

Reflections on the death of a young scientist

The tragic suicide of an outstanding graduate student at Harvard University poses troubling questions about academic priorities. But it also reinforces deeper concerns about the contemporary culture of research.

There is always something slightly humbling about human tragedy. Such is the case with the suicide two months ago of a fifth-year graduate student, Jason Altom, at Harvard University. It is impossible to speculate on the full range of factors that led an apparently outstanding and respected student, outwardly stable and well-liked by his fellow students, to decide to take his own life. What does prompt comment, however, is the fact that Altom left a detailed note describing the pressures to which he felt subject, and suggesting how some of these might have been avoided in different circumstances (see page 826).

The contents of the note, extracts of which have been published in the *Harvard Crimson*, allude to a situation with which all graduate students will be familiar. One is the constant pressure to succeed, with eyes fixed on a sometimes distant, often daunting and always challenging goal. A second is the intense relationship, which can be either supportive or destructive, with a single supervisor — a relationship that some Harvard students joke tends to last longer than most marriages.

Both pressures can be exacerbated by a lack of the financial means and social networks that might otherwise allow their more extreme impacts to be softened. Further problems are created by the system of 'indentured servitude' at some institutions, under which graduates are used to meet teaching and other commitments, and end up feeling that they are being treated as a source of cheap labour.

There is no reason to believe that the situation at Harvard, despite a hot-house culture in which many ambitious graduate students will-

ingly participate, is significantly different from that at other leading research universities. And the chemistry department, which had already been engaged in debates about mitigating such pressures, has been prompted by Altom's death to take immediate action, such as requiring every second-year student to set up a three-member pre-thesis advisory panel, and making psychological counselling services readily available.

Such moves can only be welcomed. But they inevitably raise the question, prompted by genuine concern rather than reflex recrimination, of why it took the death of an outstanding student to prompt the department into action. According to one recent PhD student, proposals for improved student oversight had been submitted by a graduate student committee three years ago, but stalled when faculty members were unable to agree on its implementation. Yet, she points out, this happened at a time when the faculty was able to conceive and start construction of a new building, renovate existing laboratories and hire new faculty.

It is impossible to pass judgement without knowing the full circumstances. But such situations raise a key issue that lies behind a broad swathe of current concerns, from scientific misconduct to the plight of contract research staff: is a culture of achievement, fanned by an increasingly competitive job market and tight competition for research grants, now in danger of driving out the culture of mutual support from which both science and its protagonists have gained so much in the past? □

Crop research meets the public

The UK government has some way to go in building trust in its handling of genetic modification in agriculture.

Lessons learnt in Britain (and no doubt elsewhere) from the BSE crisis were evident in the UK government's announcements last week of plans to change the way it regulates genetically modified crops. Out goes any lingering assumption that the technology is inherently safe, and in comes a new requirement for industry to demonstrate practically that its products will not have adverse ecological effects.

In a welcome move, a new steering group of scientists will be able to commission research it considers necessary on the ecological impacts of genetically modified crops (see page 830). The government, in turn, promises not to allow the commercialization of any crop until the scientists are reasonably satisfied that it is safe to proceed.

The government's attempts to build public trust in its scientific advice, and to include public views in its policy decisions, however, leave some questions open. It has chosen to set up a new forum of 'environmental stakeholders' whose views would contribute to decisions about genetic modification in agriculture. This forum, spanning the spectrum of interests and opinion, will need to make constructive suggestions, and avoid well-trodden, predictable and ultimately time-

wasting disputes between industry and environmentalism.

The government is already poised to embark on a survey of the public — as opposed to environmentalist — perception of the biosciences. Ministers would be wise to wait for its outcome before putting more flesh on the stakeholders' forum. But the latter should eventually be encouraged to make constructive contributions to the research agenda. In doing so, it will not only address public concerns about the risks of genetically modified crops, but should also help rebuild public trust in the application of science to foods. Here again, however, the government will need to ensure that the chance to influence research is not used as an unyielding instrument of obstruction by fundamentalist opponents of genetic modification.

Scientists on the whole are supportive of the changes, particularly the decision to authorize research trials on a commercial scale. They rightly seek better security arrangements following recent incidents of crop destruction. They should cautiously welcome, rather than oppose, increased public awareness and scrutiny of their activities while being themselves watchful (and, if necessary, vociferous) over the details of the processes the government is putting in place. □