

Grumpy scientists: the ecological conscience of a nation

First plenary session

<http://dx.doi.org/10.7882/FS.2013.006>

Chris Dickman (chair): Many thanks indeed, Paul, for again a very stimulating and slightly scary look at the range of activities that we're currently carrying out that make us, or should make us, all very grumpy indeed. There is now a time for questions and comments from both Harry's and Paul's talks. I'll hand over to Dan for the plenary session.

Dan Lunney: Thanks, Chris.

Here's a packet of pills I picked up in a recent field trip. They're called whinger's pills, and it says, "Specially made to suppress whinges resulting from the weather, drought, overwork, underpay, spouse, in-laws, the government, the boss, the employers, the Joneses, and also for not being understood, loved, appreciated, told anything, or taken anywhere, and a hundred other justified causes. So you keep taking them until smiling occurs, and you stay happy." So the question is, for Harry Recher, would any number of pills do the job for you, Harry?

Harry Recher: No, I don't think you can solve these problems or make me less grumpy by giving me a pill or a hundred pills. I could be really pessimistic and really make you feel bad, but as my brother said to me this morning "I'm glad I don't have grandchildren". Not that he did not want grandchildren, but he couldn't in all conscience accept the fact that given the state of world environment they would inevitably live miserable, demeaning lives. That's the kind of planet we've created. I don't think we can get out of it with pills.

Paul Ehrlich: My answer to whether you can solve a planet's problems with whinger's pills is no. You can solve it with Louie's wine, but as the environment goes down the drain, pills won't help.

Dan Lunney: Paul, You gave a talk in 1976 at Macquarie University and you were asked the question that everyone gets asked, "What can I do about it?" Your answer at the time was, "Go out and learn about the problem, and that will stimulate you to action. That is the best thing to do." Is that still one of your best working answers?

Paul Ehrlich: I think that's part of the answer, but we haven't got a lot of time. One of the things the MAHB [the Millennium Alliance for Humanity and the Biosphere] is trying to generate is some bottom up action that will then eventually have to interdigitate with some top down - if you can stimulate the top down action. But what action? Something to remember on the consumption side that is we know we can quickly solve the problem. On the population side, we know we cannot quickly solve the problem humanely. We should have begun 30 or 40 or 50 years ago to reduce the birth rate so that we would have a gradual decline: if we had done that, by now the world's population would be starting to shrink. That's what we still need to do, and that's why I think we have to work very, very hard and fast on women's rights.

Women's rights is a very good place to start, because at least from the point of view of most people in an audience like this, it's a win-win situation, and it's worked in large parts of the world. Changing patterns of consumption is in some ways technically more difficult. We know much more about the motivation of reproduction and how to change that than we know how to change consumption patterns. How do you get consumers to think ecologically. Sometimes the choices are easy. If I had \$10 million to spend would it be more ecologically sound to buy a jet aeroplane or a Van Gogh painting. The Van Gogh is obviously ecologically better spent money. But if the choice is between an Apple or a PC, then the issue of making the best choice ecologically is much more difficult.

But what we do know is you can change consumption very fast. I was alive when there was a thing called the Second World War. By that time we produced almost 4 million passenger cars in the United States. Come 7 December 1941 and that stopped, and in the next three and a half years or so the USA produced hundreds of thousands of tanks, hundreds of thousands of howitzers, hundreds of thousands of military aircraft, thousands of ships, and so on, while rationing butter, aluminium, gasoline, oil, rubber and so on, but many fewer passenger cars. We developed and built nuclear weapons and deployed them. Then at the end of the war, we turned the whole thing around, and by 1946/47, we were making passenger cars and TV sets, and not so many tanks or howitzers.

What I'm saying is, if the incentives are right, we know we can change consumption patterns rapidly. That's a positive thing, but none of these things will work unless we can find the incentive. I think now what individuals can do is join the MAHB and get out there and scream. If you're in a university, and I suspect many of you are, keep saying, "Why aren't the universities leading on the most important problems that we see? Why aren't we reorganising? Why are we allowing departments like psychology, anthropology, and sociology to exist side by side, instead of having them work together on the world's most serious cultural and sociological problems. The sciences are different and at many universities once separate disciplines are now highly integrated. For example, about 15 years ago we wanted to hire Steve Schneider, who at that time was probably the best climatologist on the planet. Steve died a few years ago, much to all our loss.

