# Fluoride Harm

## *Suppressed Science and Silenced Voices*

**A Collection of 21st Century Essays**

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**Studying the Fluoride Controversy**

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## CHAPTER 24

"As soon as we abandon our own reason and are content to rely upon the authority of others, there is no end to our troubles."

—*Bertrand Arthur William Russell (1872-1970)*

I NEVER SET out to take a side for or against fluoridation, just to study the controversy. But proponents thought I was on the 'anti' side. Let me explain.

My background is in applied mathematics, working on astrophysics and other topics at the Australian National University. In the late 1970s, I stumbled on a quite different topic: suppression of dissent. I learned about several cases in which environmental researchers or teachers had encountered difficulties in their careers: papers censored, tenure denied, attempts at dismissal (Martin, 1981). Writing about these cases led to some publicity, and before long, I learned about ever more cases in a variety of fields.

After a decade of one-year appointments, my job in applied mathematics ran out, and I was lucky to obtain a position in science and technology studies (STS) at the University of Wollongong. STS is a social science field covering, among other things, the history of science, politics of technology, and economics of innovation. Within STS at the time, there was a small but thriving sub-field called controversy studies, looking at debates over just about any topic involving science and technology, for example, solar neutrinos, spoon-bending, intra-uterine devices, smoking, and cancer treatments.

I already knew something about some of the big controversies at the time, especially nuclear power. To cement my position at the university—to be sure to obtain tenure—I decided to make an in-depth study of a controversy. But which one? I chose fluoridation.

### What Is Social Analysis?

What does a social analysis of a controversy involve? Usually, it means collecting lots of information, of one sort or another, and making sense of it. I set about my task by obtaining books and articles about the controversy, including its history, politics, economics, and psychology. That was straightforward, though tedious in pre-Internet days. I

remember travelling to the Sydney University Dental School, which had a library with dental journals not available elsewhere.

I also interviewed leading figures in the Australian fluoridation debate, both proponents and opponents. Most of them were dentists, doctors, or scientists. The interviews revealed something unexpected.

At the time, the four main dimensions of the debate were benefits, risks, ethics, and decision-making. Pro-fluoridation interviewees said fluoridation was highly beneficial, had few or no risks, was ethical and that decisions should be made by governments informed by experts. Anti-fluoridation interviewees said fluoridation had dubious benefits and serious risks, was unethical and the decisions should be made by the people. Everyone lined up on one side or the other on all four dimensions. For example, no one said the benefits were enormous but fluoridation was unethical. Their views on the four dimensions were "coherent," either all pro or all anti.

**What to Explain?**

A common approach to studying scientific controversies is to examine just one side of the debate—the side that's wrong. The correct side doesn't need to be examined, because it accords with the evidence. The incorrect side needs explanation, to figure out why people get it wrong.

As I started collecting social analyses of the fluoridation controversy—there were lots of them, mostly from the 1960s and 1970s— this is exactly what they did. They tried to explain opposition to fluoridation, typically with some discrediting factor, like poor education or confusion. The trouble was, none of these explanations stood up to scrutiny.

Several of my colleagues used an approach to studying science called the sociology of scientific knowledge or SSK. It sounds esoteric but the basic ideas are straightforward, though perhaps hard to accept. According to SSK, as applied to controversies, the researcher—that was me—does not judge whether scientific claims are right or wrong, but instead examines explanations for beliefs on *both* sides of the debate. This was unusual.

**Professions**

I already knew about a body of writing about professions, most commonly medicine and law. It described techniques by which members of the profession advanced their collective interests, including via lengthy training requirements and certification by the government. In essence, professions are occupational monopolies. Entry is limited, keeping salaries high.

