

Science Policy : Dissent and Its Difficulties

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Nuclear power, fluoridation and terrorism are controversial issues. An analysis of some aspects of the public debate—or failure to debate—on these issues is used to illustrate the difficulties which face those who dissent from the views backed by dominant political or professional interests.

For quite some years I have been studying and writing about what can be called 'suppression of intellectual dissent'¹. The saga of the drug thalidomide provides a typical example. When doctors first began reporting side-effects from thalidomide, such as deadening of sensation in fingers, the producer of the drug, Grunenthal, not only denied the findings but also tried to discredit the doctors and prevent their articles from being published in the medical literature².

Two aspects of the phenomenon of suppression of intellectual dissent can be identified. First, a person or group takes some action—such as doing research or teaching, or making public statements—which threatens the interests of a powerful group in society. This is the dissent. Second, in response to this action, agents of or sympathisers with the powerful group try to stop the action or penalise the individual or group doing it. This is the suppression. There are innumerable examples of this process³.

The concept of suppression captures an important aspect of the difficulties facing dissent. But overt instances of suppression, while much more frequent than usually believed, are not the only way in which dissent is restrained. Dissent faces problems much wider in scope. One important factor is a general disinclination or fear of speaking out on controversial issues, a type of self-censorship. The threat of suppression contributes to this inhibition, especially through the awareness that future job prospects, promotions or research projects may be jeopardised. But also important is the restraint caused by peer expectations. Professionals usually have a self-image as restrained and reasonable people. Speaking out on controversial issues does not fit with this self-image.

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My aim in this paper is to illustrate and analyse another side to the difficulties facing dissent: the unequal distribution of status and credibility and the consequent asymmetries in public debate on controversial issues. The points I am making are better presented initially by example. Accordingly, I begin by looking briefly at three areas, namely the debates over nuclear power, fluoridation and terrorism. After this I will spell out some common difficulties facing those who dissent from views backed by powerful vested interests.

Before proceeding further, I should make it clear that nothing I say here should be taken as criticism of the motivations of any individuals. Nearly everyone has the best of intentions, and I am convinced that the people involved in the public debates on nuclear power, fluoridation and terrorism behave as they do because it accords with their principles. Motivations are not my concern, but rather some of the wider connections between sincere beliefs, professional position and powerful interest groups.

Nuclear power

Nuclear power basically is a means of producing electricity, instead of for example burning coal, oil or natural gas. That much is straightforward. But nuclear power raises all sorts of social, political and economic issues.

- * The technology and skills required for several parts of the nuclear fuel cycle, including nuclear power plants, uranium enrichment plants and spent fuel reprocessing plants, can contribute to the proliferation of nuclear weapons capabilities.

- * The threat of criminal or terrorist use of nuclear materials means that civil liberties are restricted by the introduction of nuclear power technologies.

- * There are environmental hazards arising from the nuclear fuel cycle, including nuclear reactor accidents and long-lived radioactive waste.

- * The mining of uranium, much of which is found on the land of Aborigines and other traditional peoples, is highly destructive of native cultures.

- * Nuclear power, providing mostly electricity, does not provide a solution to the shortage or high price of liquid fuels.

- * Various alternatives to nuclear power exist: energy efficiency is the foremost of these, but there are also various renewable energy sources.

Nuclear power has been promoted by states, and within states by nuclear professionals and key politicians and bureaucrats. There is also corporate interest in nuclear power, especially in the United States, due to the potential large profits in an industry which has been heavily subsidised by the government. Because of what are seen as the dangerous conse-

quences of nuclear power, a large worldwide opposition movement has grown up. The result has been a major social struggle⁴.

There are quite a number of examples of suppression of opponents of nuclear power: sackings, cutting off of research funds, smear campaigns and so forth⁵. But here I want to look at a different type of difficulty facing the presentation of anti-nuclear views, and to do this it is easiest for me to describe some of my own experiences.

Since the mid-1970s I have been involved in the anti-nuclear side of the Australian public debate over uranium mining and nuclear power. Growing out of this involvement, I undertook analyses of the views of those scientists who were leading public proponents of nuclear power. It is my experiences in relation to these analyses that I describe here.

It is relevant to mention here that it is commonly expected that scientists and academics will provide copies of their publications on request. In requesting reprints and making queries of hundreds of scholars over the years, I have found that a high percentage reply promptly and courteously.

In 1979 I began to collect materials for an analysis of the views of the most prolific public proponents of nuclear power in Australia: Sir Philip Baxter, Mr John Grover, Mr Leslie Kemeny and Sir Ernest Titterton. In May 1979 I wrote to these individuals asking for copies of their articles. Only Sir Ernest replied and sent reprints. Even follow-up calls to Sir Philip and to Kemeny led nowhere.

