INVITED REVIEW

ETHICS, FUNDING AND ALCOHOL RESEARCH

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Abstract — The field of alcohol research is a multidisciplinary area of inquiry. Moreover the debate about alcohol issues is highly politicized, involving not only researchers but also 'advocates' and those with strong ideological orientations or who represent powerful vested interests. Researchers may easily be caught in the crossfire in polemics involving such people. From time to time ethical malpractice is evident, yet there are often neither clear guidelines to delineate which behaviours are unacceptable nor how ethical violations are to be handled. This paper considers a number of key issues currently topical in the field. These are specifically concerned with the relationships between funders or sponsors and policy makers and researchers. Such issues include the ownership of data, sponsor control and the divergent cultures and outlooks of researchers and sponsors/funders. It is concluded that the field of alcohol research requires a code of ethics to regulate the relationship between researchers and funders. This should provide protection for subjects, patients, clients, researchers and those who pay for research. Some tentative suggestions are put forward for discussion.

INTRODUCTION

'Ethics is . . . the moral limitation placed on power.' (Jonsen, 1992). Researchers have considerable social power. Those who fund research have economic power. Given the capacity of power to corrupt, it is important to review the ethical constraints on researchers and those who fund them. Such a review gives those engaged in research a chance to revisit the values that underpin their activity.

All fields of scientific inquiry should be subject to ethical considerations. There have been, from time to time, extreme examples of unethical practice in science. For example Project Camelot (Horowitz, 1967; Horowitz and Katz, 1975; Homan, 1991), the Tuskegee Syphilis Study (Jones, 1982) and the faked findings of Cyril Burt (Diener and Crandall, 1978). At its most extreme, science was perverted during World War II by the conduct of sadistic experiments on prisoners, both in Germany and in the Far East.

The Nuremberg Code and the World Medical

Association Declaration of Helsinki give general guidance about biomedical research involving human subjects. Health authorities in the UK have set up Local Research Ethics Committees (LREC) to consider giving approval to such research, and there are similar arrangements in many countries. These do not cover all research. For instance, a social scientist may ask a series of highly invasive personal questions without the need to seek ethical approval from a LREC. Stirring memories of child abuse, for example, may be far more harmful to a subject than a drug which has been produced by a pharmaceutical company as a rival to a known safe product, yet the former may not require ethical approval.

Research into alcohol-related issues involves a wide range of disciplines and topics. Some of the latter are highly politicized. This paper therefore also sets out to examine a number of key issues, especially those that are relevant to alcohol epidemiology and to the conduct of social and behavioural research into alcohol, its use and its consequences.

There is no reason to believe that the ethical standards of researchers in the alcohol field are

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higher or lower than elsewhere, nor that the pressures on them are greater or less. The case of Malcolm Pearce (Lock, 1995) has highlighted issues of scientific fraud, and it is appropriate to explore these issues in a variety of forums so that a varied audience is made aware of them.

ALCOHOL RESEARCH

'Alcohol research' is a broad area of activity rather than a clearly defined discipline with a standard training and system of qualifications or accreditation. Those engaged in this field include psychiatrists, physicians, general practitioners, community medicine specialists, nurses, social scientists, psychologists, historians, biochemists, geneticists, economists, statisticians, anthropologists, health educators and counsellors. The multidisciplinary nature of this area of inquiry has contributed to the rich and varied literature on the use of alcohol and its associated problems. The diverse nature of the alcohol field is one of its great strengths. Even so, it is also a possible source of weakness if this field lacks a coherent ethical framework to limit what is and what is not acceptable. The 'alcohol field' is a fascinating arena for investigation, discovery, discussion and debate. Like all areas of science, it has had its share of unacceptable behaviour. During recent years there have been several alleged instances of plagiarism, sexual harassment perpetration of attacks upon the work or reputations of researchers. While such behaviours often backfire to discredit or damage the perpetrators, they also may inflict considerable harm upon other people and more widely upon the field of alcohol/addictions research. Most of these infractions are not in the public domain. Even so, it is possible to cite the copying by Minnis (1988) of earlier work by Peck (1979) (K. Graham, personal communication). It would also be reasonable to conclude that some criticisms of the 'controlled drinking' research of the Sobells was motivated by hostility to the suggestion that some of those with serious alcohol problems could ever return to harm-free drinking (Sobell and Sobell, 1984). There have been other examples of criticisms which appear to have been motivated by a desire to defend perceived ideological or economic interests. The work of Fingarette (1988) and Edwards et al. (1994) has been targeted in this way. Haskell (1993) has noted that strong ideological disagreements are commonplace in the alcohol field.

