Department of Employment, Education and Training
Australian Research Council

Application for Initial Support in 1989

I

Office use only
File number
PP

When completing this form the applicant must refer to the "Advice and Instructions to Applicants" document.

Do not attach any papers to the front of this form. Applications must be typed.

Applications are to be lodged with the:

Director
Research Grants Section
Research Policy and Grants Branch
Department of Employment, Education and Training
PO Box 826
WODEN ACT 2606

The closing date for applications is 1 April 1988.

1. Institution to administer grant

University of Wollongong

2. Project title

Provide a project title that is clear, brief, precise and informative to workers outside your field. (Up to four lines; do not hyphenate words at the end of the line. Maximum of 33 characters per line.)

Scientific controversy and public decision-making

3a. Total funds for 1989 requested in this application. Whole dollars only; final figure in right hand square.

17529

See instructions for codes

b. Group | Category | National interest

Group	Category	National interest
	733	

c. Do you wish this application to be considered for a program grant? (See instructions) Yes ☐ No ☒

4. Chief Investigator(s) - see Instructions

	1.	2.	3.
a. Title, initials and surname (eg. Prof, A/Prof, Dr)	Dr E. Richards	Dr B. Martin	
b. Full address	Department of Science and Technology Studies University of Wollongong POBox 1144, Wollongong NSW 2500 Telephone (042)270627 Telex: 29022	Telephone: (042)270763 Telex: 29022	Telephone: Telex:
c. Appointment held	Senior Lecturer	Lecturer	
d. Name of Dept/School/Other (please indicate which)	Department of Science	and Technology Studies	
e. Year of birth	1941	1947	
f. Sex	Male ☐ Female ☒	Male ☒ Female ☐	Male ☐ Female ☐
g. Academic qualifications (indicate conferring institutions and dates)	B.Sc., Queensland, 1965 Ph.D., UNSW, 1976	B.A., Rice, 1969 Ph.D., Sydney, 1976	
h. Average days per month to be devoted to the project	3	3	

5. Support

Are you also applying for 1989 support from NH & MRC ☐ NERDDC ☐ Other ☐

If you have ticked one of the boxes state the project title and the amount requested in Section 16 and 17.

6. Work experiments

	Yes	No
Does the work proposed involve human or animal experimentation?	☐	☒
Does the work proposed involve experiments in which there is preparation or use of recombinant nucleic acids constructed *in vitro* from sources which do not ordinarily recombine genetic information?	☐	☒
Does the work proposed involve the use of ionising radiation?	☐	☒

If you have answered "Yes" to any of the above questions please sign the additional certification in Section 18.

7. Chief Investigator Information

For each Chief Investigator detail the following:

	1.	2.	3.
a. Indicate any anticipated period of absence from institution during the course of the project including OSP.	Overseas study leave, January-June 1990		
b. What other major research programs are being undertaken or supervised by the Chief Investigator(s)?	Social history of evolutionary biology	Vulnerability and resilience in Australian technological systems	

Other Participants

8. Provide details of the Associate Investigators: List names, organisation, qualifications, date conferred and conferring institutions. Indicate involvement in the project (average days/month). Certification required, see Section 18	
9. What technical and other staff (other than those requested) will be available to assist with this project? Indicate the involvement in the project (average days/month).	
10. Will there be any research students working on the project? If so, state the number, the qualifications being sought and type of support.	

11. Commencement/Completion date of project

Has the project started?	If no, when will it start?	What is the probable duration of need for support?	What is the estimated total time required to complete this project?
Yes [x] No [ ]	/ /	2 years	3 years

12. Cooperation of other organisations

Do you require the cooperation or assistance of any other organisation?	If yes, has the head of that organisation agreed formally in writing?
Yes [ ] No [x]	Yes [ ] No [ ]
	Attach a separate sheet of paper detailing the nature of this cooperation or assistance.