My project became so large that I restricted the analysis to the views of Sir Philip and Sir Ernest. I analysed their views in the areas of nuclear power, nuclear weapons and the nuclear debate. My special emphasis was on the assumptions underlying their pro-nuclear views and on the links between their views and their professional positions. In December 1979 I completed a draft typescript and sent copies to each of them. Neither of them replied.

I also submitted the article to the British journal *Social Studies of Science*. One of the editors, David Edge, wrote me that even if the article were acceptable to the referees, it would be tricky for them to publish it if either Sir Philip or Sir Ernest objected strongly. Edge had some relevant experience: a leading astronomer had threatened a legal action to block publication of a book on the sociology of British astronomy of which Edge was co-author⁶.

In the event, my article was not considered to contain enough original sociology to be suitable for *Social Studies of Science*. Points regarded as highly controversial by scientists are considered by many sociologists of science to be commonplace. Edge in a letter to me wrote, "It seems to us (and our referee confirms this view) that it is now well established that the views of scientific experts (such as pro-nukes) are not only a function of their social position, but also likely to be integrated into a 'strategic whole'."⁷

It became clear to me that most academic journals would find difficulties with an article which dealt with the views of eminent living figures in a critical way—especially if legal action for defamation were threatened—while most environmental journals would not want an article as long, academic and highly referenced as mine. Therefore I arranged for independent publication by the Rupert Public Interest Movement in Canberra, a Ralph-Nader-style organisation.

In April 1980, Kate Pitt of Rupert called Sir Ernest and Sir Philip to confirm that they had received my manuscript. Sir Ernest made some derogatory remarks about it. Sir Philip on the other hand threatened to sue on the basis of defamation should it be published⁸.

In September 1980 a copy of the typesetting was sent to Sir Philip inviting him to specify any statements, innuendos or areas which he considered defamatory. There was no reply. The booklet was published the next month under the title *Nuclear Knights*⁹. Sir Philip did not sue.

To my knowledge, neither Sir Philip nor Sir Ernest has made any written response to the arguments presented in *Nuclear Knights*. Sir Ernest did consent to debate with me for ABC television, but the recorded debate was not broadcast.

Mr Leslie Kemeny, a senior lecturer in nuclear engineering at the University of New South Wales, has been prominent in Australia since the mid-1970s as an advocate of nuclear power. As mentioned earlier, Kemeny in 1979 did not reply to my request to provide copies of his articles about nuclear power.

In March 1982 I completed a draft typescript of an article titled 'The naked experts', in which I argued that one reason why public trust in scientific experts has declined is that "many of the experts who defend positions agreeable to powerful organisations do not behave in the manner normally expected of an objective scholar. The experts often trade on their status rather than maintaining the standards of behaviour normally expected of experts: they do not respond to the arguments of opponents; their points may be irrelevant or inaccurate; they attack their opponents' bona fides; they claim objectivity but present value-laden arguments; and their expertise is largely irrelevant to the broad issues at stake."¹⁰ This article included a detailed study of Kemeny's views on nuclear power as its major case study. I sent a copy of this draft to Kemeny inviting his comments.

Kemeny replied the next month. He said he had neither the time nor the inclination to become involved. He called my paper "dishonest, devious and actionable", and suggested that he might sue should the paper be published¹¹. I replied to Kemeny in May 1982, but have received no correspondence from him since then.

'The naked experts' was published by the *Ecologist*, a British journal, in its July/August 1982 issue¹².

In November 1983, Kemeny sent a letter to the *Ecologist* which attacked my credibility and claimed that my article was "dishonest, defamatory and

actionable". But he did not point to a single statement of mine which was incorrect, offensive or defamatory. Kemeny demanded an apology in print from me. I did not apologise. Kemeny's letter was published in the first 1984 issue of the *Ecologist*¹³, accompanied by replies from me and from Mark Diesendorf¹⁴.

In July 1984, Kemeny sent a letter to the editor of the *Ecologist* demanding that an apology be published forthwith in the *Ecologist*. The apology drafted by Kemeny included many statements, including admission that 'The naked experts' had been written with calculated malice to slander and defame Kemeny and that nearly every paragraph of it contained "a plethora of mendacious, unresearched innuendo." Kemeny demanded that this apology be signed by five people: the publisher and the editor of the *Ecologist*, myself, Mark Diesendorf and Rosemary Walters¹⁵. (The only relation of the latter two individuals to the article is that they offered comments on the draft version and were included in the acknowledgements.) None of these five people was willing to sign the apology. To my knowledge Kemeny has taken no legal action.

