
FOREWORD

The question mark at the end of *A crisis for Australian science?*, the review by Paul Bourke and Linda Butler of Australia's 'impact' among the published citations of research papers, 1985-92, was a challenge that an academy of science could hardly refuse to take up. With the financial support of the Australian Research Council, another interested party, the Academy's Council in February 1995 commissioned our Secretary for Science Policy, Dr Keith Boardman, and other distinguished researchers constituting the project's Steering Committee, to test the trends evident in the citation analysis and the hypotheses advanced to explain them.

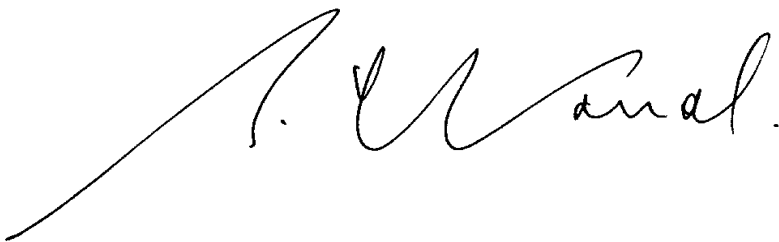
The trend in the citation impact of Australian papers was not uniform across disciplines, so Dr Boardman and his Steering Committee chose some that had been part of the trend and some that stood out from it. To help find suitable ways of testing the hypotheses that had been advanced to explain the observed trends the Committee consulted the Academy's National Committees, relevant scientific societies and the Institution of Engineers, Australia. Their advice was essential in distinguishing the top-ranked journals in each selected discipline, on the basis of which Professor Bourke and Ms Butler conducted a further analysis of the citation data base. Fellows of the Academy also responded readily with insights to guide interpretation of the citation data.

In the outcome, the hypotheses that this report enumerates were defined and tested, within the limits of the data available to the Committee. The firmest conclusions were negative, but useful none the less. The likeliest cause of declining impact, although certainly not the only factor, was found to be an attenuation of the networks connecting Australia's younger researchers with their

leading colleagues overseas. Combining this evidence with the obvious importance of such contacts to leading-edge research, we have grounds for recommending that further ways be found of promoting international links. To this and other evidence of the study the Academy will pay more attention in the months ahead.

I am very grateful to the Australian Research Council for supporting this work, and especially to its Chair, Professor Max Brennan, who played an active role on the Committee. The Australian Academy of Technological Sciences and Engineering was ably represented on the Committee by Professor Frank Larkins. Dr Keith Boardman was, as usual, a wise counsellor for the Academy, and Dr Lyn Grigg an experienced guide through the imperfectly mapped territory. Indeed, this study provides further evidence, if it is needed, of the value of data about the research enterprise, and the importance of making sure that it is collected and analysed systematically and consistently across time and institutions. Many more hypotheses than we could examine should be open to study in future.

I look forward to further debate on the issues raised in this report. The Academy would be grateful for comments and further evidence on them.

A handwritten signature in black ink, appearing to read 'G. J. V. Nossal.', written in a cursive style.

G J V Nossal
President
Australian Academy of Science