13. Interviews

Will you be available for interview if required? (See instructions for dates) Yes [x] No [ ] Uncertain [ ]

Note: An interview is frequently used in the assessment of a proposal, however, it does not indicate or influence the progress or likelihood of success of the proposal.

14. Budget Information

Refer to the document 'Advice and Instruction to Applicants' for the completion of the budget information below.

Surname of 1st Chief Investigator	File number
Richards	

Detailed budget items	Priority for Year 1	Amount requested Year 1	Year 2	Year 3	Office use only
Personnel	1				
Research Fellow, half time (Dr P. Scott)*					
level 1 ($14,346.50 + 18%)		16,929			
level 2 ($14,472 + 18%)			17,667		
Other	2				
Computer searches, postage, photocopying		600	400		
*Nomination form to follow.					
Total		17,529	18,067		

Financial Summary Support requested	Personnel $	Equipment $	Maintenance $	Travel $	Vessel $	Other $	Total $
1989	16,929					600	17,529
1990	17,667					400	18,067

Office use only

Institution: University of Wollongong

15. Summary of project

In the space provided below, supply a seven line summary of this project indicating why it is of signiiicance. The summary of the project is to be no more than seven lines and to be singled spaced. Use underlining, capital letters and any other emphasis only where required by convention eg. underline species names.
Please follow the example layout below for your summary.

Office use only

Project title:

Scientific controversy and public decision-making

Summary:

There is a need for a comprehensive and generally acceptable analysis of the role of experts, interest groups, governments and the general public in social controversies involving vigorous conflicts over scientific knowledge claims. This project will employ a comparative approach to the meta-analysis of detailed case study material from a number of previously analysed conflicts, in order to develop a model for dealing with controversies and their wider social and policy implications.

Keywords

Give up to five keywords to describe the subject area of proposal

controversy

scientific

decision-making

sociology

knowledge

Institution: University of Wollongong

1st Chief Investigator: Richards

Total support

16. List separately the support received, requested or to be requested **for this project** from your own organisation and all other sources.

Name of organisation	1986 $	1987 $	1988 $	Requested 1989

17. List separately **all other projects** for which you have received support from your own organisation and other grant giving schemes including ARC.

Name of organisation	1986 $	1987 $	1988 $	Requested 1989
U. Wollongong, Evolutionary biology (ER)			2000	
ARGS, Vulnerability of steel industry (BM)		10,000	10,000	
U. Wollongong, Fluoridation (BM)	870	1000		
U. Wollongong, Electromagnetic pulse (BM)			1300	

18. Certification - to be signed by all applicants

I/We understand and agree that:

- research which involves human or animal experimentation must be carried out in accordance with the guidelines laid down in the NH & MCR code of practice;
- research which involves the use of recombinant nucleic acids constructed *in vitro* from sources which do not ordinarily recombine genetic information must be carried out in accordance with the guidelines laid down by the Recombinant DNA Monitoring Committee;
- research which involves the use of ionising radiation must have the risks involved assessed by a recognised Ethics, Safety or Bio-safety Committee, personnel must be trained and hold a current licence, and;
- a certificate of compliance with the appropriate guidelines must be received by the Committee from a recognised Ethics, Safety or Bio-safety Committee before payment of any proposed grant can be made.

I/We declare that all persons listed as Associate Investigators have agreed to take part in the proposed research.

Signature of Chief Investigators

1. Erdla Rintoul (Signature) 14/3/88 (Date)
2. Brian Martin (Signature) 14/3/88 (Date)
3. ..... (Signature) / / (Date)

Certification by Head of Department

- I certify that the project can be accommodated within the general facilities in my Department, that sufficient working and office space is available for any proposed additional staff. I am prepared to have the project carried out in my Department under the circumstances set out by the applicant;
- I have noted the amount of time which the investigators will be devoting to the project and certify that it is appropriate to existing workloads.

Note: A confidential statement may be forwarded to the Committee if thought advisable. Refer to the 'Advice and Instructions to Applicants'.