This helped answer a question: why would dentists support a public health measure that would reduce their income? After all, if children

had fewer cavities, that meant fewer visits to dentists, so dentists seemed altruistic in their support for fluoridation. I remember one pro-fluoridation dentist telling about the old days, before fluoridation, when he had to remove all of a child's teeth, to everyone's distress and tears, including his. There was no doubt that pro-fluoridation campaigners were sincere—as were their opponents. Explaining advocacy as cynical self-interest didn't wash. But if entry to dentistry is limited, then reducing cavities in children wasn't much of a threat to dentists' incomes.

Instead, fluoridation added to the profession's prestige through its connection with scientific expertise, especially epidemiology. Dentistry, in this way, mimicked medicine with its association with science, including antibiotics, drugs, radiation, and vaccines.

Another intriguing question was why campaigning dentists pushed for fluoridation rather than other options to deal with tooth decay. It seemed simplistic to say that fluoride waste from aluminium manufacturing or uranium enrichment was a driving factor. Sure, making fluoride seem beneficial rather than toxic was helpful to industry, but was that all?

I came up with the idea of alternative trajectories for anti-cavity initiatives. One possibility was targeting sugar in children's diets, well known to cause decay. But rather than launch a major campaign to remove sugar from children's food, dentists promoted fluoridation. Why? It seemed a plausible choice when you consider who might oppose an anti-cavity campaign. In pushing for fluoridation, campaigners were mainly up against citizen opponents, who could be painted as ignorant, confused, or manipulated. In contrast, if campaigners had pushed for "desugarisation"—removing sugar from children's food via regulations or taxation—they would have come up against the powerful food industry.

**The International Dimension**

Since the 1970s, Australia has been highly fluoridated. However, once I started reading widely on the topic, it became clear that Australia was an anomaly on the international scene. In most countries, there was little or no fluoridation. Why not?

To find out what was happening around the world, I prepared a few questions and wrote to health departments in dozens of countries, or to their Australian embassies. As replies began coming in, they confirmed what had been reported in the few previous surveys: only a few countries had fully embraced fluoridation. Among industrialised countries, the most highly fluoridated were Australia, Ireland, New Zealand, US, and Canada, with a few outliers like Singapore, which was 100% fluoridated from a single water supply. In Europe, there wasn't much. In the Netherlands at one time, half the population drank

fluoridated water but then it was all stopped. In Britain, the figure was about 10%. This raised two questions.

In most economically prosperous countries, there was little fluoridation except for the English-speaking world. How did pro-fluoridationists explain the apparently irrational dismissal of a beneficial public health measure in so many countries? After all, it was not as if the teeth of European children were so cavity-free that fluoridation wasn't needed. Or was it? I soon discovered that pro-fluoridationists didn't try to explain this discrepancy. They simply ignored that fluoridation had been rejected throughout much of the world. It seemed curious.

My other question was this: why were English-speaking countries seemingly the most enthusiastic about implementing fluoridation? What was different about them? No one was exploring this issue, so I could only speculate. One difference was the autonomy of the medical and dental professions, which was much greater in the US, Australia, New Zealand, and Canada than in most European countries, where doctors and dentists were more tied to government funding and control. It was counterintuitive. Where these professions had greater professional power in relation to the state, they pushed more strongly for fluoridation. Did this relate to the increased status associated with a "scientific" intervention? This is yet to be investigated and continues to be intriguing.

**Suppression of Dissent**

Whenever there's a powerful professional orthodoxy and popular opposition, dissident experts pose a special threat: they puncture the illusion of professional unanimity. Non-experts can be dismissed as uninformed and emotional, but not so individuals with credentials, publications, and prestigious institutional affiliations. These individuals become targets. They may be censored, libelled, even fired.

In such situations, prominent dissidents are like magnets. Lower-profile dissidents contact them with their stories. And so it was with fluoridation. From the mid-1950s to the mid-1970s, the most prominent fluoridation critic was George Waldbott, a US doctor and researcher. Just reading his book *A Struggle with Titans* provided enough evidence on its own of a pattern of suppression (Waldbott, 1965). Anti-fluoridation dentists were threatened, some of them deregistered. Submissions to dental journals were rejected in a suspicious pattern. Waldbott himself was subject to a sting operation in which he was listed in a dossier of anti-fluoridation activists, grouped with extreme right-wing groups and crazy-sounding health fanatics.