The diversity of individuals and agencies operating in this field has not apparently fostered any effective way of coping with ethical infractions when they do arise. Such transgressions or alleged violations are either consigned to be chronic topics for conference or party gossip and innuendo or are handled, usually covertly, by agencies such as government departments, universities or research institutes. The latter may be more inclined towards secrecy and protecting their corporate reputations than to safeguarding the alcohol research field and those who work within it.

A major issue that has been a focus of attention in recent years is that of the possible influence upon the research process of funders or sponsors. In many countries there has been a dramatic cut in funding for alcohol research. This has been accompanied by a reduction in tenured, secure research posts and an increase in insecurity and in short-term, policy-orientated research. The latter may be subject to restrictions to publish imposed by funders.

The alcohol debate is not solely driven by plain, objective 'facts'. Investigators very often disagree about a whole range of issues and interpretations. That is a healthy part of the scientific discourse. Even so, the alcohol field is also characterized by the active involvement of individuals with strong ideologies or those who represent powerful interests. The latter, sometimes referred to as 'advocates', include the 'Alcoholism Movement', espousing the perspective of **Alcoholics** Anonymous/the Minnesota Model, the beverage alcohol industry, pharmaceutical companies and a variety of temperance or, more accurately, abstinence, organizations.

VALUE FREE SCIENCE?

One of the founding fathers of social science, Max Weber, promoted the view that, ideally, science should be value-free and objective. It is a commonplace remark that data are neutral, but researchers are not. There are many 'facts' in the alcohol field, in the sense of numerous issues for which answers may be provided in quantitative terms. Placing such a fact in a context immediately imports a value. When this is a widely shared value it is easy to overlook this. For instance, a

recent edition of this journal carried an article on moderate alcohol consumption and spontaneous abortion (Cavallo et al., 1995). Information was collected on the widely shared assumption that spontaneous abortion is undesirable. Comparing the drinking habits of Catholics and Protestants in Northern Ireland would imply that adherence to a particular faith had significance, whereas factors such as employment or social class may be more relevant. The decision to collect a particular set of figures is value-driven.

Debate about the interpretation of evidence is the life blood of any dynamic branch of science. Moreover, individual researchers interpret available information in the light of their training, knowledge, disciplines and personal value systems.

It is reasonable for those engaged in research into health or social problems to wish to move beyond simple descriptive statements to informing policies. This would, for example, involve the reduction of the problems associated with alcohol use. There is often considerable disagreement about such policies, both in relation to their likely impact and their social or political desirability. Even if the basic science is sound, governments and other powerful agencies often ignore, interpret and reinterpret or distort evidence which does not fit in with their policies and their view of the future.

In fact, the pursuit of science is an activity filled with values. First, there is an assumption that knowledge is better than ignorance. This assumption has been questioned by those who doubt the wisdom of some uses of nuclear technology. Secondly, science implies concern for truth. As one commentator has said, 'In science, lying is condemned, even by its few practitioners. Deliberate or careless deception short of lying, however, seems to be universally accepted and sometimes even promoted as a part of the culture of science.' (Bailar, 1986, p. 259.) The moral distinction between lying and intentional deception is hard to maintain. Its endurance may owe more to a desire for justification than for rigour (Bakhurst, 1992). Concern for truth implies a third value, that of openness, which in turn implies trust. The collegial trust of scientists is 'fundamental to the scientific endeavour', as Armstrong (1993) stated in condemning plagiarism. Despite the widespread belief that ethics always encompasses a grey area and that nothing is right or wrong, dishonesty and plagiarism in research do not find many defenders.

FUNDING AND SPONSORSHIP

Research requires funding. Methods of funding research vary markedly in different countries. In some, there are government-supported research units, state alcohol monopolies or governmentfunded grant-giving bodies. Charities, local government, industry (including the beverage alcohol industry and pharmaceutical companies) and a number of local and national agencies have all been active in supporting various aspects of alcohol research. The alcohol industry has been especially prominent in this respect. It also has a particular interest in the findings of research in this area. Research may be arranged and organized in a number of ways. Sometimes researchers seek funds for studies that they have devised. Sometimes agencies may commission research for which they have funding. A considerable part of the time of many researchers is spent attempting to secure money to support researchers and their work.

