



## The independence of university research

In his 1974 Commencement Address at Caltech, the physicist Richard Feynman provided an excellent summary of scientific integrity. He stated, “the idea is to try to give *all* of the information to help others to judge the value of your contribution; not just the information that leads to judgment in one particular direction or another.”

A recent example of a piece of university research in which this was manifestly not the case is provided by the report “The Value of Crop Protection” produced by Séan Rickard of Cranfield University. Among the findings of this report are: that without the deployment of pesticides to control weeds, pests and diseases, crop yields (in the UK) would fall to half their current levels and food prices would rise by 40%; that the resulting penury of raw materials would force the domestic food processing and manufacturing industry to import them from abroad at an additional cost estimated as £40,000 million (roughly double the existing cost of raw material procurement); and that in the EU as a whole comparable additional food costs for citizens would amount to some £750,000 million annually.

The report, issued in December 2010, wholly neglects the already very extensive evidence for the highly deleterious ecological effects of some of the most widely used pesticides, such as glyphosate (called Roundup by its manufacturer Monsanto) and the neonicotinoids.<sup>1</sup> The catastrophic decline of bee populations and the emergence of herbicide-resistant superweeds are just two examples of such effects. What could be the reason for this neglect? There seem to be two possibilities:

(1) Rickard is an economist and is simply ignorant of the scientific aspects of the issue. (One can rule out the possibility that he was aware of the evidence for deleterious effects but considered it to be unreliable, because this is nowhere stated.) He may, indeed, have heard that the pesticides and the genetically modified organisms designed to be used with them are “perfectly safe” and simply accepted what he heard at face value without any kind of critical scrutiny. It should be pointed out that scientific integrity is not a value necessarily shared by other professions. Indeed, as I have argued elsewhere,<sup>2</sup> for some professions upholding integrity might even be inimical to the execution of successful (within the terms of the profession) work.

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<sup>1</sup> We have the direct harm of the pesticides, through decimating the populations of benign organisms and through harmful effects on humans exposed to pesticide residues in food etc.; and the harm caused by foodstuffs derived from genetically modified crops, which modification is necessary to enable the pesticides to be applied without harming the crops.

<sup>2</sup> J.J. Ramsden, The sustainability of “postmodern” university research. In: *Philosophy and Synergy of Information: Sustainability and Security* (eds P.J. Kervalishvili & S.A. Michailidis), pp. 74–87. Amsterdam: IOS Press (2012).

(2) The report was sponsored by the UK Crop Protection Association, which clearly has a strong vested interest in promoting crop protection. *Is fecit cui prodest?* The report was not, however, produced by the Crop Protection Association directly, but by a supposedly independent university scholar.

The trap of *prévenence*, or the “shopkeeper’s code” (“the customer is always right”) always menaces the execution of contract research.<sup>3</sup> Nevertheless, there is supposed to be a sharp distinction between university research and that commissioned from a private individual or organization. The former is supposed to uphold certain inalienable features of scholarship, such as integrity and others that have been conveniently gathered together by R.K. Merton (the “Mertonian norms” or CUDOS, acronym for a communalism, universalism, disinterestedness, originality and scepticism).<sup>4</sup> But it is perhaps an illusion that contract research, even carried out by a university, can uphold these features, because one cannot of course buy integrity and independence, for “he who pays the piper calls the tune”. As a result, the whole current system of industry-sponsored university research (sometimes called the “Cranfield system”, because Cranfield University was perhaps the first British university to vigorously pursue collaborations with industry<sup>5</sup>), now lauded by numerous publications commissioned by the UK government such as the 2003 Lambert review, the more recent (2012) Wilson review as well as reports produced by civil servants, rests on extremely shaky foundations. It actually leads to what has been called “intellectual corruption”.<sup>7</sup> The results of such research are simply unreliable; the whole exercise becomes one of public relations (PR) rather than science. It is tragic to see how universities are simply destroying their reputations as bastions of independent scholarship by the multiplication of such examples of “bought scholarship”. It is also extraordinary that this eventuality never seems to have been foreseen or considered by the numerous panels that have created the reviews and reports supporting the commercial sponsorship of university research. Nor have the universities, in their headlong pursuit of sponsored research funds, seem to have themselves considered the pitfalls associated with such a *modus operandi*.

It is extremely difficult to see what might now be done to remedy the situation, not least because the “Cranfield system” has become quite entrenched in university existence and the

<sup>3</sup> See the discussion about making the transition from academic life to that of a private consultant by D.R. Denman in his autobiography *A Half and Half Affair*, Ch. 13 (London: Churchill Press, 1993).

