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## Short communication

# Climate change, values, and the cultural cognition thesis



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#### ABSTRACT

Recently the importance of addressing values in discussions of risk perception and adaptation to climate change has become manifest. Values-based approaches to climate change adaptation and the cultural cognition thesis both illustrate this trend. We argue that in the wake of this development it is necessary to take the dynamic relationship between values and beliefs seriously, to acknowledge the possibility of bi-directional relationships between values and beliefs, and to address the variety of values involved (e.g. personal, epistemic and cultural values). The dynamic relationship between values and beliefs, we claim, highlights the need to bring ethical considerations to bear on climate change communication. In particular, we must ask whether it is acceptable to tailor information about the risks of climate change in an effort to maximize communicative effectiveness given the values of the target group.

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The need to talk explicitly about values in any serious study of risk perception and human adaptation to climate change has come into focus of late. This is most welcome, but we believe that two prominent recent contributions to the discussion underappreciate the significance of the dynamic relationship between values and climate change adaptation (Kahan et al., 2012; Adger et al., 2013). The novelty of these contributions lies in the clarity with which they insist that cultural perspectives affect the uptake of scientific evidence on climate change. But although this is important, it does not go far enough, and it is vital that we do not neglect other aspects of the complex belief-value dynamic involved. In this dynamic values other than cultural ones exert influence. The processes at play are

also very probably bi-directional, with new evidence affecting valuations. This raises an ethical question about climate science communications: Should these be limited by the fear of threatening the values of one or another group if we know that values are both diverse and shaped to an extent by scientific information?

# 1. Value-based approaches to climate change adaptation

The "values-based" approach (O'Brien and Wolf, 2010) notes that the values we bring to climate change vary across

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societies and cultures, and infers that the variation is vital to proper explanation of the human response to environmental risk.<sup>1</sup> Adger et al. (2013, 113) agree:

Cultural perspectives help to explain differences in responses across populations to the same environmental risks. Recent research shows that information about climate change does not connect with all cultures and worldviews in the same way. Douglas and Wildavsky argue that societies with shared values and beliefs produce their own selective view of the natural environment, which influences how they interpret and respond to risk.

This sounds sensible – unexceptional, even. In fact, however, the notion that populations respond differently to the same risks is highly problematic. "Same" in what sense? The same probabilities? "Probabilities" in what sense? Personal subjective probabilities? Frequencies? Objective (physical) probabilities? And who says that the outcome is undesired? Whose values must be respected?

Sensitivity to cultural perspectives enables us to identify the events and activities that populations perceive as risky (always remembering that risk is a function of uncertainty and values). Culturally sensitive risk analysis has been particularly important as antidote to the economist's sometimes exclusive focus on economic and material values. In the present context it delivers "a deeper understanding of what climate change means for society" (O'Brien and Wolf, 2010, 239). Climate change means different things to different individuals and groups already simply because we value things differently. The Norwegian notion of *friluftsliv* (i.e. open-air living), for instance, is arguably a distinctive value that has to be acknowledged if we are to understand attitudes to climate change in Norway (O'Brien, 2009, 172).

Important as this insight is – and for practical purposes it is often crucial – expressed in the way it is above it is old news, theoretically speaking. Belief and preference, or valuation, are the key inputs in the received model of both decision-making and risk-analysis. Preferences and valuations are similar in kind to the "broader and subjective interpretation of values" these authors advocate.<sup>2</sup> No one should be surprised that such values are important in risk and adaptation. The fact that it is old news from a theoretical standpoint does not, in itself, render the insight unimportant. Climate policy will be at least as important as climate science in any effort to secure the future of our planet.

What would be surprising from the decision-making perspective is a value-based approach recognizing only societal or cultural values. It seems to be a mistake to argue that it is only values of these kinds (in the absence of personal preferences and desires) that have a role to play in explaining how humans respond to climate change risks, and we would like to point out that Adger and colleagues do not claim this (for instance, Adger et al. (2013, 112) say that "material aspects" of climate change are conventionally included in policy analysis).

To hold otherwise would be to follow those social scientists (e.g. Bradbury, 1989) who have assumed that risk is either a physical attribute (Starr, 1969) or socially/culturally constructed (Wynne, 1980; Douglas and Wildavsky, 1983). We observe that risk can also be conceived as *subjective* – determined by beliefs and desires (Ramsey, 1990; Savage, 1954), *perceived* – fixed by contextual and personal factors (Slovic, 1999), *felt* – when it is conceived as risk-as-feelings (Loewenstein et al., 2001), or *epistemic* – governed by what we think we know when we are acting (Gärdenfors and Sahlin, 1983; Sahlin and Persson, 1994). We will not go into details here, but see for example Blennow et al. (2014) for a detailed exposition and critique of the minimalist perspectives in which risk is regarded as either physical or social (see also Slovic (1998) for a related position).

A preoccupation with society or culture in the analysis of values, risk and adaptation appears, therefore, to be an artefact of the researcher's own interest, not an accurate delineation of the kinds of value that can exert influence on a decision-maker. Any value-based perspective needs to acknowledge value *plurality*. How these plural values relate is of course an intricate question. We simply note that to answer this question we need a framework broader than a merely cultural one.

### 2. Cultural perspectives and evidenceformation

There is a more interesting reading of Adger et al. (2013). To begin with they talk about cultural perspectives. Such perspectives include cultural values, but also what we call cultural beliefs. This inclusion should be straightforward in the context at hand; culture is defined by Adger et al. (2013, 112) as the symbols that create meaning, including beliefs, rituals, art and stories that create collective outlooks and behaviours. Crudely speaking, this opens up two ways in which cultural perspectives can influence risk perception and decision-making: via values or via beliefs. The authors also state, however, that cultural perspectives may "connect" with scientific information and knowledge in different ways. This may refer to the straightforward connection we mentioned above, with information deriving from one source and values from another. But the connection might be more complex, as one source may influence the other. Hence we interpret the two ideas here to be:

- Cultural perspectives consist of beliefs and values that affect environmental decision-making.
- (2) Cultural perspectives influence the uptake of (scientific) evidence.

So far we have talked about (1). We have argued that (1) needs to be expanded since things other than cultural

<sup>&</sup>lt;sup>1</sup> The conception of values assumed here does not entail that values can be expressed as monetary worth. Instead, values relate "to principles or qualities that are intrinsically desirable." (O'Brien and Wolf, 2010, 232). O'Brien and Wolf refer to this conception as a "broader and subjective interpretation of values" (ibid.). In general we agree with this interpretation, but we prefer to refer to these broader and subjective "values" as preferences or valuations.

<sup>&</sup>lt;sup>2</sup> Belief, conceived in this way, concerns the probability dimension of the decision or the risk-analysis, and preference or valuation belongs to the evaluative dimension.

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