The next advocate of nuclear power I discuss here is Professor Ted Ringwood, an eminent geochemist working at the Australian National University. In 1978 Ringwood announced a new method for disposing of high-level radioactive waste by incorporating it in a synthetic rock called Synroc¹⁶. Personally I have always thought that Synroc is a very promising method for dealing with high-level radioactive waste, but I disagreed with Ringwood's statements that the method solved the waste problem and by implication justified nuclear power. Shortly after the first announcement of Synroc, I prepared a short article raising some critical points, and in September 1978 sent a copy to Ringwood. Ringwood did not reply. In October I telephoned him and asked for comments, but he declined to do so. My article was published in the *Canberra Times*¹⁷. Ringwood did not reply.

In response to one of Ringwood's many articles about Synroc, in December 1980 a letter of mine was published in *Search*¹⁸. Ringwood did not reply.

Since about 1980 Ringwood has increasingly involved himself in the wider debates about nuclear power, such as the proliferation of nuclear weapons. He has argued for the export of Australian uranium and for the introduction of uranium enrichment and spent fuel reprocessing in Australia. In 1984 I prepared an article pointing out limitations in Synroc as the solution for problems with radioactive waste, and arguing against Ringwood's views about the nuclear fuel cycle. In September 1984 I sent a draft copy to Ringwood, but received no reply. Later that month, Rosemary Nichols, an editor of the Australian environmental magazine *Chain Reaction*—where my article was being considered—interviewed Ringwood about my article. Ringwood refused to offer any comments for publication¹⁹. The article was

published in the December 1984-January 1985 issue²⁰. Ringwood has not replied to it.

Among the possible shortcomings of the Synroc method for waste disposal is an effect identified by E. H. Hirsch, a South Australian scientist. Hirsch found that radioactive disintegrations could promote the breakdown of nuclear waste disposal materials by water vapour²¹. To my knowledge, Ringwood has never directly referred to Hirsch's studies in any of his scientific papers²².

In June 1985, a journalist was preparing a programme for ABC radio which treated the arguments for and against Synroc. Ringwood refused to appear on the programme if either I or Hirsch were being included on it as well²³.

These experiences with scientists prominent in the promotion of nuclear power in Australia reveal some remarkably consistent patterns. These scientists have consistently failed to respond publicly to the substance of critiques of their views on nuclear power. For the most part they do not provide private responses either. The only partial exception is Sir Ernest²⁴.

On 8 July 1985 I sent a draft of this paper to Sir Philip, Kemeny, Ringwood and Sir Ernest (among others), requesting comments by 15 August. As of 21 August none of them had replied.

My interaction with Dr Don J. Higson provides some contrast with the above experiences. In *Nuclear Knights* I listed Higson—an employee of the Australian Atomic Energy Commission—in a table of "Advocates of uranium mining and nuclear power prominent in the Australian public debate"²⁵. In August 1981 Higson wrote to Rupert Public Interest Movement, publishers of *Nuclear Knights*, denying that he was an advocate of nuclear power²⁶. Higson's letter was passed on to me for reply, and a long correspondence ensued between us. Higson said that he had written many letters to newspapers on the subject of nuclear power, given numerous talks and lectures and appeared on radio and television. But he said he was not promoting uranium mining and nuclear power, but rather was giving factual information and correcting misinformation of others.

Unlike Sir Philip, Kemeny, Ringwood and Sir Ernest, Higson was willing to argue his views at length in correspondence. But he refused to send me copies of his letters to newspapers unless I provided specific references. In our correspondence I acknowledged that Higson may have seen himself as only providing 'objective information', but I continued to contend that his writings had the effect of promoting nuclear power and that he could be properly classified as an advocate of nuclear power. In a final letter to Rupert concerning my statement that he had been a public advocate of nuclear power, he said, "I find this allegation offensive and consider it damaging to me"²⁷.

The actual or potential threat of defamation is a great inhibiting factor in presenting critiques of the views of nuclear experts, and indeed in Australia of any prominent figure at all²⁸. Sir Philip and Kemeny threatened legal action

for defamation, but even when such threats are absent the potential for such action is ever-present. This limits the range of comment and debate. Prominent nuclear critic Alan Roberts wrote a review of Leonard Bickel's book on uranium for the *National Times*; Bickel sued for defamation and was awarded \$180,000²⁹. The lesson for major publishing houses is to play it safe and avoid critical comment. For this reason, critiques such as mine are likely to be restricted to financially marginal and socially committed publishers such as Rupert Public Interest Movement, the *Ecologist* and *Chain Reaction*.

