

Environmental Issues with Deirdre Chetham (Part 1)

John Major: Welcome to another session of Asia Society's series: the Landscapes of China. I'm John Major. With me today is Professor Deirdre Chetham of Harvard University, who is an expert on the Chinese environment and Chinese environmental history and author of the book *Before the Deluge: The Vanishing World of the Yangtze's Three Gorges*. We are going to talk about environmental issues today. Let's start by looking at some issues in traditional China.

Now, it is often said that Daoism¹ has a kind of implicit environmental aspect to it. Daoist terms include words like "spontaneity" and "natural." Is there anything about traditional Chinese thought that made pre-modern China particularly environmentalist in its outlook?

Chetham: It really depends on how you look at it. The Daoists believed that there should indeed be a harmony between nature and man, in the kind of way that meant that ideally human beings did not disturb nature. The Confucians looked at it more as that there should be harmony in all things, not only in relationships between people, but between man and nature. They also saw nature as something, by keeping the harmony there, that could be used to benefit man. The Daoists saw it more as a free-for-all – that man should not, to the best of his ability, get in the way of nature, and nature would just sort of go its own course. So it wasn't so much that it was environmentalist in the way that we see it today, where you protect nature and try to nurture it and use it wisely; it was more of a 'leave it alone and nature will follow its own course,'-- if you don't get in the way.

Major: One thing that is sometimes alluded to in the Song Dynasty landscape paintings² – where you have these enormous scrolls with towering mountains and high waterfalls – is that if you look closely you see a few people walking along a path somewhere or perhaps a roof or two of a pavilion set somewhere among the mountains. Is that notion of humans fitting into an overwhelmingly powerful nature part of this Daoist sensibility?

Chetham: In some senses it is, or can be. You do then see the individual there as small in relation to the landscape, the mountains, the rivers, and the high trees. At the same time, in almost all the traditional Chinese paintings of that era, although you see these very overwhelming landscapes with these tiny little people, there are always manmade objects too. There is almost always a pavilion on top of a high mountain, or other manmade objects that shows that man, too, has earned his influence on this natural scene. So it suggests different things: that one should live in harmony and recognize that one is really very small, but that the ability also to influence and cause change makes one's presence felt.

Major: Well, for that matter, isn't it the case that China has had what one would call a built landscape for a very long time? It is a culture that has been founded on intensive agriculture, so there has been an awful lot of transformation of nature going on in China for quite a while.

Chetham: That's certainly true. It isn't a country where there is much tradition of leaving wilderness alone on purpose. That it happens is often because the environment is so rough and there is no choice. But certainly since the very earliest of times, [people in] inhabited areas ha[ve] used their resources the best they could by intensive agriculture, harvesting

¹ For an introduction to Daoism, see two resources from Asia Society's educational website, AskAsia: the first is a very basic introduction to Daoism and the philosopher Laozi <http://www.askasia.org/teachers/essays/essay.php?no=15&era=&grade=&geo=> and the second contains excerpts from texts from the religions found along the Silk Road, including Daosim,

<http://www.askasia.org/teachers/essays/essay.php?no=77&era=&grade=&geo=>

² For a Song Dynasty landscape painting to use in the classroom, see AskAsia: <http://www.askasia.org/teachers/images/image.php?no=654&era=&grade=&geo=>

trees, and by building dams and dikes. Many parts of China obviously have a very difficult terrain and are subject to regular natural disasters. Part of that is a plan of necessity – that, [for example], in order to have enough water, it was necessary to build large irrigation projects from very early on, or [it was necessary] to find other ways of using the environment to produce energy or to protect oneself.

Major: One can think, for example, of rice terracing, which is very intensive agriculture and which fundamentally transforms the land: you take wetlands or you take a mountainside and put in very elaborate provisions for moving water around, getting water around up to some high point and letting it flow down from rice paddy to rice paddy and by the time that water gets to the bottom of the paddy system, it has been used a lot.

Chetham: That's true. Often that reflects the population pressures. If there are that many people living on the mountainside, certainly they use whatever available land there is to produce the absolute most possible. That is certainly a long-standing tradition.

Major: As I recall, actually, there is even some textual evidence of awareness of environmental impacts going way back. [The Chinese philosopher] Mencius...talks about deforestation on Ox Mountain. He says in a story that several generations ago the mountain was forested and then people cut all the trees down. With the passage of time, no one remembers that there were once trees on that mountain.

Chetham: That's something that thousands of years later still goes on: the same problem of land being deforested and laid waste and then replanted, and then the whole cycle repeats itself. Right up to the current time, every government for hundreds and hundreds of years has tried to deal with this in different parts of the country.

Major: So, later in the hour when we talk about contemporary events, we'll see that some of this is nothing new.

Chetham: One of the interesting things about Chinese history and Chinese environmental cycles is that there is a great deal that is very similar to a thousand years ago or even longer ago, for good and bad, but usually not so good.

Major: Now, something that also has deep roots in Chinese tradition with respect to the environment is the attitude of government toward the natural world and particularly toward natural disasters. The emperor of China styled himself the ruler of all under heaven, and not just the human realm, but, in a sense, the natural realm, as well. What was the emperor's responsibility to maintain natural harmony? What was that about?