I took the proposal to hire Steve to our departmental faculty meeting, and our department stretches all the way from ecology and evolution down to virology - a broad biology department. My colleagues, all of whom were bright, said, "Can't do it, he's not a biologist," and by that time I'd been 35 years in the department. I looked around the table, and said, "Look, when I joined

this department two-thirds of you wouldn't have been considered biologists. You would have been considered biochemists or biophysicists, or just plain physicists. But as biology has gone towards a more reductionist direction, we've redefined the discipline, and now you're here as biologists. In ecology, climate is getting to be an absolutely crucial issue, and we need to have that covered in the biology department."

The interesting thing, and one of the reasons I've stayed at Stanford, is I got a unanimous vote in favour of hiring Steve. They hated it, but they all knew the argument was correct, and they would look foolish if they had not voted that way. So that's one reason for staying at a university. At least you can associate with smart people, if you're lucky.

Dan Lunney: Thanks Paul. Connie has a question.

Connie Harris: My question to both Paul and Harry addresses the ignorance of most of the people in regards to how appalling the state of the planet really is. The loss of biodiversity is just part of the problem. I saw in one of my medical magazines that every second male can expect to die of cancer, and every third woman, and one of my lecturers in dermatology 30 years ago said - at that stage I was in Hamburg - "Well, we have nearly the same skin cancer rate here as Australia has, but we don't have the sunshine, and it's all due to the toxins in the air."

We are pumping out more and more toxins, and you, Paul, you spoke also about the toxins. People always fear for their own wellbeing and I wonder whether there would be a chance, considering the high rates of environmental cancers, whether that can be used to focus on the Earth and the importance of biodiversity to our own well-being. So, do you have any ideas how can that be used?

Harry Recher: I'm going to give a very cynical answer. Cancer is part of the death industry. It's an industry. We do not want to cure cancer. We don't want people to know why they're getting cancers. We want people to develop cancers so that we can treat them medically. It's what funds our hospitals and profits the entire death industry - the whole medical profession. We have to change the way we look at the world and not use a fear of sickness and death to drive change. Otherwise, we become just another religion based on fear and guilt. We need to change our culture, we need to change our total behaviour towards each other and towards other species.

How you go about that is the hard question to answer. Given the state of the world's environment and the need for immediate action, it is too late to start with the kids in kindergarten. We need to start educating people who are already out of school and beyond that. How you do that is through a different sort of media, because that's where most people get their information from. The media in Australia, for example, does not talk about environmental issues, much less make any effort to inform the public, Attenborough documentaries aside. We need to get the media thinking and presenting issues on the environment in the same way that they give us updates on the stock market every 10 minutes.

John (indistinct family name): My question is to both Harry and Paul. The horse has bolted. It's going to be very hard to get it back in the stable. We have aspirational nations, even continents. India, for example, as a subcontinent, has huge expanding population, which is aspirational, and busy embracing the social media, phones, cars, red meat, and so on. The same is happening in China. The same can be said for the rest of Asia. They want what we've got, and they want it sooner rather than later. How can you change that? At the same time there are foundations established by very philanthropic and immensely wealthy people who are spending tens - or billions of dollars on research to stop cancer, eradicate malaria, and all those things that used to control the population. What can be done about that without appearing callous and inhumane.

Paul Ehrlich: Anne, my wife, and I just came back from China, which is indeed a cheery, scary place to go. You go into a town - a huge city like Xi'an, and you pass not five or six high-rises being built, but a 100 or 150 high-rises being built, all of them for apartments for the people who want to move into the cities, all of them with low ceilings and no cross-ventilation and airconditioning. You cannot breathe the air, because the coal-fired plants nearby are producing gigantic pollution and warming the planet. We've done this all over the planet. China has about, I would guess, 200 million people who are rich in the Australian style, 200 million who are rich in the Mexican style, and 900 million who are poor as hell and want to be as rich as Americans.

The Chinese government watches the GINI index all the time, the distribution of income in China, and it's getting worse and worse, and they're scared. The central government, dictatorial as it is, cannot control the situation, because the county and the province governments are mostly out to make all the money they can even if it means polluting the environment. It's not going to change until we somehow get the countries of the world together, and I don't think it's going to happen. There are lessons I could talk about from when the colonies got together in the United States to throw off the British yoke, where you had very diverse countries at that time getting together in a common cause. I don't see it happening again. That's one of the reasons I'm a pessimist.