..... (Signature) 15/3/88 (Date)

Certification by Head (or Nominee) of Organisation/Institution

- I certify that the project is acceptable to the organisation under the terms and conditions set out in the Conditions of Award and Advice and Instructions to Applicants and that salaries quoted for personnel are in accordance with practice at this organisation;
- I certify that this project is not a specific component of this organisation's budget;

A Read (Signature) 29/3/88 (Date)

EXECUTIVE OFFICER,
OFFICE OF RESEARCH AND POSTGRADUATE STUDIES
UNIVERSITY OF WOLLONGONG
P.O. BOX 1144, WOLLONGONG
PH (042) 270386

Note: All certificates must be signed.

20. Aims, research plan, justification of budget, and relevant publications

To answer this question fully refer to the document 'Advice and Instructions to Applicants' so that you can cover the points specifically made in it, especially in relation to policy and priority information and in detailed justification of the budget proposal.
Use the following headings to detail your answer:

- Aims
- Research Plan
- Justification of Budget
- Relevant publications

Applicants should specify clearly and justify the expected duration of the project.

If you have answered Yes to Section 3c (program grant) attach a supporting statement and list all associated projects. Include an extended budget using a duplicate page 3 for years 4, 5 and 6. (See instructions)
Attach additional pages if there is insufficient space.

Aims

The central role of science and technology in contemporary society has given rise to a proliferation of disputes involving intense disagreements over the status of scientific knowledge claims. Such disputes often have major political and economic implications, for example the 1970s controversy over the continued use of persistent pesticides which resurfaced in 1987 with the threat to Australia's meat export industry worth hundreds of millions of dollars.

Previous studies of scientific controversies may be divided into two main categories:

1. Those which analyse controversies from the 'outside', focussing on the politics of competing interest groups.[1] Such analyses do not critically engage with the crucial disputed scientific or technical knowledge.

2. Those which employ the interpretative tools and methods of recent sociology of scientific knowledge, and examine the social processes by which knowledge claims are posited, negotiated and defended.[2] Such 'inside' studies have generally focussed on technical controversy within the scientific community, and have ignored or avoided the larger social implications of technical controversy.

This project aims to integrate these two approaches and to go beyond previous perspectives on scientific controversy and public decision-making. The intention is to construct a comprehensive theoretical framework which incorporates the analytical tools of the social construction of knowledge and those of power relations. Such a framework would permit the deconstruction of knowledge claims by experts within the context of the exercise of power by the various interested parties, including professions, corporations, governments, and consumer and other pressure groups, and would offer a more realistic basis for policy-making and regulatory intervention.

The foundation for the project lies in several already-completed in-depth analyses of scientific controversies by the chief investigators and the nominated research fellow:

1. Dr Richards (Chief Investigator) has studied the debate over the efficacy of vitamin C in the treatment of cancer in the United States, Britain and Australia, examining the alleged finality of results from randomised controlled double-blind clinical trials and the role of the power of the medical profession and the alternative health movement in therapeutic evaluation, and has applied this analysis to the social implementation of medical therapies and technologies (see publications below).

2. Dr Martin's (Chief Investigator) study of the fluoridation controversy in the United States and Australia has examined the knowledge claims deployed by proponents and opponents, and the role of the power of the dental profession. This debate has been perhaps the most vociferously contested health issue in recent decades in English-speaking countries, mobilising enormous passions and requiring continual involvement by government bodies. Dr Martin has also carried out a detailed study of the controversy over nuclear winter and the connection of scientific claims to military policy (see publications below).

3. Dr Scott (the nominated Research Fellow) was recently awarded a Ph.D. for her study of the policy struggles and public debate over the Australian Animal Health Laboratory, a major economic investment in Australian science whose value has been contested by critics and thrown into doubt by the policy-making process itself.