Homan (1991) noted that there is a trend in social science towards less available research money, together with an increase in the proportion of funding available for policy-related, rather than theoretical or 'pure' research. He further noted that government departments may adopt a highly restrictive approach to findings that do not suit the interests or culture of the funding agency. Some UK government departments have, during recent years, introduced and imposed 'gagging clauses' when providing funds for research. These restrict the researcher's freedom to publish or otherwise publicize results unless permission to do so is granted. Whether or not such consent is given may depend upon the 'acceptability' of results to the funding agency. Sometimes no explanation is given to justify such decisions. In other cases, it may be explained with reference to some vague entity such as 'the public good'.

It has been the experience of the authors of this paper that, in order to conduct a broad and varied programme of research, it has been necessary to secure funds from many different agencies. Some organizations will fund projects that have been rejected by others.

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OWNERSHIP OF DATA

The ownership of information is an important issue. Most researchers would support the view that research findings should be made freely available. Sometimes this is not possible. Shortage of funding, job insecurity or the chance of carrying out an interesting and otherwise unfundable investigation often lead to the conduct of privately commissioned work. The results of such studies are the property, not of the researcher, but of the funding agency. Unless special permission is given, such data are not made available for publication in scientific journals. Unfavourable or unacceptable findings may be suppressed. As noted by Lee (1993):

Conflicts over publication are likely to be particularly stark where topics of a 'sensitive' kind are involved . . . Social scientists when they publish, address themselves to a variety of audiences: research participants, sponsors, funders, publishers, other social scientists and the wider society. Each of these audiences has its own distinct expectations and interests . . . and frequently, the interests and expectations of one audience collide with those of another. (p. 184)

SPONSOR CONTROL

Funding agencies often exert control of the research agenda by being selective about which types of research they support. Few will support an unlimited range of research. Such restrictions may reflect philosophy, vested interests (Edwards et al., 1995) or simply humane priorities in the face of budget limitations. Many charities have been established with a restricted, and often now archaic, remit. Their trustees are forced to confine research funding to areas set out long ago. Very often an agency will have changing, as well as limited, priorities. For a researcher to survive amidst changing priorities it is often necessary, unless one has tenure or a long-term sponsor, to chase whatever money is available and to tender for whichever projects are on offer. Under such circumstances, it is the funders, not the researchers, who set the research agenda. Some 'good' projects do not appeal to those who hold the purse strings. It is common for researchers to shop around for project funding, often unsuccessfully. Recently it has been especially difficult to secure funding for qualitative, theoretical, historical and medium- or long-term prospective research. Conducting research becomes the art of carrying out whatever it is possible to support with funding or to do without funding. This sometimes means doing smaller projects with more limited objectives and shortened time scales. Sometimes budget restrictions lead to poorly designed and flawed work. There is always the risk that this may lead to policy discussions based on inadequate information, but which may suit the sponsor.

Wenger (1987) has drawn attention to the possibility of funders exerting an influence on the research process:

Several writers have urged researchers to be aware of possible unstated objectives of sponsors and other funding bodies with whom they work... Some researchers have rejected funding where suspicion of vested interest could jeopardise the credibility of research findings... On the other hand, Moore (1977) has noted that it is possible to do good work even with 'tainted' funds and cautions against overreaction in 'fear of the hidden hand'. (p. 132)

Wenger (1987) also cited other authors who have noted that research has the appeal, if it produces the 'right results' of transferring responsibility from funders/policy makers to 'impartial experts' (cf. Cox et al., 1978). Wenger (1987) further cited Payne et al. (1980) who wrote that policy makers may react to 'negative findings' as if these were a personal attack, rather than simply objective results. In extreme cases, researchers producing the 'wrong' results have been dismissed (Jaeger and Wenger, 1987). This is sometimes referred to as 'shooting the messenger'. It is possible that very often funders may punish 'errant' researchers by simply turning down their subsequent applications.

