

New Scientist and Greenpeace Science Debates

Science, technology and our future: the big questions

What is 'natural'?

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Well ladies and gentlemen, it's very interesting that I can pick up on a number of points that Patrick has just made, particularly because I also read Bill McKibben's book, indeed I dug it out a couple of days ago and found tucked inside it the review which I had been asked of it for a very green magazine. It was never published; the editor spiked it, I think, because he didn't like what I said. I liked the book less than Patrick did I think, really because it struck me as being a kind of moan or howl of grief for the loss of some kind of pristine wonderful world, and it seems to me to take the view that once human beings have looked, indeed he even goes so far as to say once somebody had looked on the Brooks Range in Alaska it was in some way polluted. I thought this was totally ridiculous and said so. However, there were a number of points which struck a chord with me. And as I've been thinking over the last few days what I really felt about nature, what is natural, and asked various of my friends, they've mostly been perplexed when I asked them. It's sort of a question you don't ask yourself: you feel you know without actually thinking it through. I've ended up, I must say, with an absolutist position, which is that everything is natural; there is nothing unnatural in the world.

I'm struck here very much by Kubrick's film '2001 A Space Odyssey', which for me is still the best SF movie ever made, and those of you who have seen it will remember the early scene with the Australopithecine, as it were, foraging with little tapiers alongside them, and then one ape man, whatever you want to call it, you remember picks up a stick and begins to recognise that by moving this stick you can exert a force. Of course I'm afraid the first force which we saw exerted is largely on the skull of a tapier, but put that aside, what we, Kubrick shows us the ape men using a club and then the next scene we cut to a space shuttle landing on an earth orbiter on its way to the moon. I thought that was completely brilliant

because what Kubrick is saying to us, once you begin, once the tools begin, the rest of the story is inevitable, there's no need for me to fill in the details.

And of course we can all remember a time when the people used to like to define human beings. Human beings are the only tool-using animal. Well, we know that's completely nonsense. And if we begin to think, fill in those stages that Kubrick brilliantly did not fill in, then what have we got? The club begins to be refined, it turns into a spear, into bows and arrows, fire begins to be controlled, clay pots appear and so on. At what point do we start saying something unnatural is happening? It's the technological thing that we get hung up on I think. But I don't think we should. Human beings are one end point of the marvellous processes of natural selection, and one of the things that natural selection has superbly produced in ourselves is the ability for great flexibility, for intellectual and abstract thought, for recording thoughts so that generations can be linked, and so on. That is just what we are; that's the type of animal that we are.

And so I've come to the conclusion that an AK47 rifle, a pentium processor, a Mozart piano concerto, are all natural. You may debate with me but I don't see how you're going to draw a line, frankly. Having said that everything is natural and nothing is unnatural, that doesn't mean to say that all aspects of nature are equally desirable, let alone equally sustainable, and it's absolute truism isn't it, that ecosystems as we know them vary enormously and they also change, sometimes rapidly, sometimes slowly. The way in which life has developed on this planet, this dynamic planet, is fraught with changes; it's been a very powerful mover of evolution.

So, one contrast we can obviously see is exemplified by a tundra and a tropical moist forest, the rain forest. The one will have enormous numbers of very few species living in it; in the tundra it's pretty difficult to make a living and you've got to be a very special sort of organism to be able to batten down the hatches for that time. There, the eco niches are very broad. In a rain forest absolutely the opposite. There it's nature with the brakes off and there's infinite diversification, specialisation. Now, if we look at ecosystems in the way that human beings play a part in them, are a part of them, most – but not all, certainly not all - human action tends to simplify ecosystems, and that does present very big problems for us. Mono-cultures are inherently very unstable and we have a great problem keeping a control of them; the mono-cultures we require in order to grow enough food for ourselves. But let's not forget that the human part of nature, human nature, can also enrich environments immensely. An obvious example is you put up nest boxes in a bit of young woodland and thereby immediately enable species to move in and reproduce and live there that probably wouldn't be able to live there. Wrecked cars are dropped into the plain muddy bottom of the Mediterranean and prove an excellent site for octopus and various other types of fish. It may seem unfair to our co-sponsors tonight, but if the Brent Spar had been dumped onto the Continental Shelf it would be a rich ecosystem now, really rather equivalent to one of those

giants in the rain forest, a giant tree, which is covered with epiphytes, and the epiphytes have got plants growing on them and animals specialising on the epiphytes and so on. Just so a human built structure can enhance bio-diversity, if it's put in the right place.

What we're talking about, of course, is management. And because human beings do put so many inputs into the rest of the natural world, that is their nature, you find that it's very difficult to just do things once. If you start managing an environment, a habitat, you generally have to keep on at it, and if you don't you may find that it runs into trouble. At the moment there's quite some problems in the Scotland where I live with over wintering geese. The protection focus has been so successful that the numbers have gone up enormously; they're causing big problems in the winter. They're also, I believe, causing problems in the summer, in the breeding environment, because human management has meant that the natural mortality of young birds is not proceeding as it did. So management is a continuous process, but it's often enriching.

Now I remember another movie which had a moral for me and it links back perhaps to Bill McKibben, and that is that sequel to Jurassic Park, I forget...I think it was called The Lost World or something. And the character played by Richard Attenborough (not David Attenborough, his brother Richard Attenborough) do you remember is the slightly mad but basically fairly benevolent scientist entrepreneur who's got the whole thing going. At the end of the film he is making some statement because, you know, you'll remember the tyrannosaurus has arrived and trashed the ship and he's got the tyrannosaurus' mother going back and she's just fed one of the baddies to her offspring - biologists have to have a willing suspension of disbelief at this point! But never mind. What Richard Attenborough says about the Jurassic Park on the island, what these animals require of us is our absence. And I think that is a wonderful message. I would like... human beings are part of nature, we are natural, but I would like us to withdraw from quite large areas. I think it would be very good to un-manage for a bit, if we can. We can't do that at the moment because of the enormous pressure of human numbers and the best possible thing that could happen for our species is that our numbers slowly decline down to about one fifth of what they are now. Then I think there really would be a chance to restore some balance.

Where I think I share an emotional reaction, which Patrick has just put across to us, is that I do treasure moments when one, as an observer, looks in on the rest of nature and sees it operating magnificently on its own. I was lucky enough to witness a cataclysmic battle between two bull elephants in the African bush. We were sitting in our little jeep there – it was a good thing we had that natural object around! And these colossal animals were fighting it out, and around them there was the whole ecosystem, the cattle egrets were whizzing in and out because when the elephants were fighting they were stirring up the ground and that stirred up a lot of food for the egrets, so they were benefiting from this clash of the giants. But what I felt was, look, I don't matter here, and that is sometimes a great, a

very important thing for us to feel. We need as we gain, hopefully, a better balance with the rest of nature, I think we should acquire a better sense of humility, and that really is how we'll get our place.