I didn't rely just on Waldbott's book but followed up various leads, searching for articles and writing to anyone who might know something. Albert Schatz confirmed that some of his submissions to

journals had been returned unopened. Albert Burgstahler, one of Waldbott's collaborators in the comprehensive book *Fluoridation: The Great Dilemma* (Waldbott et al., 1978), sent me numerous documents, as did Waldbott's widow Edith. Before long I had a sizeable compendium of cases of suppression. I knew from experience that documented cases were the tip of an iceberg of a wider pattern of suppressing dissent.

Along the way, I wrote several articles for academic journals, and then worked on a book (Martin, 1991). This was straightforward in most ways, and there was a revealing part of the process. In my usual way, I sought comments on drafts from experts. The first three anti-fluoridation experts I approached readily agreed. However, it was difficult to find pro-fluoridation experts willing to comment. To find three, I had to approach a dozen of them. I especially appreciated the three who agreed, because they sent comments that helped me avoid mistakes and strengthen my argument. The lesson here is to seek out opponents who are open to dialogue. They are precious.

**Captives of Controversy**

Examining the arguments on both sides might seem like being neutral, but that's not how it worked in practice. Anti-fluoridationists welcomed my investigation because it took their concerns seriously, whereas many pro-fluoridationists were suspicious or hostile for this very reason. For ardent fluoridation supporters, anyone opposed was not just misguided but dangerous and deluded. By taking both proponents and opponents seriously, I was thereby treated as being on the side of the opponents.

This attitude of proponents was apparent in the debate itself, or rather, their refusal to debate. In dental journals, I read articles recommending that pro-fluoridationists should refuse to join public debates because this implicitly acknowledged there were legitimate reasons against fluoridation. So, to deny any such acknowledgement, they recommended declining to debate, even though this made them seem arrogant.

With this sort of rejection of the possibility of debate, much less dialogue, no wonder my investigation was seen as supporting anti-fluoridationists, because I was taking them seriously, whatever my own view.

At the time, two of my colleagues had similar experiences in studying a controversy using SSK. One was studying the debate over vitamin C and cancer, the other the debate over the Australian Animal Health Laboratory. We described our experiences as being "captives of controversy." However much we tried to be neutral, that's how we were seen (Scott et al., 1990). It wasn't the worst fate for social scientists. We learned a lot from the responses to our studies. For some sorts of

insights about controversies, there is no substitute for being caught up in the clash, being seen as an ally or an opponent and treated accordingly.

**Conclusion**

In some ways, the controversy over adding fluoride to public water supplies isn't all that special (Martin, 2014). The same dynamics are found in numerous other controversies, including those over nuclear power, pesticides, GMOs, microwaves, and vaccination. There is the same polarisation of viewpoints, intense partisanship, involvement of vested interests, routinised rejection of contrary evidence, and suppression of dissent. Among these, the fluoridation controversy serves as an example, featuring a stable configuration of positions and techniques over many decades.

The fluoridation controversy has one significant feature not found in most others: a striking divergence of policy in different countries, with no obvious explanation. It is not easy to say why governments in English-speaking countries are so much keener on fluoridation than elsewhere.

Every long-standing controversy is maintained by campaigners on each side. For most campaigners, there is a limit to their capacity to keep going. Many campaigners have told me they are hopeful of a breakthrough, often in the next few years, when a crucial scientific study or official finding will cause the other side to call it quits. However, one of the enduring features of these controversies is that new evidence seldom makes much of a difference.

One thing I learned is the difficulty of making predictions about the trajectories of controversies, except for one thing: it is usually safe to say they won't be resolved any time soon.

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