One of the problems with the food situation, which you subsumed in what you said, is the people getting rich in China and India are switching to meat, which is the worst direction to go in terms of if you're going to try and feed nine and a half billion people even an adequate diet. So maybe Harry has an answer. Let me also add something on the cancer thing. If you want to read a horror story which is long, read Proctor's book, *The Golden Holocaust*. It just came out, written by one of my Stanford colleagues. Any page of it can go into your medicine cabinet as an emetic in case you eat poison, because it's the story of how the cigarette industry killed 100 million people in the last century in full knowledge, for most of the time, of what they were doing, and trying to find more and more ways to conceal it and lie about it.

The same people, they're linear descendants of the people who worked for the cigarette industry to try and convince people that it was uncertain whether smoking was good for you or not, are now working for the fossil fuel industry to confuse people on climate change. In other words, we have got to make very fundamental changes in our societies if we are going to have a chance of surviving. One of the things to do of course, is get the money the hell out of politics. Rupert Murdoch, or any vested interest, should have no more votes than anyone else, and for my view, fewer, thank you.

Richard Kingsford: One of the things that we get accused of is being merchants of doom, and a lot of people out there say, "Well, we've stopped listening, because it's just bad news," and I guess I wanted to put it in the context of what do you think the role of some success stories is in terms of the bigger picture? I've noticed in the literature people talking about young conservation biologists being so depressed they don't actually want to do anything in this area, so gloom and doom may be counter-productive.

Harry Recher: Something I wrote about 20 odd years ago, was do you only tell people things are good, that things are going to be improved, that we can solve these problems, and risk that they then do nothing? Or do you tell people what the situation is, what the truth is, what the likely consequences of our actions are, which is what is described as doomsaying, and then risk people saying, "It's hopeless, we won't do anything?" I think the important thing that's lacking in our society in terms of the doom situation is the fact that our society is not educated. People are not trained, educated, informed about the environment in which they live. Paul commented that people don't even know where their food comes from. They don't see farms, they don't grow food any more in their backyards.

People don't understand ecological principles because they don't spend any time observing nature and they are not taught in school. If you look back nearly as little as 50 years now to the education syllabus in New South Wales, there was a high natural history component. Students in primary school were taught about the wildlife, the animals, the plants, the natural world that they lived in. It was a much more rural environment, and as we have become more and more urbanised we've gotten further and further away from that. Unfortunately, that scenario has been duplicated at universities. When I went to university I was taught how to identify plants. I was taken into the field and shown birds and mammals and how to trap and study them. We tend not to do that in university programs any more. That's partly why I said we need to change our university education system in the sciences to four years.

We actually need to think about an undergraduate degree taking six years. Just look at how many metres of shelf space a single journal like *Ecology* takes in a library with just the journals published since 1970. It's huge, a huge expansion in human knowledge. But we make no effort to accommodate that within our education system by increasing the amount of time people spend in school. At the risk of getting on one of my other favourite hobby horses, Australia - and probably the United States now, although I haven't lived there long enough recently to be sure of this - are the most anti-intellectual, anti-education nations I have ever seen any place in the world, despite all the words about the importance of education from our Prime Minister and the high levels of participation in tertiary education. As a nation, we do not value education. It seems to me that school children spend more of the school year on holiday than in the class room. This might be okay if there was a learning component to holidays, but checking out the surf in Bali and detailing your every action on Facebook do not quality as education or learning.

We don't value education, and until we value education and start educating people, the entire community, in the basics of natural history and the environment, they won't understand why they get cancers from air pollution or from the sun, they won't understand what they can do as individuals to protect the environment so that their grandchildren do have a chance to live healthy, happy lives. We also all need to make personal sacrifices. We have to accept that the Indians and the Chinese do aspire to the things we already have. That means we have to give up things. A lot of the things we can do, as individuals, might be heart-wrenching, but they're achievable instantaneously. For example, it should be illegal to own a non-working dog. Dog ownership in a world suffering the impact of global heating and where tens of millions die of starvation and malnutrition every year is unethical at best. Dogs consume huge amounts of resources and providing for their needs generates huge amounts of greenhouse gases. These are resources that could be used to reduce our impact on the planet, fund education, and feed starving people.

You don't need to own a dog unless it's a working dog. Yet Sydney has had a proliferation of dog ownership over the last two decades, while children die of starvation and the rate of species extinction sky rockets. We need to get a grip on the balance between what is necessary and what we want.

Dan Lunney: Thanks to Paul and Harry.