Alcohol researchers generally conduct themselves and their disagreements with courtesy and restraint, but there have, sadly, sometimes been exceptions to this rule. Such exceptions have occasionally taken the forms of personal attacks and abuse. The field as a whole would derive great benefit from following the advice of Sobell and Sobell (1984):

So let us all act rationally in the interests of our

patients and science and return to our work. Issues regarding controlled drinking, or other aspects of the nature and treatment of alcohol problems, are far better resolved by research than by polemics.

CULTURE CLASH?

An important perspective on the possible tension between researchers and funders has been provided by Sharpe (1978). This commentator has suggested that there is a basic distinction between the institutional cultures of researchers and administrators (e.g. funders, civil servants, policy makers). Wenger (1987), citing Sharpe, has made the following comments:

On the one hand, at the level of basic value orientation, the academic ethos is one which places a high value on independence, intellectual autonomy and creativity, while on the other, the administrative ethos is one of agency loyalty, formal procedures and respect for authority. Related to the basic ethos are the hierarchical structures of the institutional backgrounds. The academic is part of a collegiate structure, with few hierarchical strata, loosely defined in terms of administrative responsibility rather than authority. As an academic, her or his professional responsibilities are comparable irrespective of her or his administrative responsibilities. Within the academic community the researcher may have high or low status. The administrator, on the other hand, is part of a bureaucracy with (many) hierarchical strata. (pp. 211-212)

There are several crucial ways in which researchers and potential or current funders may simply live and view the world of research in entirely different ways. They sometimes even use different language. Researchers are likely to value openness, independence, creativity, publication and freedom. Funders or sponsors may revere quite different things. The latter include agency loyalty, secrecy, confidentiality and control (Sharpe, 1978; Wenger, 1987).

TRANSPARENCY

Alcohol researchers operate in a marketplace of plentiful ideas, but of scarce resources to support

research. The latter should be not only technically competent, but should be conducted and reported as honestly and openly as possible. This requirement may be more attractive to researchers than to some administrators or funders. Openness and honesty clearly require that publications should acknowledge funding sources. In fact, most scientific journals routinely require such disclosure, as do most funding agencies. The officials of funding agencies would usually be aggrieved if their support for research, for conferences etc. were not acknowledged. It is a matter of courtesy, as well as one of honesty, to acknowledge funding. This is a relatively straightforward issue. In a recent editorial in the British Medical Journal, Smith (1994) offered useful advice, suggesting:

A good guide when you are facing a difficult decision is to consider whether you would be happy to be questioned about the decision on live television.

In the same article, he suggested that authors should cite any possible bias that might influence their work. Rothman (1991) would regard such a suggestion as insulting. 'We should counsel those who have this attitude that it debases science to focus attention on hypothetical fraud on the part of those for whom the only indication for such fraud is the source of their research funding.' His argument is that to focus on the circumstances of the work rather than the work itself only serves to decrease objectivity. We think this is naïve. This is not to say that researchers are inevitably influenced by their sources of funding or that they lack integrity. Bond (1991) works as an epidemiologist for Dow and argues that it is in industry's best interests to respect the fundamental principles of the epidemiologist's obligation to protect public health. Our point is to ensure that a potential conflict of interest is identified. Rothman (1991) makes the useful suggestion of blind peer review, where the author's identity is unknown to the reviewer. Had this been implemented the editor of the British Journal of Obstetrics and Gynaecology may have been saved recent embarrassment. The literal implication of this view has been questioned by 'Bird' (1995). The latter has noted that political opinions, for example, may influence the presentation and interpretation of data:

Smith is surely not suggesting that all conflicts

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of interest should be enumerated at the end of a paper; if they were, the disclaimer might take up considerably more space than the subject matter.

It is notable that this view, though cogent, appears to originate from an individual who adopted a false identity (Craft, 1995).

TWO SCENARIOS

The following two scenarios are fictional, but have been devised to illustrate some ethical dilemmas which researchers in the alcohol field may face:

(1) Professor Shark of the University of Basing-stoke conducted a study of heavy drinking and illicit drug use amongst young people. This revealed that such behaviours are especially commonplace in areas of high social deprivation and unemployment. These results were not welcomed by the funding agency, a government department. Professor Shark altered his report to conceal the truth. This was then published in a journal. A young researcher, Dr Alice Goodbody, was amazed to read the resulting paper. She worked on the original study and knew the real findings. Professor Shark is her departmental head. What should she do?

