Of pirates and pogos

My favourite German political party is of course the APPD, the Anarchist Pogo Party of Germany. Admittedly, it has never scored the resounding electoral success of its cousin the Pirate Party, which won 9% of the vote in Berlin's regional election last year. In that same poll, the APPD did claim a plurality of the vote (39.82%), based on the fact that it instructed its supporters either to vote for the party's candidates or else not to bother voting at all.

The APPD's main policy is to replace the old-age pension with the young-age pension, on the grounds that only the young have the vitality to enjoy life to the full and spend the entire time partying instead of working. After all, partying is expensive. The old have got nothing to look forward to apart from dying, so might as well be put to some use, working hard to fund the sex, drink and drug habits of the young.

Unfortunately, the APPD does not have a fully fleshed out science policy, although it did propose combating the EHEC epidemic by promoting the 'beer diet'. It's worth considering, however, whether the party's philosophy could be usefully applied to science.

The European Research Council (ERC) already reserves a large slice of its budget for substantial 'starting grants' to young investigators. These grants, typically of €1.5 million over five years, provide a massive boost to the research careers of brilliant, aspiring scientists, especially those prepared to cross traditional boundaries. The emphasis is very much on innovation and risk-taking, a far cry from traditional funding programmes that encourage applicants to play safe by proposing projects that represent incremental advances on previous work, and are unofficially assumed to be already half-completed.

Other agencies have begun to adopt similar policies, seeking to reward new

talent, fresh ideas and thinking 'outside the box'. However, the norm in most countries remains the depressing opposite: the chance of getting funded is mainly determined by whether one has been funded previously. Naturally, it is damaging for established scientists to lose their grant. But it is equally unfair for young investigators to not be funded at all. Although many first independent projects fail, they remain a worthwhile investment for the future, since junior scientists tend to take failure in their stride and are not afraid to throw out approaches that lead nowhere. Seniors tend to cling to what they know works, even if in reality it doesn't work very well, and often leads to nothing exciting. In supporting established scientists, ERC also places a large premium on novelty and adventure. Although it doesn't quite go as far as the APPD's policy of creating separate living spaces to protect pogo-anarchists from the corrupting influence of normal people, the ERC's vision of a 'high-risk, high-gain' science culture recognizes the importance of challenging received ideas as the primary motor of progress. National funding agencies should follow its lead.

Some might argue that the wisdom of old age and long career service must also count for something: after all, most Nobel Prizes are awarded to individuals well into what would be regarded as their twilight years in almost every other walk of life. However, closer inspection reveals this to be a fallacy. Laureates are recognized not for lengthy and distinguished service, but for specific discoveries that were generally made in their youth, which can only be judged to have stood the test of time after a considerable period has elapsed. Watson and Crick were 25 and 37, respectively, when they published their structure of DNA. Hans Krebs was also 37, when he inferred the existence

of the cycle that today bears his name. The list is lengthy. The plain fact is that the young have sharper minds and are less tied down by erroneous assumptions.

Despite this, far too many universities in far too many countries tap into, but ultimately sap the energy of, their younger faculty members, by imposing on them a hefty teaching burden at just the moment in their career when they have a chance to make a real impact in research. It is not uncommon for assistant professors to be assigned 250 or more hours of teaching per year. Although this might be considered to be just 8 hours per week during semesters, such a calculation doesn't take account of the additional time needed to devise lectures, teaching materials, laboratory classes and so on. As younger faculty tend to be highly conscientious in performing their duties, and in fact need to demonstrate this in order to get tenure, research can never be more than a part-time activity for those carrying such obligations. It would make far more sense to shift the bulk of university teaching onto the shoulders of the more experienced faculty members, especially those whose research might have become a little stale. Not to mention all those tedious peripheral and administrative tasks that take up so much time for all of us.

One of the APPD's slogans is 'Asoziale an die Macht!' ('power to the anti-socials!'). Anyone married to a scientist probably recognizes this character trait. But along with a certain tendency towards unsocial behaviour goes the dedication and vigour needed to succeed in science. We should be brazenly nurturing that vigour in our young scientists and conferring on them the power they deserve.

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