

How are perceptions of environment and climate change linked to social and cultural conceptions?

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Although Western society tends to assume that the 'environment' is separate from the 'enviromed', many cultures like those inhabiting Papua New Guinea negate such a division, in turn causing different approaches to handling climate change and demonstrating how differing social conceptions influence our outlooks of the environment. The prevailing view of nature in the westernized world is a dichotomous relationship, in which humans construct and manipulate the environment through science and industry. Margaret Mead's ethnographies and work with the Green Movement in the 1970s promoted the atmosphere as a 'shared culture'. Her work greatly influenced Western notions of the environment as a transcendent and provisional milieu affected by human actions, thus supporting the imperativeness of a rapid solution to climate change through the organization of international systems, which in turn promoted western ideas of education and communication. Conversely, many societies in Papua New Guinea, such as the Huli people described in Chris Ballard's ethnographic studies, understand climate change in relation to discrepancies in the balance and interplay of nature and culture because their survival is based on the mutual upkeep between all entities through moral behavior. Accordingly, the Huli see the solution to the degradation of their environment through ritualized actions upholding moral standards of society, as nature appropriately reacts with blessings.

This essay will look at the comparison of the Western and Papua New Guinean outlooks of climate change through the research of Tony Crook and Stuart Kirsch, analyzing the implications of their convergent cultural perceptions of nature through the Ok Tedi Mine environmental disaster in Papua New Guinea. Conclusively, this essay will link peoples' social conceptions of the environment to their interpretations of climate change by reflecting the different approaches that societies take in an attempt to explain and solve universal ecological crises within their accepted cultural beliefs.

The awareness of human capacity to destroy all life through the impact of nuclear weapons drastically altered Western cultural conceptions of the planet, constructing a more finite view of our environment. This also impelled the need for innovative institutions and new forms of human culture that globally promoted the survival of our environment, and thus our existence. Margaret Mead was the first anthropologist who defined climate change as a common goal for human kind, a global identity, and a shared universal future that in turn promoted international connectedness. Mead's claim for a social transformation in which we build interdependent institutions on the shared goal of a future is based on the depletion of the atmosphere as a global common danger, "At present we have a climate option that recognizes that we're all one species, that the world is highly interdependent, and that the air is endangered" (Mead, 1975, 45). The threatening imminence of nuclear disaster not only caused knowledge of our capacity to instantaneously destroy our environment, but also human ability to prevent climate change crisis through our behavior. This in turn necessitated rapid and widespread action as an immediate solution to climate change (Mead, 1965, 138).

Mead publicized the urgency of international cooperation through her speech on the first Earth Day, April 22nd 1970, "Earth Day is the most holy day that transcends borders... spans mountains and oceans and time belts, and yet brings people all over the world into one resonating accord...". Moreover, the Western conception of human dominance, power, and influence is reflected in Mead's ideas in the ways that we are not only capable of destroying Earth, but can also save it through technical ingenuity, "We have to set up a system that is sufficiently complex to continue to monitor the whole. We have to use our scientific knowledge to correct the dangers that come from science and technology". This affirms the belief that our scientific evidence of carbon emissions negative effects makes our behavioral solutions to combat global warming the most efficient and effective method, and in turn should be implemented worldwide. Although Mead's work on climate change demonstrates universality by making cultural

specificity redundant in regards to environmental responsibility, it also negates recognition that other societies will view climate change differently due to contrary cultural conceptions of the environment, and in turn propose different solutions.

The western solution to combat climate change is based on the fundamental influences of science in understanding our environment as a separate entity understood through chemical and biological fact. Accordingly, the international society currently accepts the scientific definition of climate change as, “The climate system evolves in time under the influence of its own internal dynamics and due to changes in external factors that affect climate...natural phenomena such as volcanic eruptions, as well as human-induced changes in atmospheric composition” (IPCC, 2007, 96). Mead however had a distinctive outlook of the atmosphere, not as a complex and dynamic chemical system, but as a cultural idea that provides humankind with a desperately needed evolutionary improvement in order to avoid self-destruction. Mead saw one solution to the effects of climate change as impartial and universal education on pro-environmental interactions, “It must be such that everyone, everywhere can start afresh, as a young child does, with a mind ready to meet ideas uncompromised by partial learning. It must be cast in a form that does not depend on years of previous learning” (Mead, 1965, 141). With a newer and shared corpus of knowledge through greater international communication and education styles where all generations are concerned, accountability will be proliferated and corrective measures constantly implemented. Through the specific use of models demonstrating how life on earth can be affected by climate change, people can grasp how to anticipate the future environmental crises with an understanding from their past, and consequently, “In this way, plans for population control, flood control, control of man’s inroads on nature, plans for protecting human health and for developing a world food supply, and plans in which citizens participate in informed decisions” (Mead, 1965, 145). It has always been historically evident in the westernized world to rapidly remake society that creates a more educated and scientifically informed population as a common solution to societal issues.