Chetham: Well, there was a long-standing belief, which also continues, as many other things do, right up to the present, that the ruler's ability to maintain control over the country was both dependent upon and made clear by his ability to maintain the environment and protect people from natural disasters. When you think of the size of China's population, whether on a national level or on a county level, any kind of large natural disaster could very well cause famine, massive unemployment, or any kind of problem that could vastly threaten social stability. It was believed both as a superstition and as a practical matter that the ruler's right to rule, the Mandate of Heaven, the heaven-given right to be a ruler, was diminished or put into question if there were natural disasters during a reign, because that suggested that something was off and that the ruler was not really as good as he might be. When there was an earthquake or a drought or famine, it was often considered a sign from heaven that the ruler was probably on his way out and that there was a problem.

That is a belief that in many ways has carried through to modern times. In 1976, when Mao Zedong died, there was the great Tangshan earthquake³, which was one of the most devastating earthquakes in all of China's history. So you could say that Mao was old and he wasn't going to last that much longer anyway, but to many, many people, that [the earthquake] was a sign of his imminent demise, which turned out to be the case whether or not it was directly connected. It is also the fact of losing social control if the ruler couldn't prevent the disasters or at least couldn't deal with them adequately once they happened, in terms of relief. It is often what has launched revolts and all sorts of problems for both local and central governments right up to the present.

Major: In a way then, as you are suggesting, there was some element of truth there. The disaster might have been a natural phenomenon, but if the imperial Chinese equivalent of the Federal Emergency Management Agency was not doing its job properly, the consequences of the natural event would be very much worse. So in a sense it was the responsibility of the imperial government.

Chetham: That is very true. It is often framed as a superstition, but when you think about it there is often a great logic to it.

Major: One thing that you find in the 17th and 18th centuries is a drastic increase in the population of China – partly because of new crops, partly because you had mostly domestic peace – no warfare cutting down on the population increase – and probably other reasons as well. But what was the environmental impact of the rapid growth of China's population in the early modern period?

Chetham: It had a negative impact ultimately because for a long time, particularly in the period you mention, there was stability between the natural resources and the population. Although there had been droughts, famines, and all the things I had been mentioned throughout Chinese history in various places, after a certain point the population suddenly increased drastically as you get to the end of the 19th century and particularly as you into the 20th century. That ultimately unbalanced the impact at least in certain regions of the country. As you go into the modern era, this became more of a problem, particularly as a result of the policies during Mao's rule and particularly during the 1950s, when families were encourage to have six, eight, or ten children, if possible. Mao believed that this was a good thing and that it would not have the disastrous implications that many people at the time did predict, [implications that] he, in fact, ignored.

Major: So was there, for example, degradation of the soil or over-use of resources? What were the actual mechanics of this impact?

Chetham: It varied from place to place, but certainly in many of the areas around the major rivers, you find major deforestation. The forests were cut down to make way for arable land, to plant crops that were not necessarily suitable for those areas, but nonetheless vast fields were cut. The result was that rivers lost their soil, and the soil that was left was less useful for farming. There were many problems with silting in the rivers and a whole series of things that would depend on the location – mountains that were unsuitable for farming, [for example]. Particularly in the 1950s and 1960s, with the really radical agricultural policies that were instituted then, you see environments that were not suitable for certain types of agricultural use being forced into that type of use. The result was that they usually did not work for long and the environment was severely impacted over time.

³ The Tangshan earthquake of 1976 was a major earthquake that devastated a large area of northern China. TimeAsia had an interesting article on the earthquake in 1999 that described the earthquake through one survivor's story: <http://www.time.com/time/asia/magazine/99/0927/tangshan.html>.

Major: It sounds like you are saying there was a real shift in the mid-20th century, even if you see phenomena like population increases occurring well before then. I think I hear you saying that, in the mid-20th century, with the institution of communist rule in the People's Republic of China, there was something new and different happening.

Chetham: There was. Before that you had a gradual increase in population, but the population generally continued with traditional methods of agriculture, which then become less and less suitable as there were fewer and fewer areas of land that were appropriate. But as you go into the communist era, you have political movements and decisions about how to grow crops, dams that need to be built by whoever is around rather than by engineers, a whole variety of issues that were new, and an entirely different approach to the environment and agriculture. These issues were seen not only as problems to be solved to grow food, but as hallmarks of Communism and a way to force an entirely new way of looking at life and an entirely new way of growing crops. For instance, during the Great Leap Forward⁴, there was a political campaign to catch up with England economically. As a result of that, the entire method of planting crops was changed so that, instead of planting cabbages the old-fashioned way, they planted them three times as close together, with the result that they didn't grow very well.

Major: Wasn't there some national program to use a kind of new plow during the Great Leap Forward?

Chetham: They did what was called "deep plowing." The idea was that you could plow much more deeply and closer together. By concentrating the vegetables or the grain, you could produce greater crops. In general, it was just a complete failure. There were a number of different mechanical methods that were tried and, at the time, glorified as being successful. It was a period when statistics were largely falsified throughout the country on the extent of food production, which led to one of the worst famines in Chinese history.

Major: You would think that peasants with one hundred generations of experience would know more about how to plant crops than some bureaucrat in Beijing.

Chetham: And indeed they did, but they had the local communist party official there, who probably thought it was just as crazy as they did, but nonetheless had to enforce these things. They had to do it. There was no way around it.

⁴ For more background on this political movement, see the BBC, http://news.bbc.co.uk/1/hi/english/static/special_report/1999/09/99/china_50/great.htm; for visuals, see Stefan Landsberger's collection of communist era posters, <http://www.iisg.nl/~landsberger/glf.html>