subjects for discussion between government and industry" and are hoped to "generate action as well as debate". It would be difficult for the report to be any more positive than this. It is widely recognised that the fishing industry is highly fragmented and lacking the necessary sense of identity that would enable it to develop a united approach to an issue such as post-harvest technology. Traditional industry concerns in relation to government involvement and the associated user-pays implications, together with the professional and competitive independence of industry groups, are seen as factors which will moderate enthusiastc industry support and participation.

To allay industry concerns and to have this issue pursued in a co-operative spirit, the Commonwealth and State governments will perhaps need to accept from the outset the more passive role of monitoring and guiding and, in this context, to encourage industry to produce its own co-ordinated strategy and priorities for action. Recommendations on how this scenario might best be achieved are not covered by the report.

This brings us back to the question of judging the effectiveness of this report. It is now more than 12 months since *Casting the Net* was published and the sad truth is that the extensive and thorough groundwork done by ASTEC has thus far amounted to little. For a short time in early 1989, the debate it raised was intense but largely lacking substantive direction, being predicated on a wait and see what the goverenment does approach. The report was not directed at industry and so industry has not responded, except to contribute to the debate.

One suggestion that may help precipitate timely and substantial follow-up action in any further ASTEC inquiry is to include on the review committee at least some members of the industry and specialist technologies involved. The fisheries post-harvest technology review group did not include expertise in either. Although industry and government specialists were widely consulted, this was obviously not sufficient to harness effectively their collective expertise in a way that would produce a more positive outcome.

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Life Among the Scientists: An Anthropological Study of an Australian Scientific Community *by Max Charlesworth, Lyndsay Farrall, Terry Stokes and David Turnbull*
(Oxford University Press, Melbourne 1989) pp.viii + 304, $19.95, ISBN 0 19 554999 6

Life Among the Scientists addresses an important and interesting (a somewhat unusual juxtaposition) issue; indeed it is an important book. That is not to say, however, that this reviewer regarded the book as being a particularly enjoyable read or that it reveals much that is new or wildly exciting about that rather small, but nevertheless very important group of scientists at the Walter and Eliza Hall Institute of Medical Research. Although the style of writing in the first person,

without identifying the author, makes the book sometimes irritating and less useful than it might otherwise be, my overall reaction is perhaps best captured by paraphrasing the comment attributed to George III when he read Edmund Burke's *Reflections on the Revolution in France,* "a good book, a very good book and ought to be widely read".

In their Introduction, the authors explain their mission in the following way:

> This is an attempt to understand how a small group of scientists at a particular research institute, and in a specific scientific field, do science, as distinct from what the received scientific mythology *says* they do and what philosophers of science and other science watchers *suppose* they do.

The authors claim that their work is an illuminating story and "an example of a genre of writing which raises certain expectations in the reader". They regard it as "a cultural artefact and in the broad sense a work of fiction". Of course the work is not a fiction and to suggest that it is, is a piece of semantic gymnastics which is at best silly.

Life Among the Scientists is a most interesting, and often entertaining, attempt to penetrate the arcane world of the scientist. However, although Professor Max Charlesworth and his colleagues do illuminate that world to an extent seldom achieved in Australia, the light is opaque rather than bright. For example, the character of the Chief of the Walter and Eliza Hall tribe [Sir Gustav Nossal] is less clearly drawn than one would like and would expect in a book of this nature. Similarly, to continue that imagery, the light the authors shine on the Walter and Eliza Hall Institute is not that of the sharply focussed scientific microscope under which the scientists and their inter-relationships are passed and analysed, but rather a hand held 'anthropological torch' which from time to time moves out of focus and off the subject.

This is a book that deserves wide readership because it examines one of Australia's and the world's premier research organisations, provides the wider public with insights into the character, style and achievements of two very great Australians (Sir Macfarlane Burnet and Sir Gustav Nossal), and — most importantly — takes a look inside science at a time when Australian science is undergoing unprecedented and appropriate scrutiny. Much of this questioning and re-appraisal of Australian science is unfortunately conducted without even the remotest understanding of the nature of science, the scientists themselves, or the culture that attracts and nurtures those scientists and shapes both science and our world.

The authors provide a most useful Introduction that explains the genesis of the book (a talk, presumably by Charlesworth, at the Wednesday staff seminar of the Institute some five years ago), discusses the nature of anthropological research, the notion of knowledge and cultures, and describes the research methodology that guides the book.

Charlesworth (I presume) begins Section One, *The Life-World of the Institute,* with an explanation of how he got the idea for the book. He explains:

> I suppose that what first gave me the bright idea of doing an anthropological study of the Institute was reading Bruno Latour's Laboratory Life. So I decide, as an act of piety, before I begin at the Institute, to reread 'Bruno's Bible', as my friend Alvin calls it. Latour's general idea is marvellously original — looking at the Salk Institute endocrinologists as though they were a primitive tribe.

The bright idea begins with an interesting and often amusing (at least to the reviewer, who was present) description of the opening of the Institute's new

building in 1985 (during which occasion one of the authors — presumably the omnipresent Charlesworth — felt "rather like Margaret Mead at the beginning of her stay in Samoa"), and progresses through a discussion of the work of Sir Macfarlane Burnet [the first Director 1944-65] and his role in shaping the organisation and culture of the Institute.

