

It takes more than just alternative technology

Interview with Dr. Sharon Beder

by Amy Davis Jones, Co-Editor of the EcoEngNewsletter



Dr Sharon Beder is associate professor of the Science, Technology and Society Programme at the University of Wollongong. She has written several books, including "Toxic Fish and Sewer Surfing", "The Nature of Sustainable Development", "The New Engineer", "Global Spin and Selling the Work Ethic".

Sharon worked as a professional engineer for several years before becoming an academic. She has been Chairperson of the Environmental Engineering Branch of the Institution of Engineers, Sydney, President of the Society for Social Responsibility in Engineering, and a director of the Earth Foundation. In 2001 she was presented with the World Technology Award in Ethics.

Info on Sharon Beder's work: <http://www.uow.edu.au/arts/sts/sbeder/>

Amy Davis Jones: **Your focus since you returned to academia has been on the social dimensions of science and technology, could you expand upon and explain this in a little more detail?**

Sharon Beder: I guess what I am interested in is the interactions between science and technology and society. Most people are aware of the way technology effects society, but I am also interested in the social factors that influence and shape science and technology. It is a two way interactive process. I am particularly interested in the political influences on science and technology.

ADJ: **Before you returned to academia you were a professional engineer for several years. Could you explain what you did as a practitioner and how it has influenced your work today?**

Sharon Beder: I did a variety of engineering jobs, but none of them were particularly satisfying to me. I spent a year with the Ministry of Works in New Zealand in their systems laboratory. Then I came to Australia and did a variety of jobs here; freelance structural engineering, fire sprinkler design, water engineering. I never felt satisfied with any of that work, which is why I went back to the university.

I started doing a Master's degree in Industrial Engineering, but then I saw an advertisement for a Master of Science and Society, and that sounded more interesting to me. And that was really the turning point where I went from being a practicing engineer to studying the interactions between engineering and society.

And I found that really interesting. I had decided to do engineering because I thought that technology was the way to solve the problems that the world was facing, but when I did that degree I realized that the real obstacles to solving major problems were social. Even if you could invent the best possible technologies, they wouldn't be adopted without the right political, economic and social conditions.

It was those conditions that were stopping us from finding and implementing solutions to these problems.

ADJ: **Would you say the motivation behind a lot of your work is that you are an ecologist at heart, and that as a practicing engineer you were not able to explore those interests?**

Sharon Beder: It was more that when I was an engineer, I didn't really feel like I was contributing to anything meaningful. I wasn't contributing to making society a better place. I probably was in a very small way, but it didn't feel like enough to me.

I didn't actually become interested in the environment until I did my Ph.D. on Sydney's sewerage systems. I sort of had a layperson's interest in the environment before then, but I didn't become interested in the professional sense until my Ph.D. I was interested in why engineers and others put in place solutions that harm the environment.

And so part of my motivation was to understand what was going on and part of my motivation was to be able to make some contribution myself that I felt was worthwhile.

ADJ: **Could you see yourself as a voice that speaks for and promotes environmentally responsible ecologists, science and engineers? For example, your articles and papers use less technical lingo and terminology and translate all these complex problems to the layperson and help them see the health risks and environmental problems associated with certain technologies.**

Sharon Beder: Yes, I have always been interested in promoting social responsibility in engineering and related professions. I have taught academic courses to science and engineering students that are about society and the environment to try to broaden their education...sometimes in the face of some hostility from engineering lecturers. I've also been involved in the Institution of Engineers on their environmental engineering panel. And also with environmental groups, such as a group in Sydney called Stop the Ocean Pollution. I was involved with them in trying to highlight some of the ocean

pollution issues in Sydney.

Also in my writing I have not just aimed at an academic or professional audience. I have written in popular magazines and newspapers to try and raise awareness to problems and also in engineering magazines to try to get engineers to think about these things. For two or three years I had a column in *Engineers Australia* where I tried to raise these broader social and environmental issues, but that was discontinued at the end of last year. It made some engineers angry. They would write letters saying "what does this have to do with engineering?" I also got emails and letters saying "this is what engineers need to hear". But there were numerous traditional engineers who felt threatened by what I was saying.

ADJ: On the whole, would you say that your work is noticed and that you are reaching people that otherwise wouldn't give these issues much thought? Or do you feel like it is a balance; some you frustrate and some you enlighten?

Sharon Beder: I guess it is like teaching, some people you can never reach and others can really appreciate what you're trying to do. Last year I received a World Technology Award in Ethics, which was a great honor for me, in recognition of my work. So, I don't feel as if it is all being wasted. I do get feedback from people saying what I have done has changed the way they look at things.

ADJ: [I should preface the following question by saying Dr. Beder has researched and published a lot of work on the public relations game that corporations and government agencies play. I highly recommend that our readers visit her website (<http://www.uow.edu.au/arts/sts/sbeder/>) and read some of her work.]

Well that must be very rewarding. It is my belief and probably a lot of other ecological engineers, ecologists, landscape architects, planners etc., that your research and writing is crucial to the expansion of more ecologically engineered solutions. Do you feel like there is a coalition of people out there who are attempting to bring down the large corporations and government agencies who are playing the public relations game. Or do you sometimes feel like you're a small army trying to bring down the big giant.

Sharon Beder: I would probably feel like there was little opposition to corporate PR if it wasn't for the internet. Internet networks and discussion lists have connected me with people doing similar things elsewhere in the world. For example, John Stauber and Sheldon Rampton are at the Center for Media and Democracy in the United States. Their book is called "Toxic Sludge is Good for You!" They put out a magazine called *PR Watch* which I have written for and recommend people subscribe to.