Armstrong (1993) told the story of a young researcher who recognized his own writing in a professional journal. The article was attributed to a distinguished figure in his subspecialty. He wrote to the person concerned, who said that it was a coincidence and that great minds think alike. The young researcher did not pursue the matter further. In contrast, Nigg and Radulescu (1994) told of a peer-reviewed self-plagiarized article in the *Bulletin of Environmental Contamination and Toxicology*. 'The two authors of the article were sent three successive letters. The first asked for an explanation. The second insisted on an explanation. The third banned them from ever again publishing in the bulletin.'

Many readers will sympathize with the young scientist whose plight is highlighted by Armstrong (1993). It would be easy to blame the individual researcher for not pursuing his claims more vigorously, but Petersdorf's (1986) point is important. 'Institutions . . . need to create an

environment in which truth prevails.' Journals and research centres have a key role to play in creating such an environment. A policy which explicitly outlaws the use of fraudulent data needs to be accompanied by evidence of the use of sanctions to support the policy. In the short term, it is acutely embarrassing for an institution to be open about fraud. The long-term benefits are considerable: innocence cannot be proved, but an open institution is better able to convince others that it is hiding no skeletons in its cupboards. In this way, research institutions can add to the stock of goodwill which has been accumulated by previous generations of researchers.

To return to Alice Goodbody, her ideal course of action would be to convey her doubts about Professor Shark's integrity to the authorities at Basingstoke and to the Editor of the journal in which his research was published. It would be courteous to confront Shark before doing this. It would be unrealistic to insist on this course of action if Basingstoke or the journal Editor show no signs of wanting to root out fraud. This would be an indication that fraud was endemic, a situation which would call for both martyrs and prophets as well as a more systematic reformation. Those who, in such circumstances, fail to engage in the task of systematic reformation would be poorly placed to condemn Alice Goodbody for declining the role of martyr. In the real world, however, she is confronted with a major dilemma. Professor Shark has far more power than she does and if she attempted to blow the whistle, she would risk harassment, dismissal and professional ruin. It should be emphasized that there is a hierarchy of prestige and influence, not only within organizations, but within the alcohol research field in general. This hierarchy may be a powerful disincentive to people who would like to disclose unethical practices.

(2) Suppose a research team were to discover that those whose drink of choice is gin had twice the rate of liver cirrhosis than other drinkers. Further investigation reveals that this is associated with a single ingredient, juniper berries. The Scunthorpe Gin Company, who are funding the study, refuse to permit publication of the findings. What should the researchers do?

If the researchers expose the company they are likely to lose their jobs, breaching their duties as

family breadwinners. They may have difficulty seeking further employment. Employers frequently see whistleblowers as difficult individuals. This may be unjustified. Even so, those who blow the whistle have to counter a prevailing culture, and this requires particular characteristics. On the other hand those with no principle over which they would protest or resign may have no principles at all. It is not a light matter to breach a contract of employment, as this counters social obligations. However a contract of employment which tries to exclude the public interest cannot be in the public interest and may need revision on these grounds.

Researchers in this situation who wish to publish face difficulties. Shah (1994) made a helpful distinction between patenting and copyright. If information is patented, the patent owner can forbid its use. Copyright does not prevent anyone from obtaining information, although acknowledgement is necessary. Where publication is in the public interest, the copyright model is to be preferred.

There may be occasions when incomplete research results suggest an interpretation but are not yet conclusive. If this were the case in the scenario above, then the Scunthorpe Gin Company may be justified in delaying publication of incomplete material. There is only cause for concern when such material is never published, and research which might be more conclusive is not pursued. It would not be possible to insist that the Scunthorpe Gin Company funded further research without conceding to some institution draconian powers over private property. It would be possible to deny Scunthorpe Gin the right to delay publication or prevent further research in the area by blocking access to its data. This would give researchers the responsibility to see that their research was not lost. They already have an interest in this, as Petersdorf (1986) noted: 'Promotions committees count and weigh papers but do not read them.'