Fluoridation

The putting of fluoride ions into water supplies as a means of reducing tooth decay in children is called fluoridation. There are no benefits for adults, and the magnitude of the benefits for children has been questioned by several scientists. There are some dangers. Excessive ingestion of fluorides can lead to mottling of teeth and, at higher levels, skeletal fluorosis. There is evidence suggesting other hazards. Fluoride has been shown to produce genetic damage in some plants and animals, and also in some types of cells cultured from the human body. Fluoride inhibits the action of a number of enzymes in humans. It is well documented that some sensitive individuals suffer allergic or intolerance reactions to fluorides³⁰.

Fluoridation is normally carried out by putting a fixed concentration of fluoride into water supplies, typically one part per million. But different people drink different amount of water, and in addition fluoride may be ingested from other sources such as reconstituted fruit drinks and food processed with fluoridated water. Fluoridation, therefore, provides an uncontrolled dose to those exposed. This is in addition to other sources of fluoride, such as fluoride toothpastes and some medical drugs.

Since it is inconvenient or expensive to avoid ingestion of fluoride in fluoridated communities, the ethical issue of compulsion arises. This is especially the case since fluoride is not an essential nutrient and is neither necessary nor sufficient for good teeth. (Not necessary: it is quite possible for children to have excellent teeth when there is a negligible concentration of fluoride in the water supply. Not sufficient: children can suffer serious tooth decay even when there is one part per million of fluoride in the water.) In any case, children requiring fluorides can take tablets, so it would be quite easy to avoid compulsion.

Given the array of scientific and ethical issues involved—only some of which have been mentioned here—it might be expected that open debate about the wisdom of fluoridation would be the norm. But the situation is very different from this. Most countries in the world do not have any sizeable programme of fluoridation. In Europe, for example, most countries which previously fluoridated their water have stopped it, and the major fluoridation plants are closed down³¹. In these countries there is not much debate about fluoridation simply because the process is not considered the best thing to do.

By contrast, in a few other countries—notably Australia, Britain and the United States—fluoridation has the status of an almost unquestionable dogma. Even in these countries fluoridation is not complete. Britain is about 10% fluoridated, the United States about 50% and Australia about 90%. So how can a partially implemented process be beyond dispute? Quite simply by the denial of open debate.

The main proponents of fluoridation are dentists and doctors, and in particular some powerful and vocal figures within their ranks. Behind the scenes are commercial vested interests, especially aluminium companies and manufacturers of sugary goods. Fluorides are a dangerous waste product from the production of aluminium. Fluoridation allows aluminium companies to sell some of this waste, and also to improve the image of fluorides in the public mind. Manufacturers of sugary foods gain from fluoridation since it distracts attention from the role of their foods in fostering tooth decay³².

Once the dental and medical professions were captured by pro-fluoridation forces, it became nearly impossible to present reasoned criticisms of fluoridation in scientific forums. The experts on fluoridation have declared that there is nothing to debate. Critics of fluoridation have been labelled cranks. In the United States, much opposition to fluoridation is categorised with paranoid small-town anti-communism, which indeed has played a role in the American opposition³³.

Opposition to fluoridation is generally seen as much more of a fringe view than opposition to nuclear power. For example, Heinz Arndt in an article supporting nuclear power used anti-fluoridation campaigns as an example in which "fanatics" pursued a cause even though all the evidence was against them. Arndt said, "The anti-fluoridation campaign is rather an extreme case, though an obsessional, almost paranoid, streak has characterised many such protest movements". His implication seems to have been that the anti-nuclear power campaign was yet another movement of this type³⁴.

There are many instances of suppression of dentists, doctors and scientists who are critical of fluoridation³⁵. For example:

*Dr Max Ginns, a dentist in Worcester, Massachusetts, circulated a petition in 1953 listing dentists and physicians who opposed fluoridation. As a result he was expelled from the state dental society³⁶.

*Professor Albert Schatz—co-discoverer of the antibiotic streptomycin—in 1965 sent three separate certified letters to the *Journal of the American Dental Association*, discussing hazards of fluoridation. The editor returned all three letters unopened³⁷.

*Associate Professor John Polya, then in the Department of Chemistry at the University of Tasmania, was very outspoken about fluoridation. He claimed in 1973 that his staff and equipment had been taken away from him because of this³⁸.

Although these cases of overt suppression are important, the most important restraint on criticism of fluoridation has been the denial of debate and the relegation of all critics to the category of nuts. Although there has been serious questioning of fluoridation, one will look in vain in the major English-language dental and medical journals for a substantial critique of the practice. These journals are simply not open to the contrary view. Most of the major critiques have appeared as books, in minor journals or in specialist journals where the implications for fluoridation are not spelled out for the profession as a whole³⁹.

