrace of employment law to the domain of academic research. Unfortunately, this just makes matters worse. The norms that such a system establishes are simply incompatible with academic success in the current research climate. Anyone who actually works the ~1,625 hours per year prescribed by law for research scientists, as for any other employee, is simply dooming their career. Nowhere is this truer than in molecular biology, in which the collection of data typically remains time-consuming and laborious. One can easily imagine that the time spent just in routine technical work could easily fill far more than the official work-time quota, with no time left for reading, writing or even proper thinking. If experimental design had to respect every PhD students’ legal entitlement to time off, most experiments would never be completed.

As Joe Strummer sang, “Know your rights... as long as you’re not dumb enough to actually try it.” Although the song was, of course, a comment on the brutal hypocrisy of police states, it also describes the

dilemma facing aspiring professional scientists. The fierce competition for ‘real’ jobs and for research funding in academia means, in practice, that only those prepared to work way beyond the call of duty, as defined by standard workplace norms, have any chance of success. Those who wish to assert their ‘rights’, or who are constrained by external circumstances to do so, are no more than the cannon fodder of the current research system.

What is to be done? Can scientists (and their families) hope to enjoy the protections and entitlements of the welfare society, along with a salary that reflects their level of training and responsibility, without reducing their activity to a mere job in which filling out electronic time-sheets, or fulfilling one’s quota of PhD students trained, papers published in *EMBO reports* or research grants earned is more important than the actual content of one’s life’s work?

For now, the answer must lie in the way we select and mentor young scientists. While lobbying for a more humane and rational career structure, not to mention those basic pension entitlements that many still lack, seniors have a duty to tell the stark truth to aspiring students and trainees: science is a vocation, not a job. Supervisors must not only motivate and train young researchers to apply their inner passion for knowledge in a disciplined and productive manner, they must also counterbalance the systemic myth that the lab is a workplace like any other. Of course, the labour unions still have an important role in defending the rights of ‘real’ employees. But it would be no bad thing if we forced prospective scientists, at an early stage, to face the fact that the path they seek is different.

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