

Year 2000 Survey of Scientists

As a country, we have a poor record of monitoring the effects of change. By world standards, the economy, the public service, the welfare system, the organization and management of our health, education and science systems have all undergone radical change over the past 15 years, yet in no case have we set in place robust systematic data collection systems to monitor the effects of change - except perhaps in a broad economic sense where the specific effects of change are often too dissociated from the overall economic outcome measured to be sure of cause and effect.

Not that anyone would want to treat fundamental structural and organizational changes that result from legitimate and democratic political processes as a scientific experiment driven by testing hypotheses and negation in a true Popperian sense. A similarly inappropriate scenario arose with the Greens claiming that eating GM food is one colossal global experiment conducted by commercial interests like Monsanto. But in both cases, innovative changes made in the belief that they would be in the best interests of the country or mankind and the environment would have benefited from a preconceived plan to monitor the effects of the changes, before, during and after the event. Such a scientific approach, that would allow appropriate analysis of the data collected, is largely absent from our analytical system. Rather we seem to favour some bizarre *post hoc* system of analysis and interpretation of the effects of change.

In the science and health systems, the Crown Company Monitoring Unit (CCMAU) was set up to monitor the performance of the pseudo business units into which these and other sectors of the public service were divided. But the functions of CCMAU have been largely focused on economic performance and there is still no effective process to monitor other outputs such as science performance and health status and to track human resource changes and predict requirements.

The success of any change is a function of the ability of management to work with and involve workers in the changes. In this respect, the perceptions of, for example, scientists can be seen as a reflection of the successful implementation of science policy. The report on the Year 2000 Survey of Scientists, published in this issue of *Science Review*, continues a series of surveys initiated by NZAS in 1994 and continued by Dr Jack Sommer in 1996 and in the year 2000. Although these surveys were aimed at monitoring over time the perceptions of scientists about the ongoing changes in the science system, the nature of the survey has changed as a result of the more professional approach taken to the survey and the nature of the changes themselves.

The survey conducted in 2000 and its predecessors now provided baseline data by which future changes in the science community may be monitored, and performance measures developed. They also serve as a source of fundamental data for public or private policy making as well as a voice for scientists.

The views of three commentators were sought on the Year 2000 Survey. One from a practicing scientist another from a former Minister for Research, Science and Technology and the third from the Government's chief scientific advisor. On behalf of the Association I sincerely thank each for their comments which, along with the finding of the surveys will contribute to the continuing effort of New Zealand to make the best use of its highly skilled but limited scientific resources.

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Dr Jack Sommer, the Knight Distinguished Professor of Public Policy at the University of North Carolina at Charlotte, was a Senior Fullbright Scholar in 1995-96 and then a Fullbright Distinguished American Scholar in 2000-2001.

Jack has recently been elected to the Board of Directors of Sigma Xi, the Scientific Research Society, as the regional representative for the southeastern United States. Sigma Xi is an international scientific honour society of nearly 80,000 distinguished research scientists and engineers devoted to the proposition of fostering communication and companionship among researchers, across disciplinary and national borders.