My friend and colleague Mark Diesendorf is one of those who has had difficulties in presenting views critical of fluoridation. In one case he submitted a paper—a critique of the report of the Royal College of Physicians on fluoridation—to *New Doctor*, the journal of the Doctors Reform Society in Australia. He received no reply from the journal: neither acknowledgement, acceptance or rejection. On phoning the editors, he eventually determined that the paper had been rejected, and that a pro-fluoridation article would be published in the special dental health issue of the journal. Inquiring about referees, he was told that Mr Keith Powell had been one. He wrote to Powell requesting the referee's report, but received no reply⁴⁰.

On other occasions Mark has presented talks to local councils in the process of deciding whether local water supplies would be fluoridated. He is standardly asked what credentials he holds relevant to the subject. The clear implication is that anyone who is not a dentist or doctor is not qualified to express an opinion. Being an applied mathematician with 17 years' postdoctoral research experience in universities and CSIRO, who has analysed the statistical studies on fluoridation and tooth decay and who has worked for over a decade on the effect of lifestyle and environment on health seems to be irrelevant. Needless to say, anyone without formal qualifications of any sort would not even get in the door.

The professional enforcement of pro-fluoridation views is so effective that even debates on the subject are ruled out of order. The standard pro-fluoridation view is that there is nothing to debate. Anyone who wants to present an anti-fluoridation view is almost by definition a crank. The result is that it is very difficult to organise a debate. One interesting exception was a debate in 1979 organised by the Society for Social Responsibility in Science in Canberra, on the topic "Is there a link between fluoridation and cancer?" This was organised largely at the instigation of SSRS secretary Mark Diesendorf. The view that fluoridation is linked to an increased cancer death rate was presented by Dr John Yiamouyiannis. It was not easy to find someone to present the pro-fluoridation view. In the debate itself Yiamouyiannis presented a more impressive argument than Professor Roland Thorp⁴¹, a spokesperson for the National Health and Medical Research Council, who defended fluoridation. During an exchange of letters to the

Canberra Times stimulated by the debate, Dr Peter Cooper, chairman of the ACT Cancer Society, defended fluoridation in an article and several letters⁴². But when challenged to debate the subject in public, Cooper declined⁴³.

After the debate, the SSRS committee avoided any further involvement with the fluoridation issue.

Terrorism

Before beginning my discussion of terrorism, it may be useful to remark that I am opposed to all forms of terrorism. Aside from the human death and suffering it causes, terrorism in my opinion is almost always counterproductive for the purpose of bringing about a more just, free and democratic world. For these reasons I have argued for many years in favour of nonviolent methods for social action and social change. This said, it is still possible to analyse orthodoxy and dissent in the 'terrorism debate'.

For most people, the word terrorism brings to mind the violent actions of small, ideologically motivated groups. Names such as the Red Brigades, the Baader-Meinhof gang, the Irish Republican Army and Shi'ite Moslem sects spring to mind. This is the picture presented overwhelmingly in the mass media. Bombings, airplane hijacks, hostage sieges: this is the stuff of 'news'.

In wars, terrorism is invariably attributed to the 'enemy'. In the Western media, communist insurgents are typically called terrorists, such as the Viet Cong and the rebels in El Salvador. Likewise, fighters opposing Israeli government actions are often called terrorists. Sometimes the actions of terrorists in Western countries are alleged to be agents, or at least dupes, of communist secret police, in particular the Soviet KGB. Thus, terrorism becomes automatically assumed to be left-wing terrorism and used to tar communist regimes.

This interpretation serves the interests of elements within Western governments and state bureaucracies. Terrorism is painted as a grave threat to the Western way of life, requiring both military preparedness and tighter internal security. The existence of such a threat is useful to those who support the strengthening of Western military forces and state security bureaucracies.

There are also some intellectuals who argue that all this is the way reality is, and that Western governments need to be ever-alert to oppose the left-wing threat to their survival⁴⁴.

Another perspective is that the Western media actually encourage terrorism by the way in which they report events⁴⁵. On the one hand, the genuine grievances of various oppressed groups—such as the Catholics in Northern Ireland, or the Palestinians—are seldom given an airing. The problems of poverty, racism, exploitation, and their roots in inequitable political and economic structures, are treated sporadically, superficially or not at all. On the other hand, dramatic violence often is given generous time and space in the media, whether this is airplane crashes or mass murders. The result is that one way for a small group, which is willing to resort to violence, to bring

its presence—if not its cause—to the attention of the world is through terrorism. From this perspective, rather than trying to stamp out the terrorists while leaving the incentives for terrorism unchanged, it would be more sensible to reform the media and direct attention to the grievances of oppressed peoples.