The investigators are thus able to combine well-developed research skills and expertise for the advancement of their project and to bring to it a considerable body of established work which is consistent with recent sociology of scientific knowledge. Their various controversy studies represent a valuable source of readily accessible analysed material which, together with other published studies, may be drawn upon for developing and evaluating various models of the relationship between knowledge, power and decision-making. Each case study has wide social and cross-national ramifications, and taken together they provide a unique opportunity for meta-analysis of a number of areas of conflict in which social, professional, economic and political interests differ in kind and degree. All have particular relevance to Australian science policy. In addition, each of these studies is significant in that attempts have been made by partisans to 'capture' the investigator and her/his findings. This is a process which has received little attention in the literature and whose policy relevance is unexplored.[3]

In summary, the aims of the project are:

- to uncover key themes or patterns in scientific controversies which have major social implications;
- to develop a theoretical framework which incorporates both the social construction of scientific knowledge and the exercise of power in the public domain;
- to examine different methods for science policy-making in the light of insights about scientific controversy, focussing on the roles of experts, interest groups, governments and the general public;
- to examine the impact of the researcher on scientific controversies, and the implications of this for policy-making.

1 H. Tristram Engelhardt, Jr. and Arthur L. Caplan (eds.), Scientific Controversies (Cambridge: Cambridge University Press, 1987); Allan Mazur, The Dynamics of Technical Controversy (Washington, DC: Communications Press, 1981); Dorothy Nelkin (ed.), Controversy: Politics of Technical Decision (Beverly Hills: Sage, 1979).

2 H. M. Collins, 'The seven sexes: a study in the sociology of a phenomenon, or the replication of experiments in physics', Sociology, vol 9, pp. 205-224 (1975); Collins, 'Son of seven sexes: the social destruction of a physical phenomenon', Social Studies of Science, vol 11, pp. 33-62 (1981); Collins, 'An empirical relativist programme in the sociology of scientific knowledge', in K. D. Knorr-Cetina and M. Mulkay (eds.), Science Observed (London: Sage, 1983), pp. 85-113; A. R. Pickering, Constructing Quarks: A Sociological History of Particle Physics (Edinburgh: Edinburgh University Press, 1984); S. Shapin, 'History of science and its sociological reconstructions', History of Science, vol 20, pp. 157-211 (1982); Collins (ed.), 'Knowledge and controversy: studies of modern natural science', Social Studies of Science, vol 11, pp. 3-158 (1981).

3 D. E. Chubin and S. Restivo, 'The "mooting" of science studies: research programmes and science policy', in K. D. Knorr-Cetina and M. Mulkay (eds.), Science Observed (London: Sage, 1983), pp. 53-83.

Research plan

The research plan falls into four principal stages: literature search, comparative analysis of controversies, analysis of models of science policy-making, and study of the impact of the researcher. These proceed sequentially but overlap considerably.

The first part is a search of the literature for material on other controversies, especially studies that use a contextual analysis similar to that of the investigators. Much of the literature on scientific controversies is known to the investigators, but it is important to survey as much of it as possible in order to gain further insights and be able to classify the field of controversy studies. Standard bibliographic methods will be used for this literature search, supplemented by correspondence and, where possible, interviews with leading figures in this research area. The initial searches and correspondence for this part will take place in months 1 to 6, and follow-up searching will continue thereafter.

The second part is a comparative analysis of the controversies carried out by the Chief Investigators and the Research Fellow. This will involve a codification of the salient issues, especially those involving methods of promoting knowledge claims and exercising professional or other forms of power in relation to the debate. For example, in some debates the 'outside expert' (usually from another country) plays a key role, being introduced at the behest of a particular interest group. In most debates claims about 'proper scientific credentials' are introduced. These and many other factors will be assessed and compared as tactics and ploys in relation to the power configurations in which the controversies take place. Appropriate comparisons will be made to other studies as the literature search proceeds. This part will take place throughout months 1 to 12 and possibly longer.

