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# The Problem of Suitable Classroom Literature

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by some educators against courses that expose the student to the molecular orbital treatment of chlorine, but fail to reveal that chlorine is a poisonous, straw-yellow gas. As a result, pressure to increase the descriptive content of courses is increasing. Other groups, such as the A.A.A.S., have suggested that while the current courses may serve the needs of students who intend to study science at university, they fail to increase the 'scientific literacy' of the average student. A number of educators have developed courses that deal with the social interaction of science, but for the vast majority, trained in the tradition of the 'hard sciences,' such courses are rejected as 'Mickey Mouse.'

The situation in Canada at the present time is further complicated by a variety of factors. The 'back-to-basics' movement may reverse what little progress has been made in the implementation of science and society courses. The reduction of teaching staff over the next decade will delay the infusion of new ideas from the universities into the high schools. There is a shortage of appropriate material for use in high schools and most of what is available is oriented toward American concerns in hope of American sales. Finally, since most of the educational journals that teachers receive are American, it is difficult to inform teachers about Canadian concerns.

Having outlined the problem, I wish that I could suggest a remedy. The best hope is probably for the involvement of prestigious organizations such as the Science Council and the universities, acting though ministries of education, to convince teachers of the validity of the concerns. A second course is for university staff to make themselves available for talks to teachers on professional development days and at teachers conferences.

Koestler in the 1940s had a dark vision of democracy being destroyed by a scientifically illiterate electorate making decisions based upon personality and self-interest. Only the schools provide a wide enough population base to prevent such a scenario from becoming reality.

## THE PROBLEM OF SUITABLE CLASSROOM LITERATURE

R. A. Jarrell

Everyone with whom I have spoken who is teaching a course in our subject, or adds some Canadian content to science or history courses, inevitably has the same problem: the lack of suitable texts and readings. I faced this problem in 1974 when I introduced a full-year course on the subject at York University, and I still face it teaching a half-course at Toronto. The fact that approximately one-quarter of this latter course deals with science policy doesn't change the problem for there is little readable material in that subject. Bibliographies for courses are always makeshift at best, depending as they do on course

director's knowledge of the literature and on the library's resources.

The chief desideratum is a good survey of the history of Canadian science and/or technology, but there is none. Documents are available in both subjects (Levere and Jarrell, A Curious Field-book, for science; Sinclair, Ball, and Petersen, Let Us be Honest and Modest, for technology), but the older general works of Tory, the Royal Society of Canada, and Royal Canadian Institute are too old, too superficial, and out-of-print. Separate sciences and institutions have had histories written on them. Morris Zaslow's Reading the Rocks, an excellent history of the Geological Survey, is prohibitively expensive for students and too detailed for classroom use. The same can be said of Don Thomson's history of surveying, Men and Meridians. Works on various government scientific departments are usually unavailable or of marginal use. A new series of biographies published by Fitzhenry and Whiteside will include several Canadian scientists and engineers (e.g. Larry Murphy's T.C. Keefer), but these works are aimed at the high school level.

The history of Canadian technology tends toward the highly specialized--the recent Building a House in New France by Peter Moogk is an example--or the unusable (like Brown's Ideas in Exile). We have many peripheral works and many useful supplementary books, but no core. The government-sponsored 'fun books' on innovations and science (Mirrored Spectrum) have limited use, but at least they are cheap and readable for undergraduates. If a course is to deal with science and technology in French-speaking Canada, an instructor will have to be particularly resourceful. Only Cyrias Ouellet's La vie des sciences au Canada français is readily available but is not nearly enough to sustain a good discussion.

If one wishes to include a unit on science policy, the valuable books of Doern (Science and Politics in Canada) and Hayes (The Chaining of Prometheus) seem an expensive route to take. Having students read parts or all of the Lamontagne report may be simply cruelty. Fortunately, a few magazine-format items on science policy are beginning to appear and may be stimulating additions to the classroom.

What of the future? Our first step will be to provide the community with an annotated bibliography for courses in the history of Canadian science and technology (noted on page 1). Since there seems to be no hope of a general survey being published in the foreseeable future, perhaps we should work toward developing packages or units of articles and parts of books which could be purchased by students. This module approach works admirably in some high school subjects and is appearing in some university courses, particularly in the science and society area (in which Concordia University has pioneered).