Here I want to deal with a different dissenting view: the argument that the main form of terrorism in the world today is that perpetrated by governments. *If one defines terrorism as violence against humans designed to strike terror into the hearts of the general population and in particular of the opponents of the terrorists, then it is undoubtedly true that governments are the world's leading terrorists. The statistics are overwhelming. The number of people killed by the agents of the government of El Salvador alone over the past few years vastly exceeds all the killings by non-state terrorists over the past several decades in every part of the world. Then there are the tens and indeed hundreds of thousands of people killed since World War Two by the governments of Argentina, Ethiopia, Indonesia, Iran, Kampuchea, South Vietnam, Turkey, Uruguay, etc. Non-state terrorists take small numbers of hostages for short periods. Many states hold vast numbers of political prisoners for years.*

There is also another point of criticism of the dominant perspective: a large fraction of non-state terrorism is by right-wing groups. But in any case the main source of terrorism undoubtedly is states, in particular military dictatorships.

This dissenting view has been presented very ably by quite a number of people but, as I have noted, little of it has filtered through to the general public. The most frequent hint at the situation comes through the reports of Amnesty International, which are often reported.

Noam Chomsky and Edward S. Herman are prominent among those who have exposed the realities of terrorism. In their impressive book *The Political Economy of Human Rights*⁴⁶ they argue that mass killings are treated in different ways by the Western media depending on who benefits. Some massacres are beneficial to Western elites, such as the killing of 500,000 to a million Indonesians in 1965-1966. Such massacres are caustically called by Chomsky and Herman 'constructive terror': news commentaries are generally supportive of the political developments associated with the killings. Other killings—perpetrated by the 'enemy', usually a communist regime—are trumpeted widely and often highly exaggerated, such as the killings by the Viet Cong. Finally, there are bloodbaths that are mostly irrelevant to Western elite interests, and these are ignored. Chomsky and Herman call this 'benign terror'. The mass killings in East Timor since 1975 are one example. Only in Australia and Portugal has there been more than superficial reportage.

Chomsky and Herman had difficulties having their book published. The original publisher of an earlier version of the book, a commercial house

called Warner Modular Publications, printed 20,000 copies and began advertising the book. But the publisher's parent corporation, Warner, on hearing of the book's contents, refused to allow the book's distribution. Warner was ready to renege on the publication contract, but in the event was able to suppress the book by selling Warner Modular to a small affiliate which had no distribution facilities and which did not promote the book⁴⁷.

Although direct suppression has played a role, the main way in which the critique of state terrorism has been submerged has been through refusal to deal with it. Book reviews of *The Political Economy of Human Rights* were surprisingly rare or superficial in mainstream publications. More tellingly, the proponents of the 'terrorism-is-a-dire-threat-to-Western-society' thesis obtain extensive publicity. This applies not only to the leading officials of governments who repeat this line, but also to some of the intellectual defenders of this perspective. But when was the last time you saw Noam Chomsky or Edward Herman giving their views on prime-time television? Chomsky and Herman and others like them can be neglected because they are not treated as credible. Or perhaps it is also true that it is *because* they are pointedly neglected that they can be dismissed as not credible.

Another factor in the neglect of Chomsky and Herman's book is its publication by South End Press, which is prominent among small radical publishers but is obscure so far as the mainstream press is concerned. Radical newspapers, magazines and book publishers frequently develop in response to the failure of the conventional press to deal with radical movements and perspectives. The 'dissident press' often encounters suppression or repression⁴⁸. Often more effective though is simply the refusal to take notice of it. Chomsky says that "the major media in the US refuse in principle to review South End books"⁴⁹. An example is Michael Vickery's book on Cambodia⁵⁰—which deals authoritatively with the politically explosive issue of the mass killings in Kampuchea under the Pol Pot regime—which has been systematically ignored by mainstream publications in the United States.

It is not a question of the strength of arguments. The argument that left-wing terrorism derives from a Soviet network, the argument that left-wing terrorism is more important than non-state right-wing terrorism, and the argument that left-wing terrorism is in any way as important as terrorism by client states of the United States government have all been demolished by Herman⁵¹. But Herman's effort is treated as irrelevant. The issue is simply not up for debate. The safety of Western society is at stake, after all!

The dissident view is not eliminated entirely, but simply restricted to peripheral channels. The argument that the Bulgarian KGB was behind the attempted assassination of Pope John Paul II has been raised in the *Reader's*

Digest and the *New York Times*. To find the carefully argued contrary view that the KGB was not involved one must read such sources as *Covert Action Information Bulletin*⁵².

Scholarly debate?

Each of these cases shows the principles of scholarly practice being violated in public debate.

1. Failure to provide information. For example, several pro-nuclear figures declined to provide reprints of their papers. Proponents of the left-wing terrorism view have failed to document the source of many of their claims.