By contrast, Chris Ballard's studies of the Huli society in Papua New Guinea demonstrate a more transposing and interactive relation with the environment based on their belief that spirits influence climate change. As a result, in times of entropic degradation of landscape the Huli will conduct ritual attempts to induce rapid and intense climate change. This time is referred to as *mbingi*, or "time of darkness", symbolizing an organized account of dealing with rapid environmental affects, such as volcanic eruptions, as people move to high ground, provision stockpiles, separate men and women, and retrieve ancestral skulls (Ballard, 1998). Their social conception of climatic events, *mbingis*, resultantly stimulate a time of great plenty and is scientifically verified by the volcanic eruption off the northern coast of Papua New Guinea in the 17th century. Despite the scientific evidence of this climatic occurrence causing positive environmental effects, the Huli people induce climate change because of their cosmological view of nature as regenerative through mutual relations:

"Accordingly, past floods, earthquakes, mudflows and eclipses are all described as *mbingi* events, cosmographic convulsions that transform the ground for human agency, eradicating the irredeemable and reconstituting the circulation of fertile substance. *Mbingi* events mark the meter of rhythm of Huli temporality and, as chronological markers of decline in the state of the land and of the behavior of men and women, serve to morally invigorate the trajectory of Huli historicity" (Ballard 1998, 73).

Thus, the Huli conceptualize the entropic decline or fertility as caused by imperfect rituals and decline in moral standards due to their belief in the constant renewal of landscape and regeneration of humans for joint survival. Consequently, the Huli understand climate change to be manifested in the diminishing fertility of the land and also with the human *mana*, as both are in continuous threat of decline, "The depletion of *mana*, which is held to account for the imperfect performance of ritual and for the

continual decline in moral standards, is critical to understanding the way in which fertility is morally constituted and hence negotiable in practice for the Huli” (Ballard, 1998, 74). This society is similar to Western conceptions of the environment in that humans have the ability to control climate change through their actions, however the Huli develop this understanding through a cosmological belief that the environment is in constant need of renewal through human ritualized acts, rather than greener technology proven by science.

The Ok Tedi environmental disaster represented a new agent participating in existing social, economic and cosmological relations as the creation of this mine was seen to have interrupted the flows of spiritual beings. The Ok Tedi copper and gold mine in Papua New Guinea discharged over 1 billion tons of tailings and waste rock since production began in 1984, causing profound changes to the river and ecological systems that will take several hundred years to recover (Crook, 2007). Consequently, environmental changes were being reported without scientific evidence presenting poor crops, bad tasting water, sparse river life, dried out foliage, clogged water ways, and more alterations to the appearance of land, definitively representing an awareness of climate change (Crook, 2007, 221). The people in the Bolivip area who were affected by the Ok Tedi Mine did not view climate change as something induced solely by this industrialization, but rather by the turmoil in cosmological relations, “These ill-effects are contended to be traveling through the same spiritual tunnel that the ancestral blessing used to pass through in times when the relations with the ancestral spirit were better” (Crook, 2007, 226). The Bolivip conceptualize the land as a moral and malleable agent, determining the ecological livelihood of the landscape dependent upon the interactions between spirits and people. For example, the Yonggom view the Ok Tedi Mine as irrational and dangerous like a sorcerer, describing enigmatic events such as climate change to be caused by the mine operations, “They view the mining company as a corporate individual and accuse it of acting irresponsibly like a sorcerer... interpreting illness, injury, and accidents that previously would have been attributed to sorcery in

terms of the mine's destructive impact" (Kirsch, 2006, 108). For example, an infected finger is caused by exposure to chemicals, a broken leg from being stuck in the mud, or an over-turned canoe from the fast flowing channel due to sediment volume, which all correlate with the Ok Tedi mine (Kirsch, 2006). We see the relationship between converging environmental conceptions in explaining climate change through the ways in which the West Ningerum Pressure Association, WNPA, sought compensation due to the shrinking people, itchy water, ecological collapse, and depleting resources. Their petition was fundamentally based on Western science and terminology, excluding their own cultural perceptions of the environment on spirits and the landscape because, "They hoped, by speaking the language of natural science, that their complaints would be readily understood" (Crook, 2007, 223). Thus, diverse cultural perceptions of the environment compel distinctive solutions to the issue of climate change, however their ideas can be suppressed just like any other cultural beliefs.

In conclusion, in addressing solutions to climate change throughout the world, one must look at the wider cultural frame and analyze the multiplicity of perceptions that societies maintain in relation to their environment. Social and cultural conceptions of western society in turn analyze climate change as caused by human's physical actions based on scientific evidence. The Huli society further demonstrates how cultural ideas are borrowed from nature through their social system, which is based on environmental maintenance through rituals. Difficulty in determining solutions to climate changes is exemplified through the Ok Tedi Mine where the Yonggom and the Westernized Australian government came to understand this rapid, industrial-caused climate change based on their convergent cultural conceptions of the environment. The ways in which diverse societies are going to address climate change is fundamentally based on the product of particular conceptions of the environment, nature, and human nature, as not all cultures have equivalent ideas or concerns.

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