The third part is an assessment of models of social and political decision-making and the ways in which they deal with knowledge claims by experts and others. Some of the models to be examined will be top-down

decision-making (synoptic rationality), incremental methods or 'muddling through', control by experts, the 'science court', and various ways by which citizens and community groups can be involved, including lobbying, public campaigns, referenda and incorporation on advisory committees. These models will be treated as non-exclusive ways of approaching policy issues. After researching the theory and practice of these models or methods, each one will be examined using the insights from the case studies. The research into models will take place roughly from months 7 to 12 and the examination of them from months 13 to 18.

The fourth part of the project is an examination of the impact of researchers on the dynamics of scientific controversies and the implications of this for policy. This will be carried out in part by analysing our own experiences and also those of other researchers in Australia and overseas. A survey of the content of citations of papers published by the investigators about the controversies will provide further material. Finally, and most importantly, interviews will be held with participants in the controversies -- including both those interviewed previously and new individuals -- to determine assessments of the impact of the researchers on the debate. The central focus of these interviews will be towards elucidating the implications for policy of the researcher's role, in the light of the models of decision-making. The preliminary work for this part of the project will take place roughly in months 9 to 14 and the interviews from months 15 to 20.

Writing up of results will consume the remaining time.

Justification of budget

The central item in the budget is a half-time salary for Dr Scott* for two years at the Research Fellow level. Dr Scott's participation for this time and level is necessary in order to carry out the comparative analysis of controversies at the depth of understanding required -- understanding of both the theoretical issues involved and the practical understanding gained from doing a controversy study in great depth -- and to provide the sustained work in examining controversies and theories of decision-making.

The amounts specified for computer searches, postage and photocopying are necessary for effective literature searches and contacting other researchers by mail.

Publications, 1983-

(i) In fields related to the project (starred items are directly relevant)

Evelleen Richards. Drugs in social context. In David Turnbull (eds.), **Medicine and Society** (Geelong: Deaking University, 1985).

* Evelleen Richards. Vitamin C suffers a dose of politics. **New Scientist**, vol 109, pp. 46-49 (1986).

Evelleen Richards. Review of Kenneth J. Carpenter, The History of Scurvy and Vitamin C. **Metascience**, vol 5, pp. 88-89 (1987).

* Evelleen Richards. The politics of therapeutic evaluation: the vitamin C and cancer controversy. **Social Studies of Science** (to appear).

* Evelleen Richards. **Vitamin C and Cancer: Medicine or Politics?** (London: Macmillan) (in preparation).

Brian Martin. Suppression of dissident experts: ideological struggle in Australia. **Crime and Social Justice**, no 19, pp. 91-99 (Summer 1983). Reprinted in **Philosophy and Social Action**, vol 11, no 4, pp. 5-19 (Oct-Dec 1985).

* Gabriele Bammer, Ken Green and Brian Martin. Who gets kicks out of science policy? **Search**, vol 17, nos 1-2, pp. 41-46 (Jan-Feb 1986).

Brian Martin, C. M. Ann Baker, Clyde Manwell and Cedric Pugh (editors). **Intellectual Suppression: Australian Case Histories, Analysis and Responses** (Sydney: Angus & Robertson, 1986), including the following chapters:

Brian Martin, C. M. Ann Baker, Clyde Manwell and Cedric Pugh. Introduction, pp. 1-7.

Brian Martin. Science policy under the whip, pp. 79-86.

Brian Martin. Mutagens and managers, pp. 123-129.

Brian Martin. Archives of suppression, pp. 164-181.

Brian Martin. Elites and suppression, pp. 185-199. Reprinted in **Philosophy and Social Action**, vol 12, no 2, pp. 31-50 (April-June 1986).

Brian Martin, C. M. Ann Baker, Clyde Manwell and Cedric Pugh). Options for dissidents, pp. 243-252.

Brian Martin and Clyde Manwell. Publicising suppression, pp. 253-256.

Brian Martin. Suppression and social action, pp. 257-263.