And then there are organizations in each country, such as Corporate Watch in the U.S. and a group with the same name in the U.K., who keep an eye on corporations and their PR activities. There is one in Europe too called Corporate Europe Observatory, CEO. So there are people and organizations in different parts of the world who keep an eye on corporations and their activities.

ADJ: So does this give you hope for change?

Sharon Beder: Well yes, I have to be optimistic otherwise I would give up. Occasionally, in my darkest moments I feel like it is all a waste of time, but at other times I feel like change is inevitable and that it is just a matter of hastening the process.

ADJ: Could you give us an example of preventing a potential environmental disaster through your efforts and the awareness your work provides?

Sharon Beder: I've been involved in a few semi-successful fights in Australia. One was a fight against the siting of a high temperature incinerator to dispose of organochlorine waste in Australia. There was a lot of PR involved in that with that. It was a government's initiative, as they are just as capable of using PR as the private corporations.

We managed to stop the incinerator from being sited in a small rural town with lots of agricultural activity in the area. So far, no high temperature has been sited in Australia. Our argument being that it was a very old-fashioned catch-all technology. The idea was for the incinerator to take all the hazardous waste from all around Australia without working out what was the best way to deal with each waste stream.

ADJ: Was this the case where the government tried to fool the public through the planning process by leading them to believe they had public input?

Sharon Beder: That is right. So, at least in that case the community was able to see through the public relations and to have an influence on whether the incinerator was going to be sited in their community or not. Also, with the help of environmental groups like Greenpeace they were able to actually get a re-evaluation of whether a high temperature incinerator would be an appropriate solution to the problem. So, it had national consequences.

The other issue I was involved with was the Sydney sewage issue, where effluent did not even receive full primary treatment before it was discharged through three major outfalls directly into the ocean. Their proposed solution was to extend the outfalls into deeper water and have diffusers, but still not treat the sewage adequately, not even up to primary treatment.

We had a major campaign, we got 250,000 people on Bondi Beach protesting against the sewage pollution and the extended ocean outfalls. It resulted in promises for more and better treatment. The treatment has been slightly upgraded, but as soon as the media spotlight was taken away from that issue they stopped their efforts to improve the treatment. There is still only primary treatment.

ADJ: In terms of what you know about IEES is there a particular issue or current project you are involved with that would be important for ecological engineers and other professionals to be

aware of or apply to their work?

Sharon Beder: What I am working on at the moment is electricity deregulation and privatization. For example, what happened in California is a very similar situation to what is happening in Australia. I've also been looking at what has been happening with privatization in Brazil and India.

It seems to me that there is an ideology that the free market is best, combined with the self-interest of large corporations to make big profits, behind deregulation and privatization. It always seems to be at the expense of finding the best way of doing things. Often the best way of doing things is through public endeavor and appropriate regulation. So, this is what I'm writing my next book about.

ADJ: **I think this issue is very applicable to IEES because I know there is great interest in alternative energy.**

Sharon Beder: From what I've seen the push for privatization/deregulation seems to favor some technologies over others. And certainly favor new generating plants over efficiency and conservation. There has been an increase in gas-powered plants at the expense of solar and wind and other alternatives. Particularly in places like Brazil, where they used to be very dependent on hydro-electric power. The privatization has led to a real push for gas-powered generation because private companies are coming in and wanting to make quick profits. Gas is cheaper to construct and so their returns come quicker. The first priority is making a profit rather than using the best energy source for the area, based on all the considerations, especially environmental.

ADJ: **So there is really no push for municipalities or neighborhoods to go on a more modular system, it would still be a very centralized approach to electricity?**

Sharon Beder: Right. Once you have privatization and deregulation then the whole drive for companies to make a profit, not to install what is the best long-term environmentally sound solution.

ADJ: **In terms of what the interests of IEES are, going with more modular, sustainable forms of energy, and considering it is a crucial time where governments and corporations are looking into deregulation, what approach would you suggest professionals should take in promoting a more sustainable solution or system? You have this inside to the PR game, so what advice would you give?**

Sharon Beder: What sort of PR tactics should be used, is that what you are saying?

ADJ: **Yes**

Sharon Beder: Well, I think the essential thing is to get grassroots support for your particular solution. Once you have community backing you, half the battle is won because then you can get local community helping with your campaign or your push in terms of government approvals and the like.

I would also say that it is really important for a genuinely motivated professional to not be deceptive in their PR. To tell the truth and to present things as they are and this will foster a sense of trust. The more people are exposed to the other type of PR, the PR that the big corporations are engaged in in order to get their own way, the more people are going to be cynical about PR. So it is really important to be really upfront, straight, honest and genuine.

ADJ: **So, knowing what you know about the PR game, what additional advice, other than being honest and a grassroots approach would you give to the professional to promote solutions that are more sustainable to our cities and towns?**

Sharon Beder: I guess I will get back to what we discussed in the beginning, and that is to be really aware of the social dimensions of solutions. Because I think one of the mistakes that the appropriate technology movement made was to think that if they could just come up with these wonderful technologies that people would see how good they were and think, yes, that is what we want.

And they didn't recognize that every technology is socially shaped and that its implementation depends on social and political factors. So that for a planner, ecologist, engineer or an architect, they have to not just focus on the technical issues and find a solution that works technically, but they have to look at the social dimensions as well.

That involves consultation, understanding the local situation, and also understanding the politics of who is going to oppose it. They must also consider why they will be opposed and how to respond to opposition.

ADJ: **Well that wraps up our interview, on behalf of IEES, I thank you for your time and we sincerely appreciate and recognize the importance of the work you do.**

Sharon Beder: Thank you.

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