Water and risk society: water management and historical understanding of water in Japan

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Risk Society Discourse

Ulrich Beck: *Risikogesellschaft. Auf dem Weg in eine andere Moderne.* (1986)

-Luhmann, Giddens, Lupton, Douglas

-idea that modernity changed the thinking of people on environment, science and technology by making them aware of the risks involved in their decision-making.

-much of the discourse has taken for granted the assumption that modern reflexivity is more or less a byproduct of Westernisation.

Riscum narrative

The Eurocentric origins of risk narrative or history, focusing on maritime insurance practices (and the establishment of Lloyds) and the Latin concept of Riscum, have become widely accepted in English language literature.

Economics/Business studies have often referred to this narrative

However, early Italian *risicare* ("to dare", which is closely associated with gambling) is more likely father of European risk conceptions

Eurocentrism simplifies history

Alternative narratives of risk histories could easily be located in different cultural spheres, with direct links to modern societies and the emergence of ever-deeper awareness of relationships between decision-making and risks in such fields as environment, science and technology.

East Asia & "reflexivity"

East Asian societies provide good examples of surprisingly early cases, where people have demonstrated rather "modern" forms of reflexivity in their relationship with environmental management, to the degree that there may be good reason to re-examine whether modern reflexivity and awareness of risk is as "Western" a phenomenon as many researchers seem to believe and whether the whole idea of "modernity" could also be problematic in the case of many non-Western societies.

East Asian history of water management

East Asian history contains good examples of well-developed awareness of complex relationships that characterise water management. Without such awareness the scale and sophistication of water management practices in East Asian societies would be difficult to explain. However, using the theoretical tools of the social risk discourse provides an opportunity to analyse the significance of water management and environmental awareness in East Asian societies, as well as identify problem areas in modern environmental practices in East Asia.

Onsen (bath) scene, detail from ukiyo-e by Hiroshige III (1882)

Water seen as a purifying element in rituals,
Kiyomizudera, Kyôto

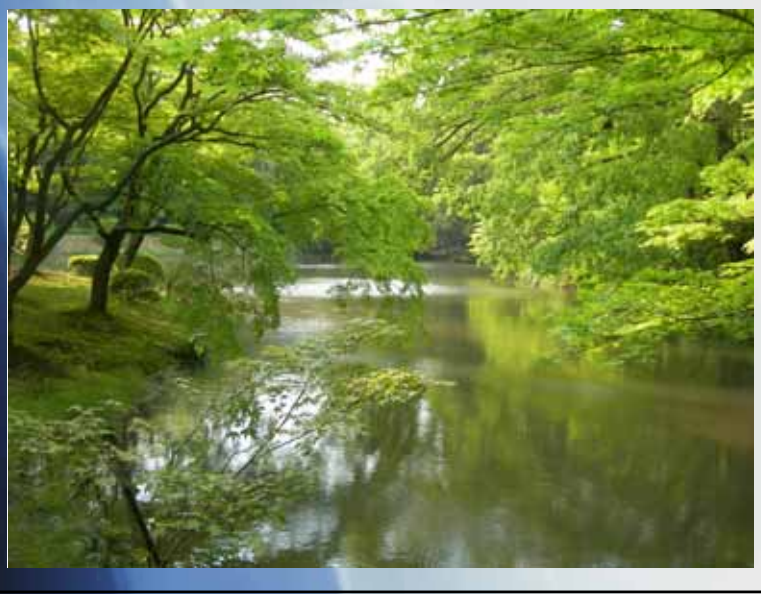
Takase River, artificial canal made in 1611 to transport goods from Kyôto to Ôsaka, in use until Meiji Period

Rice field, could be part of both rural and urban landscapes
Kurashiki City, Okayama

water as part of city planning & aesthetic element;
Bitchû Takahashi, Okayama-ken

water & gardening; water as an artistic element;
Kyôto Botanical Garden

water & gardening; water as part of "ideal" natural landscape;
Kyôto Botanical Garden



water & city/village biodiversity,
Satoyama (co-existence with nature, liminal spaces)

water works as part of city landscape;
concrete & stone, combining the objectives of flood prevention & public works (employment)

Japan: early models of rational water management

The population density of Japan reached high levels early, and people had to pay attention to hygiene in a country where climatic conditions could easily pollute the water. One practical way to ensure the safety of drinking water has been drinking water in the form of tea. Water has also contributed to public health in Japan by being used for bathing. In addition, the bodily wastes of people and animals had been taken into good use for centuries as fertiliser and therefore they did not contaminate water resources. The water distribution and sanitation systems of such major Japanese cities as Edo and Kyôto during the Edo period had no parallel in the rest of the world.

Legacy of historical models

Japan was able to design effective large-scale systems that effectively minimised health risks, contributed to public health and avoided wasting and polluting environment and scarce natural resources. The key policy element was an optimal use of water and other natural resources in the long run rather than maximum use in the short run. One of the most important lesson from Edo history is that social infrastructure can serve people well and minimise a whole range of risks. However, neglect in investment in the social infrastructure has resulted also in Japan in imbalances, distortions and anomalies.

managing water pollution

industrial water pollution from Meiji Period

-effective response only from the 1970s

-From the point of view of risk society discourse, the effective response of Japanese government to deal with the issue of water pollution tells about the benefits of having an effective central government working in close cooperation with industry, with easy access to most modern science and technology.

Water & air pollution: the success stories of Japanese environmental policy

Explaining Japanese model

The Japanese government is not keen to protect environment for biocentric reasons and that also among the Japanese public the support for non-anthropocentric environmental protection is limited. Despite all of this, especially in the area of water management Japanese record is in its own class in East Asia and may serve as the best available model for many other Asian countries.

Motives: public health, technological solutions work (collusion of interests among business/politicians), topography helps

East Asian comparisons

A big difference between China and both Japan and Korea is that more elaborate irrigation systems for large-scale low land paddy fields were developed much later, from around 1500 CE onward. The topographical features and absence of gigantic rivers encouraged more diverse agricultural methods. Japan was the pioneer of urban water systems, whereas China's record in large-scale irrigation systems is unbeatable. The scale for water system construction was smaller in Japan and Korea, so were the fatalities in the case of levee breaks.

Learning the risks

East Asian societies all living with large-scale water systems and regularly experiencing typhoons, earthquakes and floods have surely developed understanding of risks of water engineering and lack of it.

Conclusions

The narratives of water history in Japan, as well as China and Korea, contain elements demonstrating that different forms of reflexivity and awareness of complex relationships between water system management and social/environmental risk were present very early in these societies.

why to study Japan & water management

Japan, China and Korea are suitable for studying this kind of risk awareness for the following reasons:

1) good availability of historical sources, 2) long history of large-scale water works, including both urban and rural works of water engineering, 3) the fact that all these societies have modernised with different social models and in different times and, 4) that all these societies are non-European and as such are suitable for testing whether the reflexive modernisation is as Western a phenomenon as the social risk discourse has claimed.

Patterns?

My examples here deal with water management, but I am confident that there would be other social and environmental issues where similar results could be obtained. My research also shows that there are major differences in the history of water management, even within East Asia, and that also present challenges and policies are very different, reflecting differences in popular attitudes and political/administrative systems.