

Simon Upton

New Zealand is fortunate that Dr Jack Sommer has sustained his interest in what its science community thinks and feels about the state of its universe. That such a distinguished, external investigator should return to follow up his baseline survey of 1996 when there must be so many more fascinating things to worry about in North Carolina, may or may not, however, be a source of comfort. Are we perceived as having created such a hectic laboratory of organisational change that a foreign commentator can't tear himself away? And if so, is being 'interesting' in this way any sort of recommendation?

The answer to that has to be 'No' if the results of the survey are anything to go by. By comparing the responses of roughly 100 'panellists' to the same or very similar questions in 1996 and 2000, Dr Sommers gives us a glimpse of the beginnings of a trend. When asked to offer some commentary, I remarked that a very unfair one-line summary would be that the interrogated group has become richer and grumpier!

Lacking any training in poll analysis (beyond poring over party political opinion polls) I do not claim any expertise in judging trends that may or may not be revealed by this initiative. Looking at crude, generalised trends, we can say (with respect to the panellists) that they have become older (obviously!), a significant number of the foreigners among them appear to have taken up citizenship, more of the group are now engaged in management or consulting (and fewer in research), they're significantly richer (both in household terms and individually) and a larger proportion are controlling bigger budgets.

In terms of their views, we might observe the following trends: [(Numbers # refer to the survey questions: See <http://www.rsnz.govt.nz/clan/nzas>)].

- More respect for peer-review processes while cynicism levels remain stable (#20)
- Slightly less insistence on the prior importance of science over society's concerns (#23 & 27) but a significantly more dismissive view of the public's and the media's ability to understand science (#21,26,31 & 32)
- A slightly more equivocal view about the nature of scientific discovery (#34)
- A stronger inclination that expensive equipment is needed to do really interesting science (#35), a more negative judgement on the impact of science reforms on the ability to perform innovative research (#48) but a decisively positive verdict on improved access to equipment, supplies and staff support over the last few years (#42 & 43)

- Significantly stronger scepticism about the worth of *matauranga maori* but much firmer convictions that there is a need to attract Maori undergraduates to science, mathematics and engineering (#36 % 38)
- Fewer people undecided about whether they would recommend careers in science (in a negative direction #45) and a continuing stable consensus stacked firmly against the approach to science management

Some results seemed a little mysterious to me (although I could be out of touch): for instance, there was overwhelming disagreement with a new proposition in the 2000 survey that "changes in the organisation of tertiary education over the past two years have created, or are creating, a better environment for scientific research" (#62). With the best will in the world, this writer can't locate changes in the 1998-2000 period that were so dramatic as to have generated a 63.4% disagreement rating with only 2.1% in agreement. Tertiary education has certainly been the subject of endless *proposed* reforms (which continue to this day) but nothing has actually been done that would come within a country mile of the changes that came to pass in respect of departmental/CRI research in the early 1990s.

Other results showed a pretty acute eye for a bad question. Question 59 asked panellists whether they expected that "investment on science through the New Economy Research Fund will result in greater benefits to New Zealand than would a simple increase of the same amount for awards through the Marsden Fund. 34.4% neither agreed nor disagreed which seemed to me the only sensible answer in the face of a question that depended on so many variables that opinions could only be highly contingent ones at best.

As one who has been far too closely implicated in the New Zealand science system ever to be regarded as being remotely capable of an objective judgement, there are only two really strong conclusions I would draw from the research – and both accord with my own impressions. The first is that the Foresight process has proved to be a pretty comprehensive disaster in terms of its ability to engage and win the confidence of the science sector (# 52-57).

That comes as no surprise to me, having sat in Cabinet committees as the Minister for Crown Research Institutes – (as such, one would have thought, a reasonably informed observer) – and been completely unable to fathom some of the explanatory papers served up. It reminded me of an introductory talk on Bhuddism I once attended in which my head was quickly swimming as I tried to assimilate 16 pathways, 7 noble portals, 39 steps and however many righteous zones of conduct.

The process ended up being reasonably comprehensible (and undoubtedly engaged some industries seriously for the first time ever – no mean feat) but by then, the communications war had been lost with the science community that felt (I know from numerous personal comments) utterly bamboozled by what had been unleashed.

The second irrefutable verdict is that the science community has overwhelming doubts about the management systems that are currently in place. Whether those doubts are fair – universally or partially – is not the point. There is a real lack of confidence and that, again, comes as no surprise to me on the basis of the feedback I received as a Minister over my entire period in office. This comes despite the fact that, as noted above, there have been palpable and acknowledged material improvements in the science system.

When I first engaged with it, I had a lot of complaints about the quality of facilities and equipment, salaries and support staff. Many of those have been addressed as a result of some very big investments, particularly in CRIs. But the overall level of dissatisfaction proves what we all know: that at the end of the day it's the human factor that will make or break any science organisation (and for that matter, most institutions). It is not clear, from the questions panellists have been asked, what an improved system of management would look like. But from my knowledge of the different management styles being deployed within CRIs, some are clearly more intrusive and perceived to be meddlesome than others.

That said, it would be interesting to know what anonymous staff surveys of management in the best managed and most successful companies and/or government agencies routinely throw up. It has been suggested to me that approval ratings are rarely overwhelming simply because such surveys provide one of the few real opportunities staff have to let rip. I don't mention this to suggest there isn't a problem – I believe there is – but it would enable us to calibrate this response.

This has to be the urgent focus for the CRI boards and the Crown Company Monitoring Unit (as far as the CRIs are concerned) and those who manage researcher interactions with the public funding system in universities (if such a species exists). The Foundation too, must look at the extent to which its procedures add value as against frustration. There are no textbook answers. One hopes there is no prospect of a return to the 'good old days' when, as one senior, retired scientist told me with a glow in her eye, there was real excitement when an urgent ministerial came through to the lab. (I can't imagine how people can think that such short-term politically inspired recourse to science is a stable model – fine when the Minister is vaguely literate, disaster when he/she has arrived in office with a collection of tacky prejudices).

As Dr Sommer says in his wry and perceptive summary, the two surveys are just "two data points on a barely understood trajectory of change". But without them we would have no reference points and in a sector that is so reliant on maintaining the confidence of highly skilled (and highly mobile) individuals, to be uninformed about the judgements being made on a day to day basis by the workforce would be foolhardy indeed.

It is to be hoped that someone (Dr Sommer's barely disguised preference is for the Royal Society) will keep the process alive. There are, sadly, no shortage of changes that will add further turbulence to future results. The deeply disappointing decision to mount a general raid on CRI reserves, for instance, will be a source of demoralisation to managers and scientists alike in the worst affected institutions. But that just makes the importance of independently verifying the distance between rhetoric and reality.

As I stated at the outset, I have no special expertise to interpret these results – neither have I had access to all of the cross-tabulations that could supply a more fine-grained and revealing analysis. But the two or three hours devoted to preparing this short piece were truly rewarding. Someone should commission a quick survey to see how much time (largely non-existent) science reporters devote to getting inside the results.

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