Climate Change Research: Evaluation and Policy Implications
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Climate Change, Living Environment and Ways of Life

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Abstract
Our empirical material based on interviews with influental actors in environmental policy in Finland suggested that possible future climatic changes illustrates the greatest single environmental threat on a global scale. The influential actors did not hesitate to consider as an issue of high certainty a kind of man-induced climate change. In mapping out social resources among actors to tackle climatic risks we have utilizised a teleological reasoning of rational action as an ideal model.

1. Introduction

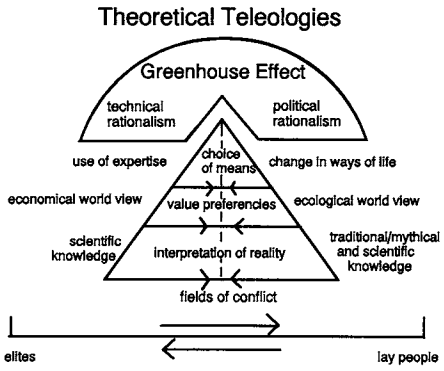
From the point of view of global social and political regulation, the most complex and challenging issue in present-day ecological policies can be seen the question of climate change. Furthermore, within scientific world, there is a widening consensus about necessity to carry out social science research to contribute, on the side of natural and technical sciences, our knowledge about global environmental issues like climatic changes (see Morrisette & Plantinga 1991, Buttel & Taylor 1992,). In this presentation we will draw attention to the issue of climate change as a special case of social and environmental conflict in late modernity.

In our complex societies, experts seem to gain ever more influence over issues like social regulation as the problems themselves grow more compicated (Fores et al. 1991, pp. 83-84, Parsons 1958, 34). In the field of environmental protection, the task to create rational modes of thinking and political action strategies is easily left to few highranking experts (Sundqvist 1992). The present part of our research focuses on socially influential groups that have a significantly important status in determining the interests, knowledge and morality in the definition of problems in environmental policies. Our empirical research sample includes various environmentally influential experts found in major industrial companies in Finland, politicians active in environment policy, experts in public administration and in the field of science, and journalists interested in environmental issues. We have also interviewed some eminent civil activists.

The empirical material consists of sociological theme interviews. Rather than outlining different viewpoints of interest, our research focuses on the idea and knowledge resources

that project different ways of thinking. The following figure illustrates the various social dimensions and structures embedded in the handling of the issue:

The social resources of climate change politics



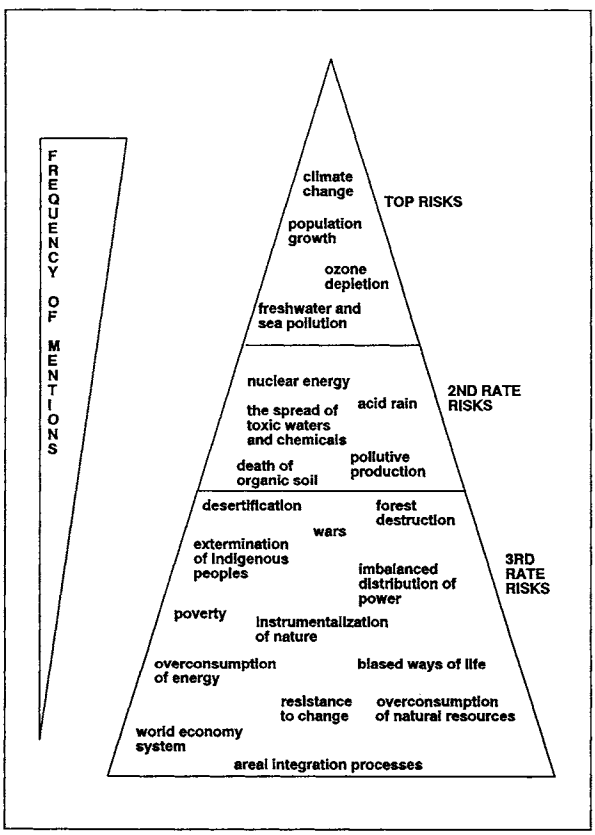
There are three basic cognitive layers to be defined: The first layer consists epistemological question which goes whether the climate change is a real phenomenon or not. The experts we interviewed were very affirmative on this issue as we shall see later. The second layer deals with societal objectives. What should form the policy basis? Is the goal set in prevent dooming climatic changes or should we orientate rather to adjust to changes and mitigate the effects where possible. Here we found out two clearly differing emphasis on issue: the one which pointed towards reorientating the present public policy and the other which questioned the whole structure of that policy. The third layer points to the measures implemented to fulfill the objectives. Here we could also identify even more radically diverging concepts of action: the predominating discourse which adhere to technical rationality and the counter discourse which points our consumeristic life-styles. Before going more into substantial implications of this model we like to explore the social risk profile of climate change.

2. Climate change as a future risk

Over the past twenty years, there has been a lot of discussion concerning man-made reinforcement of the natural greenhouse effect. Statistics show that since the 1950's, the atmospheric concentration of carbon dioxide (CO_2), the main proponent of the greenhouse effect, has risen sharply (Kanninen 1992, p. 33). Furthermore, at global level, statistics demonstrate some increase of tropospheric average temperature. Yet, due to the lack of sufficient long-term and homogenous observational data, scientists have been unable to pick up the "signal" of greenhouse warming from the amplitude of "natural climate variability". This all means that, according to the distinguished Intergovernmental Panel of Climate Change, it may take at least another decade to detect the intensified greenhouse effect from the observational data (IPCC 1990; Stehr & von Stroh 1993)

However, our empirical material based on interviews with influental actors in environmental policy in Finland suggested that climate change based on acceleration of the greenhouse effect illustrates the greatest single environmental threat on a global scale. On the basis of our sample, we were able to form a three-level risk pyramid which illustrates schematically the order of global environmental risks as reflected by actors.

Environmental risk pyramid in global perspective



3.Teleological structures in the reasoning of influential actors

As we have pointed out earlier, in mapping out social resources among actors to tackle climatic risks we have utilizised a teleological reasoning of rational action as an ideal model. In sociological terms, the interpretation of reality and the suggested goals for societal development, together with appropriate means, form the agenda for social action strategies as in the case of the climate change. As far as climate change problematique is considered, following predominant structures of rationality among experts were detected in our study:

Teleological rationality of predominant discourse as expressed by actors:

Interpretation of Reality	Objectives	Measures
Climate change is a fact Environmental policy should be based on this Scientific evidence inadequate	Adjust to changes Prevent harmful effects through effective policy	Save energy Promote low CO_2 energy production (nuclear power, new technology)

Counter discourse: Opposed to above rationality. Replacement proposal:

Interpretation of Reality	Objective	Measures
Climate change is a fact but no reason to ignore other environmental problems	Prevent changes through complete reform of policy principles	Abandon consumption-centered lifestyle Application of new and renewable energy sources

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