Brian Martin. Suppression in science. In: Barry Butcher et al., **Science in Culture** (Victoria: Deakin University, 1986).

* Brian Martin. Science policy: dissent and its difficulties. **Philosophy and Social Action**, vol 12, no 1, pp. 5-23 (January-March 1986).

* Brian Martin. Agent Orange: the new controversy. **Australian Society**, vol 5, no 11, pp. 25-26 (November 1986).

Brian Martin. Nuclear suppression. **Science and Public Policy**, vol 13, no 6, pp. 312-320 (December 1986).

Brian Martin. The issue of intellectual suppression. **Philosophy and Social Action**, vol 14, no 1, pp. 3-14 (January-June 1988).

* Brian Martin. The sociology of the fluoridation controversy: a re-examination. **Sociological Quarterly** (to appear).

* Brian Martin. Analysing the fluoridation controversy: resources and structures. **Social Studies of Science** (to appear).

* Brian Martin. Coherency of viewpoints among fluoridation partisans. **Metascience** (to appear).

* Brian Martin. Nuclear winter: science and politics. **Science and Public Policy** (to appear).

* Ron Johnston and Pam Scott. The Australian response to the threat of an exotic disease incursion: the establishment of the Australian National Animal Health Laboratory. In: Adrian Gibbs and Roger Meischeke (eds.), **Tests and Parasites as Migrants: An Australian Perspective** (Canberra: Australian Academy of Science, 1985), pp. 63-74.

* Pam Scott. **The Politics of Science: The Establishment of the Australian Animal Health Laboratory** (Ph.D. thesis, University of Wollongong, 1986).

* Pam Scott. Dealing with dissent: on the treatment of opposition to the Australian Animal Health Laboratory and the importation of live foot-and-mouth disease. **Search** (to appear).

(ii) In other fields

Evelleen Richards. Darwin and the descent of woman. In: David Oldroyd and Ian Langham (eds.), **The Wider Domain of Evolutionary Thought** (Dordrecht: Reidel, 1983), pp. 57-111.

Evelleen Richards. Will the real Charles Darwin please stand up? **New Scientist**, vol 100, pp. 884-887 (1983).

Evelleen Richards. Women and science. In David Turnbull (ed.), **Knowledge Making** (Geelong: Deakin University, 1985).

Evelleen Richards. A question of property rights: Richard Owen's evolutionism reassessed. **British Journal for the History of Science**, vol 20, pp. 129-171 (1987).

Evelleen Richards. The 'moral anatomy' of Robert Knox: the interaction between biological and social thought in Victorian scientific naturalism. **Journal of the History of Biology** (to appear).

Evelleen Richards. Huxley, the woman question and the control of Victorian anthropology. In J. Moore (ed.), **History, Humanity and Evolution** (Cambridge: Cambridge University Press, to appear).

Brian Martin and Evelleen Richards. Introduction to women in science. **Philosophy and Social Action**, vol 14, no 2 (April-June 1988, in press).

Brian Martin. The selective usefulness of science. **Queen's Quarterly**, vol 90, no 2, pp. 489-496 (Summer 1983).

Jill Bowling and Brian Martin. Science: a masculine disorder? **Science and Public Policy**, vol 12, no 6, pp. 308-316 (December 1985).

Brian Martin. Bias in awarding research grants. **British Medical Journal**, vol 293, pp. 550-552 (30 August 1986).

Brian Martin. Proliferation at home. **Search**, vol 15, no 5-6, pp. 170-171 (June/July 1984).

Brian Martin. Environmentalism and electoralism. **Ecologist**, vol 14, no 3, pp. 110-118 (1984).

Brian Martin. Self-managing environmentalism. **Alternatives: Perspectives on Society, Technology and Environment**, vol 13, no 1, pp. 34-39 (December 1985).

Jill Bowling, Brian Martin, Val Plumwood and Ian Watson. Strategy Against Nuclear Power. **Social Alternatives**, vol 5, no 2, pp. 9-16 (April 1986).