2. Failure to enter into rigorous debate. For example, Sir Philip, Kemeny, Ringwood and Sir Ernest did not respond to the content of my analyses of their arguments. The proponents of fluoridation have denied the validity of public debate. Edward Herman's devastating critique of Sterling and other proponents of the left-wing terrorism view has been totally ignored in the United States.

3. Reliance on formal status. The effect of failure to enter into rigorous debate means that credibility depends significantly on the credentials and formal status of the protagonists. Sir Philip and Sir Ernest are knights and professors; Ringwood is a professor and eminent scientist. Their critics seldom have equivalent formal status. The proponents of fluoridation are the leaders of the dental and medical professions; few of the critics of fluoridation have the same status in these professions. The proponents of standard terrorism view include prominent heads of state; the critics of this view seldom hold any position in government.

4. Attacks on the credibility of opponents (not on their arguments). Sir Philip, Kemeny and Sir Ernest have often cast aspersions on opponents of nuclear power and in particular questioned their motivations⁵³. Opponents of fluoridation have been relegated to the lunatic fringe. Critics of state terrorism have been cast as supporters or dupes of communists.

Related to these points is the view that decisions must be left to the experts: the experts on nuclear power, the experts on fluoridation, the experts on terrorism. For example, Sir Philip has said that "The experts must in the end be trusted"⁵⁴. The counter-argument is that expertise on the technical aspects of a subject should not give any special right to make political decisions. Nuclear engineers may know how to build nuclear power plants, but that should not give them any special right to decide *whether* a nuclear power plant should be built. Dentists may know about the way teeth decay, but that should not give them any special right to decide on compulsory medication for the population. State security managers may know how to organise a security system to restrain non-state terrorists, but that should not give them any special right to decide political policy concerning all types of terrorism. Or, to use another example, pilots may

know how to fly airplanes, but that should not give them any special right to decide where planes fly or whether people should use planes, cars, trains or bicycles.

The key point here is that issues such as nuclear power, fluoridation and terrorism are not solely technical issues. They involve value judgements, political decisions and interest groups.

Before proceeding, it is worth noting that the 'principles of scholarly debate' are often violated in traditional scholarly forums as well as in public debate. It is quite common for scholars to fail to cite the works of their rivals. Indeed, rigorous debate between researchers is rare. Due to the high degree of specialisation, it is easier to push on with one's own research and ignore contrary views. In many research fields there is an avoidance of confrontation. There is also considerable reliance on formal status in spite of claims of equality in the community of scholars. The one thing which is rare in scholarly arenas is open attacks on the credibility of opponents. But quite severe comments on other scholars are often expressed in private discussions⁵⁵.

Power systems and public debate

In each of the cases I have described, there are powerful interest groups favouring particular stances on the issues. The identification and indeed the very existence of such interest groups is a matter of some debate. Here is my assessment in brief.

The dominant social institution promoting nuclear power is the state, because of the state's interest in forms of energy production which grow out of and depend on state finance and state-employed or regulated expertise. Also involved are some corporations—especially in the United States—and sections of the scientific and engineering professions.

The promotion of fluoridation is funded by aluminium companies and by manufacturers of tooth decay-promoting foods. The actual promotion is done mainly by members of the dental and medical professions⁵⁶.

The identification of terrorism as something done by non-state groups is promoted by most states. In capitalist countries terrorism tends to be branded as left-wing, while in communist countries right-wing terrorism is highlighted. In communist regimes, the media are under direct control of the state. In capitalist societies, the mass media generally identify with their own governments' views—especially those official orientations which persist through changes in the political party in power—because they depend on governments to supply much news and because they generally support the Western perspective which they help to mould.

The interest groups promoting nuclear power, fluoridation and the conventional labelling of terrorism face different types and degrees of opposition.

The anti-nuclear power movement which developed in the 1970s has drawn

on a wide range of community-level groups in countries around the world. It is supported by a minority of scientists and engineers.

The anti-fluoridation movement has drawn on local opposition to bureaucratic and professional impositions (especially in the United States), with the support of sceptical professionals and state bureaucrats in some countries.

The critique of conventional views on terrorism has been based in the populations of countries subject to state terrorism, and their supporters elsewhere. A large number of writers and other intellectuals have taken a stand against state repression because intellectuals are among the first groups to be repressed⁵⁷.

In each of these cases a power struggle has taken place in which political, economic and social resources are at stake: massive investments in the nuclear fuel cycle, large-scale programmes of fluoridation, and whole political systems built on or supported by state repression. While this facet of the struggle might be seen as its 'material base', it cannot easily be separated from the struggle involving ideas. The credibility and legitimacy of nuclear power, fluoridation and state terror are open to challenge.