CONCLUSIONS, FURTHER COMMENTS AND RECOMMENDATIONS

What happens when a researcher, or other individual involved in the alcohol debate/arena, crosses the ethical line? Maybe nothing much. Those who attempt to reveal unethical practices may face embarrassment, resistance, inertia,

indifference, hostility, punishment or even dismissal. Such may be the fate of the 'whistle blower'. This has been ably described elsewhere (Glazer and Glazer 1989; van Wormer 1995). It is also a problem that in many situations even a discredited or disgraced researcher may at worst face the disapproval of a limited number of fellow scientists or be banned from membership of an élite but esoteric society or professional body. There are grey areas in the relationships between researchers and funders. It is possible that some researchers present or even censor their work in order to impress funders. It is also possible that some funders may choose to support researchers whom they regard as friendly, 'safe' or non-threatening. Individuals conducting privately commissioned research may face the moral dilemma of what to do if they wish to publicize or disclose evidence that is being suppressed. Where does their first duty lie? Is it to the funding agency (and their agreement to accept secrecy) or to openness and public interest? Most existing professional codes of ethics emphasize issues such as the need to protect patients, clients and research subjects. Key themes include confidentiality, necessity, consent, covert research/deception, quality control and benefit. Current professional codes of which these authors are aware pay little, if any, attention to the relationship between researchers and sponsors, funders or policy makers.

As this paper has indicated, there are important ethical considerations in the relationships between researchers and those who pay for their work. It is crucial for the continued association of researchers and funders that there should be clear and generally understood and accepted boundaries for acceptable and unacceptable behaviour. These are essential if research is to continue and to be credible.

Both researchers and funders need to accept that there must be basic rules governing what constitutes acceptable behaviour in relation to the alcohol debate. Moreover, such rules should be equally binding for all of those involved in this arena. They should protect patients, clients, subjects, researchers and funders. Issues such as confidentiality and informed consent are important. It is therefore also suggested that a number of guidelines and procedures should be accepted that would serve to regulate the relationship between

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researchers and funders or sponsors. These could usefully include the following:

- Sources of research funding should always be fully acknowledged.
- Anonymous criticism should be unacceptable. Critics must operate openly. (This has obvious implications for the widespread use by scientific journals of anonymous referees and the publication of anonymous editorials.)
- Funding agencies and other bodies have a right to seek advice from researchers. Even so the identities of such advisors should be a matter of public record.
- The payment of consultancy fees to researchers should be a matter of public record.
- The suggestion by Rennie (1989), almost endorsed by Lock (1995), should be adopted by this and other journals in the alcohol field. He proposed an editorial audit on one in every 1000 papers submitted. This may be a sensible rate for the *Journal of the American Medical Association*, but for a more specialized journal like this a rate of 1 in 100 would be more appropriate.
- Some form of ethical authority is needed within the alcohol field. This could be established by a scientific journal or by a number of journals or other agencies acting together. Such an authority would draw up a formal ethical code based upon extensive consultations and would devise a mechanism for considering alleged cases of malpractice and for dealing with these in a fair and open manner.
- Researchers possessing information about unethical behaviour would have a duty to submit such evidence to such an authority once it was established.

Those involved in this field, whether as clinicians, researchers or funders, are human. As such they all have frailties. It would be crass and inaccurate to suggest that any group of people were either wholly virtuous or wholly corrupt. Nevertheless, it is clear that unacceptable activities have occurred and that there sometimes appears to be no adequate way of dealing with these. It is hoped that this paper will stimulate a debate on the most productive way forward.

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REFERENCES

Armstrong, J. D. (1993) Variations of plagiarism. (Comment.) American Journal of Roentgenology 163, 727-730.

Bailar, J. C. (1986) Science, statistics and deception. Annals of Internal Medicine 104, 259–260.

Bakhurst, D. (1992) On lying and deceiving. *Journal of Medical Ethics* 18, 63-66.

'Bird, J.' (pseudonym) (1995) Academic integrity; proper review makes funding irrelevant. (Letter.) *British Medical Journal* 310, 1068–1069.

Bond, G. G. (1991) Ethical issues relating to the conduct and interpretation of epidemiologic research in private industry. *Journal of Clinical Epidemiology* 44, 29S-34S.

Cavallo, F., Russo, R., Zotti, C., Camerlengo, A. and Ruggenini, A. M. (1995) Moderate alcohol consumption and spontaneous abortion. Alcohol and Alcoholism 30, 195-201.

Cox, E., Hausfield, F. and Wills, S. (1978) Taking the queen's shilling; accepting social research consultancies in the 1970's, In *Inside the Whale*, Bell, C. and Encel, S. eds, pp. 121-141. Pergamon Press, Sydney.