Brian Martin. Science and war. In: Arthur Birch (editor), **Science Research in Australia** (Canberra: Centre for Continuing Education, Australian National University, 1983), pp. 101-108.

Brian Martin. Social defence and the Indonesian military threat. **Peace Studies**, no 4, pp. 5-8 (July 1984).

Brian Martin. Science, war and peace (I): building a lasting activism. **Peace Studies**, no 7, pp. 9-12 (October 1984).

Brian Martin. **Uprooting War** (London: Freedom Press, 1984), xi+298 pages. Chapters 1 and 2, slightly edited, reprinted as: The limits of the peace movement. **Our Generation**, vol 17, no 2, pp. 3-21 (Spring/Summer 1986).

Brian Martin. The social construction of Australian peace movement demands. In: Paul Patton and Ross Poole (editors), **War/Masculinity** (Sydney: Intervention Publications, 1985), pp. 87-99.

Brian Martin. Peace research: centre and periphery. **Peace Studies**, pp. 26-27, 49 (November/December 1985).

Jacki Quilty, Lynne Dickins, Phil Anderson and Brian Martin. **Capital Defence: Social Defence for Canberra** (Canberra: Canberra Peacemakers, 1986), 68 pages. Also published in Italian as: **Un Modello di Difesa Popolare Nonviolenta** (Molfetta: Edizioni la Meridiana, 1987).

Brian Martin. Nuclear disarmament is not enough. **Peace Studies**, no 3, pp. 36-39 (June/July 1986).

Brian Martin. Social defence: elite reform or grassroots initiative? **Social Alternatives**, vol 6, no 2, pp. 19-23 (April 1987). Reprinted in **Civilian-based Defense: News & Opinion**, vol 4, no 1 (June 1987), pp. 1-5.

Brian Martin. The Nazis and nonviolence. **Social Alternatives**, vol 6, no 3 (August 1987), pp. 47-49.

Brian Martin. Disruption and due process: the dismissal of Dr Spautz from the University of Newcastle. **Vestes**, vol 26, no 1, pp. 3-9 (1983).

Brian Martin. Academics and social action. **Higher Education Review**, vol 16, no 2, pp. 17-33 (Spring 1984).

Brian Martin. Plagiarism and responsibility. **Journal of Tertiary Educational Administration**, vol 6, no 2, pp. 183-190 (October 1984).

Brian Martin. Merit and power. **Australian Journal of Social Issues**, vol 22, no 2, pp. 436-451 (May 1987).

Brian Martin. Education and the environmental movement. In: Tom Lovett (ed.), Radical Approaches to Adult Education (London: Routledge and Kegan Paul, 1988, in press).

20. Nomination of Assessors

Office use only

Applicants for initial support may nominate up to three persons who are qualified to assess the project and are not associated with it.

Applicant

Surname	Given names	Initials
Richards	Evelleen	

Institution: University of Wollongong

Project title: Scientific controversy and public decision-making

Nominee 1

Surname	Given names	Title
Mendelsohn	Everett	Professor

Postal address:
History of Science
Harvard University
Cambridge MA USA Postcode 02138

Reason for nomination: Key researcher and editor in scientific controversy area

Nominee 2

Surname	Given names	Title
Albury	Randall	Professor

Postal address:
School of Science and Technology Studies
University of New South Wales
POBox 1, Kensington NSW Postcode 2033

Reason for nomination: Editor of Metascience; author of central Australian book in the area

Nominee 3

Surname	Given names	Title
Lowe	Ian	Dr

Science Policy Research Unit

Postal address:
Griffith University
Nathan Q Postcode 4111

Reason for nomination: Researcher and writer on science and public decision-making

Where an applicant has concern about the Committee using a particular assessor(s), the applicant should nominate the person(s) and provide a brief outline of the reason for preferring that the assessor(s) not be involved.

Evelleen Richards
(Signature of applicant)

14/3/88.
(Date)