Intellectual resources are put into the fray on both sides. The particular configuration of power influences the way in which these resources are deployed. Whichever side holds the 'high ground'—the assumption of intellectual or professional agreement—has a great advantage.

1. Access to publication. If one group controls this access, it can be used to prevent debate and hence to deny legitimacy to the other side. In the nuclear debate, the size and breadth of the opposition to nuclear power eventually managed to open many outlets—including much of the mass media—to its side of the argument. Therefore this factor has not been extremely serious. By contrast, most English-language dental and medical journals are closed to anti-fluoridation views. Similarly, much of the Western mass media refuses to present views critical of state terrorism except for terrorism by stigmatised states such as Cuba, the Soviet Union or Libya. Alternatively, critical views are relegated to the back pages without a deep analysis of the causes and implications of state terrorism.

Any group may try to suppress the opposite view. Certainly there are some within the anti-nuclear movement who, given the opportunity, would try to limit the expression of pro-nuclear views. Some anti-fluoridationists, like their opponents, highlight statistics and 'authorities' favourable to their cause and ignore contrary ones. The asymmetries in the debate arise when one group has control over the opportunities for promoting its views and over the means for suppressing the views of opponents.

In addition, a much larger fraction of the opponents of nuclear power and fluoridation and of critics of the orthodox terrorism view have no economic, political or professional vested interest in their stands. They are more likely to be committed to disseminating information so that members of the

public can make up their own minds and participate in decision-making on the issues.

2. Role of formal status. If one group has a near-monopoly on proponents with high formal status, it has a great advantage if the 'debate' is between statuses rather than between arguments. One strategy for the high-status group is to 'rise above' the debate and refuse to respond to the arguments of the opponents. Open debate may negate the impact of formal status, since those viewing the debate may listen to the arguments and become aware of the role of vested interests. The lower-status group gains through open debate if it has good arguments and debaters on its side. The implicit reliance on high formal status and the refusal to debate has been most marked in relation to fluoridation.

In some cases it might be said that public proponents of nuclear power, fluoridation or the standard terrorism view lack credibility on these issues within their own professions. For example, Sir Philip and Sir Ernest no longer hold the ear of government the way they once did. Some would say that their pro-nuclear views do not carry as much weight within the scientific community as in years past. Whether this is true or not, it is certainly the case that there has been almost no public criticism of their pro-nuclear views by established scientists. Therefore, so far as much of the public is concerned, their formal status still counts very heavily.

The professional abdication of responsibility for making public comment is quite pronounced in the terrorism issue. Political scientists can be scornful of simplistic anti-communist or conspiracy views in private; by avoiding public comment they also avoid antagonising actual and potential government patrons.

3. Arguing techniques. Either group may resort to techniques such as selective presentation of views or denigration of opponents⁵⁸. These techniques work best if the other side cannot answer back or if the debate involves more image than substance (such as is often the case on television). However, arguing techniques of this sort may backfire if they seem to viewers to be unfair.

My view is that open debate is always to be preferred, even if it seems to open the doors to views which are completely crazy or reprehensible. The best defence for any view or policy which is supposedly based on enlightened reason is widespread understanding of the view, and this can best be fostered by continual challenge and debate. Let me introduce one final example to illustrate this point.

'Creation science' is an alternative perspective on the natural world based on a view that God created the world much as it is today. This is a clear challenge to the conventional scientific view of the world, and especially to the evolutionary perspectives in biology and geology. One common response by conventional scientists has been to reject creation science as bogus and not to bother even to refute it. I would argue that even though creation science

may have little factual basis or logical support, simple rejection and refusal to debate is the wrong response. After all, modern science is often touted for its openness to criticism; all scientific statements and theories are claimed to be tentative. Science is supposed to progress on the basis of evidence and the testing of hypotheses. Admittedly, this noble view of science has been criticised by philosophers, historians and sociologists. But even from a practical point of view, people are likely to be less impressed by conventional science if it is taught as dogma rather than as the consensus of critical minds. Dogma is subject to overthrow by some other dogma, because beliefs come to depend on who has the power. Views developed through rigorous debate are much less subject to overthrow.

It would be rash to jump to the erroneous conclusion that any view which is suppressed or denied consideration is automatically a worthy cause, or 'correct' in some hypothetical final judgement. Just because the views of Velikovsky were fiercely suppressed by leading astronomers⁵⁹ does not mean that Velikovsky's views on planetary catastrophes involving earth within historical time are correct. By the same token, opposition to suppression and support for open debate do not require agreement with the views suppressed or submerged. These points may seem too obvious to mention, but their practical realisation still seems far away.

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