<sup>4</sup> Although possibility (2) seems to be the most likely explanation for the neglect, (1) would be equally inexcusable according to these norms of scholarship, a sin of omission rather than of commission.

<sup>5</sup> Although the phrase “Cranfield system” is a well used part of the internal university vernacular at Cranfield, the actual history of university–industry collaborations does not seem to have been comprehensively documented hitherto. There is, however, plenty of incidental evidence. For example, in 2000–01 Cranfield University was in third place nationally in terms of absolute income from industrial research grants and contracts (after Imperial College and Oxford, occupying the first and second places, respectively), putting Cranfield in first place when taking due account of the overall size of the institution.<sup>6</sup> One notes, furthermore, that Cranfield was specially commended in the recent (June 2012) pamphlet issued by the UK Department for Business, Innovation and Skills (“Following up the Wilson Review of Business–University Collaboration”) for its work in promoting such collaborations.

<sup>6</sup> Table 6.1 in the Lambert Review of Business–University Collaboration. London: HM Treasury (December 2003).

<sup>7</sup> See, for example, *Lords Hansard*, Grand Committee (Civil Aviation Bill), col. GC134 (8 December 2005).

continuing squeeze of government expenditure on higher education and scientific research has made many universities extremely dependent on the external income obtained from research contracts. The system not only leads to intellectual corruption but has further corollaries that are already tending to marginalize universities in the business of knowledge production. Chief among these is the growing dominance of managerialism in their internal organization. In the UK, this was triggered by the 1984 Jarratt report, which was supposed to make universities more “efficient”. It was surely naïve then, and appears even more so now, to suppose that scholarly excellence, inventiveness and innovation could flourish under a régime of managerialist control and coercion of academics. Inevitably, as managerialism has slowly become the dominant force, academic life has become relatively unattractive and not only is it becoming difficult to recruit and retain academic staff but the highest calibre of student is no longer attracted to the idea of doing a PhD, the essential apprenticeship for research. Therefore, even if the desire to carry out objective, independent research returns, it has now become difficult to find people to do it. Mediocrity is, of course, of no consequence if *prévenance* holds sway, but once the true nature of the system becomes relatively widely known, commissioning a university to produce certain desired results will lose its PR value and such research will cease to be a significant source of income, since commercial organizations will no longer see an advantage in placing such contracts. A further corollary of the present reliance on sponsored research is the tendency to make each academic into an individual cost centre, jealously guarding his or her contracts. The untrammelled and collegial cross-campus discussions inherent in the idea of a university, which would have doubtless prevented the eruption of ignorance into the outside world if explanation (1) above was the correct one, simply do not take place any more, or in severely emasculated form.<sup>8</sup> Managerialism is, by the way, the first principle of New Public Management. As C.N. Parkinson has pointed out,<sup>9</sup> “public administration has had a bad effect on business ... while the civil servant’s methods may be similar, his aims are different ... because ... at any stage of his career, questions may be asked as affecting his work ... so what the civil servant needs to protect himself is a file recording exactly what he has done ... [he] wants to show that he took the right decision, gave the right advice, asked the right questions and obtained the right facts before placing the right minute before the right authority. What actually *happens* is of little consequence. It is the file that has to be in order ...”. At Cranfield, and doubtless elsewhere, every decision, however insignificant, made by the managers is punctiliously recorded on paper and filed, with scant regard for the consequences of the decision. Small wonder that there is diminishing energy left for invention and innovation.

This renunciation of unimpeachable scientific integrity by universities could not have come at a worse time for humanity. Our technical capabilities for manipulating nature have reached unprecedented heights. The creation of genetically modified organisms has become almost routine, and the continuing development of atomically precise technologies in the physical world will further increase human mastery over nature. But the wider and long-term

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<sup>8</sup> Diverse pressures of all kinds severely limit the time academics feel they have available to “combine”; the formerly crowded and convivial combination rooms are largely deserted nowadays; the whole concept of “devotion to scholarship” seems to have acquired an antiquated and impracticable air.

<sup>9</sup> C.N. Parkinson, *In-Laws and Outlaws*, Ch. “Paperwork” (pp. 123–140). London: John Murray (1964).

consequences of these advances are often far from readily apparent, perhaps least all to those directly engaged in pursuing them. We began with a quotation from Richard Feynman; let us end with another one, a remark to be found at the end of his observations contained in the report into the “Challenger” space shuttle disaster in 1986:<sup>10</sup> “For a successful technology, reality must take precedence over public relations, for nature cannot be fooled.”

J.J. RAMSDEN

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<sup>10</sup> *Report of the Presidential Commission on the Space Shuttle Challenger Accident* (Rogers Commission), Appendix F (6 June 1986).