

6. HYPOTHESIS 5 *Foreign libraries have policies and practices related to the management of international journals that may impact on the visibility of Australian science*

There is a real and growing potential for library acquisition and collection management policies to affect citation behaviours. While no data exist to add weight to this statement, the following very brief review of the literature on the subject indicates that some general trends in serials collection management in libraries throughout the world warrant consideration in any discussion regarding citations.

6.1 Citation analysis as a tool for collection management in libraries

Many libraries have been using citation analyses and the ISI's journal impact factors for more than a decade to evaluate the journals which they acquire and retain in their collections (Budd, 1986; Haas & Lee, 1991; McCain, 1981; McReynolds, 1984). Databases have been developed using *Journal Citation Reports* to guide libraries' periodical collections (Calhoun, 1995), or to measure the strength of holdings in research libraries (Heidenwolf, 1994).

Knowledge of citation habits in particular disciplines have also been used to adjust libraries' periodical and monograph collection policies (Bowman, 1991; Burdick, Butler & Sullivan, 1993; Mack, 1991; Swigger & Wilkes, 1991).

The effects of such practices are very difficult to determine. Clearly, the most frequently cited journals are being identified and targeted for acquisition regardless of cost, and this has been the practice in many libraries for the last decade. If Australian fields of science are not publishing to any great extent in the 'top' journals in their fields, one could hypothesise a flow-on effect in terms of reduced share of citations from such library acquisition policies. The issue of publications in 'top' journals is addressed further in Section 7.

6.2 Cost as a factor in periodical subscription and cancellation

Libraries around the world are cutting back on library acquisitions because of the escalating costs of periodicals (Spang, 1995). The BIE Report (1996b) notes evidence that in the United Kingdom the costs of medical journals have risen by 82 percent, and of science and technology journals by 88 percent during the period 1989-1994. The result appears to be reluctance to subscribe to journals which are outside the mainstream or core journals in a field. Journals on the periphery of a field, highly specialised journals in new fields, and journals from smaller scientific nations have been found to be neglected by some United States and Canadian libraries resulting in underrepresentation in research collections (Walden, Fineman, Monroe & Parrine, 1994). Academic library collections are reported to be looking more and more similar, with a focus on core areas only (Perrault, 1995, cited in BIE, 1996b). The BIE Report

makes the point that if Australians are overrepresented in ‘peripheral’ journals on the ISI list, then, given global library practices, there could be a problem with visibility.

6.3 Discussion: Hypothesis 5

As no data exists on the matters raised on this issue it is impossible to reach a firm conclusion regarding this hypothesis. Section 1 of this discussion paper referred to results of a study by Bourke, *et al.*, (1996), which indicates that Australian scientists are not in the peripheral journals when these are defined as those journals *not* in the ISI indices. However, no data has been gathered regarding representation in low-impact journals *within* the ISI compared to other countries, and this may be an avenue worth pursuing.