Chapter Two, which attempts to describe the emergence of the new biology, can be viewed as the book in microcosm, though obviously not in terms of the specific matters dealt with. For example, the chapter subject is important and immensely interesting, but the authors seem to just miss the essence of what has been one of the most significant and exciting achievements of all scientific endeavour. Linus Pauling has described the discovery of the double helix of DNA as one of the greatest discoveries ever. Indeed, the authors, at a later point, refer to Watson and Crick's letter to *Nature* as "one of the seminal scientific documents of the twentieth century". The real value of the chapter for this reviewer was that it stimulated another look at *The Double Helix, The Eighth Day of Creation* and *The Path to The Double Helix*. This re-examination was initiated by what was regarded as an absurd remark that *The Double Helix* is almost as significant a part of their (Crick and Watson) success as their actual discovery and the most unfair description of Judson [*The Eighth Day of Creation*] and Olby [*The Path to the Double Helix*] as compliant and offering a 'whig' interpretation of the history of biology. I do not know what a 'whig' interpretation is (the authors offer no explanation) and I would be reasonably certain that the notion never crossed the minds of Judson or Olby.

Chapter Two concludes with a brief report of the response of one Institute scientist to a draft of the chapter. The response of that scientist (John Rolland) is enlightening, but given the anthropological nature of the study, the reader can be forgiven (I hope) for being disappointed that more of the tribe weren't asked to comment on the same material. The same point can be made about showing a draft of Chapter Two to Anne Pascoe.

In many respects, Chapters Three and Four (The Institute's Setting; Socialisation and the Social Structure) are the most important for it is here that the reader is taken inside the present Institute, where the "posthumous and ambiguous presence" of Sir Macfarlane Burnet is still powerful. In the book, as in the Institute, Sir Macfarlane Burnett appears much as Banquo's ghost.

One of the more valuable features of this book is that it raises a number of issues which we all know about, which we realise are important but about which we do little — the role of scientific support staff, power, fraud and the politics of science. The role in science of technicians is not only central to a proper understanding of science, but also represents an area where close examination would show that the quality of scientific output could be markedly improved by the application of modern management principles. In some instances — and the Walter and Eliza Hall Institute seems to have its examples — simple courtesy and respect for those who support (in some cases prop-up) the bench scientists would be enough to effect a giant leap in work satisfaction (for both the bench scientist and his or her support colleagues) and scientific productivity. After the quite thorough treatment of this issue (particularly in Chapter Four), one is left with the very strong feeling that in some instances at the Walter and Eliza Hall Institute, and in much of Australian science as a whole, the role and status of support staff have changed little in the last century.

The character of the present Director of the Institute is not as well drawn as one might expect. It is worth noting here that Barbara McClintock receives

seven citations in the Table of Contents, SirMacfarlane Burnett twenty-five; Albert Einstein nine and Sir Gustav Nossal ten. Discussing role models and heroes the Director is referred to in the following fashion:

> The present Director is not seen so much as a role model for the budding young scientist in the Institute since, although he has had a distinguished scientific career, he is now seen mainly as a very skilled administrator and entrepreneur. He keeps the various factions in the Institute in a state of relative equilibrium; he brings home the bacon in the form of government and other funding; he keeps the name of the Institute before the international scientific community; he is adept at discerning where the new waves in immunological research are likely to break. He takes the organisation and administration of science very seriously and sees himself at the other extreme from what he calls the 'Darwinian' approach to the organisation of research (collecting a bunch of bright, competitive individualists and letting them go to it) [p.124].

It is of more than passing interest that the authors describe the formation of the joint venture company AMRAD, as an Australian government initiative. In fact AMRAD developed from a bold Victorian government initiative. Furthermore, that initiative is unlikely to have succeeded without the support and influence of Sir Gustav Nossal and the formal involvement of the Hall Institute. Similarly, much of the success of AMRAD to this point must be attributed to its first Chief Executive, John Stocker, who completed his Ph.D [in immunology] at the Hall Institute under the supervision of Gustav Nossal. Readers will realise that in March this year Stocker became Chief Executive of CSIRO. These are but two illustrations of the diffuse and powerful influences of the present Director and the Institute on Australian science — influences not well drawn out in this book.

Life Among the Scientists does not offer a great deal that is new to those who have a practitioner's knowledge of science and a general understanding of the Institute. The book will, however, provide fascinating and occasionally riveting insights for those with less familiarity. It is in no sense a criticism to say that this book will be of greatest value to that much wider audience of people who are simply curious about science and scientists.

Life Among the Scientists, draws a better than rough and ready boundary around science and the scientist and describes the Walter and Eliza Hall Research Institute in a most unusual and especially interesting way. In this case, the reader can be grateful that the illumination of science, the scientists and the Institute given by Charlesworth and his colleagues was not provided by the sharply focussed microscope — the less clinical, less focussed and less fixed approach adopted here offers a richness and a feel for the humanity of science and the Hall Institute that is the book's greatest strength.

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New Technology. International Perspectives on Human Resources and Industrial Relations *edited by Greg J. Bamber and Russell D. Lansbury*
(Allen and Unwin, Sydney), pp.xx + 267, $24.95, ISBN 0 04 928060 0

This book is a collection of chapters, which were given in their original form, at the Seventeenth International Industrial Relations Association World Congress, held in Hamburg in 1986. The interests and emphasis of a special