Craft, N. (1995) Letter fraud (editorial) British Medical Journal, 311, 523-524.

Diener and Crandall (1978) Ethics in Social and Behavioural Research, University of Chicago Press, Chicago, IL, USA.

Edwards, G., Anderson, P., Babor, T., Casswell, S., Ferrence, R., Giesbrecht, N., Godfrey, C., Holder, H., Lemmens, P., Makela, K., Norstrom, T., Osterberg, E., Romelsjo, A., Room, R., Simpura, J. and Skog, O.-J. (1994) Alcohol Policy and the Public Good. Oxford University Press/World Health Organization Europe, Oxford.

Edwards, G., Babor, T. F., Raw, M. and Stockwell, T. (1995) Playing fair: science, ethics and scientific journals. *Addiction* 90, 3-8.

Fingarette, H. (1988) Heavy Drinking: The Myth of Alcoholism as a Disease. University of California Press, Berkley.

Glazer, M. P. and Glazer, P. M. (1989) The Whistleblower. Basic Books. New York.

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- Haskell, R. E. (1993) Realpolitik in the addictions field: Treatment — professional, popular-culture ideology and scientific research. *Journal of Mind and Behavior* 14, 257-276.
- Homan, R. (1991) The Ethics of Social Research. Longman, London.
- Horowitz, I. L. (1967) The Rise and Fall of Project Camelot: Studies in the Relationship Between Social Science and Practical Policy. MIT Press, Cambridge, MA.
- Horowitz, I. L. and Katz, J. E. (1975) Social Science and Public Policy in the United States. Praeger, New York.
- Jaeger, J. and Wenger, C. G. (1987) If it's bad news, shoot the messenger, In *The Research Relationship*, Wenger, G. C. ed., pp. 185-197. Allen and Unwin, London.
 Jones, J. (1982) *Bad Blood*. Free Press, New York.
- Jonsen, A. R. (1992) The end of medical ethics. *Journal of the American Geriatrics Society* 40, 393-397.
- Lee, R. M. (1993) Doing Research on Sensitive Topics. Sage, London.
- Lock, S. (1995) Lessons from the Pearce affair: handling scientific fraud. British Medical Journal 310, 1547-1548.
- Minnis, J. R. (1988) Toward an understanding of alcohol abuse among the elderly: a sociological perspective. Journal of Alcohol and Drug Education 33, 32-40.
- Moore, R. (1977) Becoming a sociologist in Sparkbrook. In *Doing Sociological Research*, Bell, C. and Newby, H. eds, pp. 87-107. Allen and Unwin, London.
- Nigg, H. N. and Radulescu, G. (1994) Scientific misconduct in environmental science and toxicology. *Journal of the American Medical Association* 272, 168–170.
- Payne, G., Dingwall, R., Payne, J. and Carter, M. (1980)

- Sociology and research, In Sociology and Social Research, Payne, G. et al. eds, pp. 142-159. Routledge and Kegan Paul, London.
- Peck, D. G. (1979) Alcohol abuse and the elderly: social control and conformity. *Journal of Drug Issues* 9, 63-71.
- Petersdorf, R. G. (1986) The pathogenesis of fraud in medical science. Annals of Internal Medicine 104, 252– 254.
- Rennie, D. (1989) Editors and auditors. Journal of the American Medical Association 266, 2543-2545.
- Rothman, K. J. (1991) The ethics of research sponsorship. Journal of Clinical Epidemiology 44, 25S-28S.
- Shah, R. M. (1994) Towards developing a code of ethics. Journal of Dental Research 73, 1783-1787.
- Sharpe, L. J. (1978) Government as clients for social science research In Social Policy Research, Bulmer, M. ed., pp. 67–82. Macmillan, London.
- Smith, R. (1994) Editorial. Questioning academic integrity: be prepared to defend yourself on television. *British Medical Journal* 309, 1597.
- Sobell, M. B. and Sobell, L. C. (1984) Under the microscope yet again: a commentary on Walker and Roach's critique of the Dickens Committee's enquiry into our research. *British Journal of Addiction* 79, 157-168.
- van Wormer, K. (1995) Whistleblowing against the company: a case of ethical violations at a Norwegian treatment centre. *International Journal of Drug Policy* 6, 8-15.
- Wenger, G. C. (ed.) (1987) The Research Relationship. Allen and Unwin, London.