

Chapter 25

The Perspectives Method: towards socially robust river management

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Abstract

People have different ideas about the best ways to manage water. These differences are usually not rooted in a lack of knowledge, but in having different perspectives, which tend to be implicit and difficult to unravel or directly reflect upon. In this chapter I present the so-called Perspectives Method – based on Cultural Theory – that allows changing and non-stereotypical perspectives on water to be operationalised, assessed, and monitored. After an introduction and brief explanation of the method, I show that the method may be used for different purposes; to stimulate dialogue, to analyse the past in order to learn more about perspective change and its effects on support for measures, and to explore present and future support for policies.

25.1 Introduction

The Dutch are well-known for their struggle against the water, especially after their country was struck by a disastrous flood in 1953, inundating 165,000 hectares of land and resulting in 1830 fatalities. Moreover, 100,000 people lost their homes and the economic damage to buildings, livestock, and infrastructure was huge. The large-scale innovative Delta-works were implemented in response to this disaster and helped the Dutch defeat their enemy, the water. In recent decades, however, there has been increased attention for more natural ways to control river discharges by intentionally providing more space for environmental processes and water. In less than five decades, the relation between the Dutch and the water shifted from fighting an enemy towards living with a friend. This paradigm shift has resulted in decreased support for traditional, control-focused measures like dike reinforcements and an increasing demand for nature-oriented measures like the “Room for the River” programme and the restoration of natural river banks and the winter bed.

The current Dutch river management approach can best be described as a mosaic: dikes covered with grass or asphalt, of different heights and widths, alternate with “room for the river” areas, dike rings, dredging activities, side-channels and retention areas. It is hard to judge which of these measures performs best given the present and future challenges in terms of climate, society, and the economy. It is particularly hard when people hold fundamentally different opinions on the threat of climate change, on the best way to deal with water and on the most desirable effects and priorities of river management strategies. The traditional approach to such controversies is to say that we need more scientific facts and knowledge to solve them. However, most controversies are not grounded in any lack of knowledge, but rooted in different values and interests (Sarewitz, 2004). The challenge is thus to identify a sustainable river management strategy that is acceptable to people with different opinions and able to cope with uncertainties in our physical environment (like climate change). This is what we call a socially robust river management strategy. A strategy that lacks social robustness may – under specific future conditions – lose societal support, possibly leading to untenable positions and forcing policy makers to take expensive adaptive measures or cancel plans.

25.2 The relevance of societal support

The early 20th century can be characterised by great faith in the human capacity to control water and nature. Normalisation of the Dutch rivers to facilitate year-round navigation, and extensively controlling the river by dike rings and dikes were the dominant *approaches*. As of the 1960s, however, a trend emerged towards less faith in progress, growth, and the potential to manipulate nature. This trend was caused by a

combination of calamities, alarming publications, and a context of emerging environmentalism. The shift in perspective led to increased resistance to the paradigm of economic growth and control of nature and water. As a consequence, support for dike-related measures decreased and a stronger demand for environmentally friendly measures arose. Protests made continuation of traditional control measures impossible and a new policy paradigm was born: combining flood protection with habitat development while simultaneously improving conditions for agriculture and preserving historical values. The restoration of side-channels and floodplains became an important pillar of this new policy paradigm. What we learn from this is that perspectives and perspective change play an important role in the support for river management measures. Without societal support it may become impossible to implement measures or continue along the chosen policy path. It is thus important to understand perspectives and perspective change.

25.3 The Perspectives Method

Within the project entitled “Perspectives in Integrated River Management in River Deltas”, funded by Deltares and ICIS, we developed a method to make perspectives on water explicit and measurable in order to examine perspective change and socially robust river management. This method applies Cultural Theory perspectives (Douglas, 1970; Thompson et al., 1990) to water management (see Hoekstra, 1998; Middelkoop et al., 2004 for more information) and distinguishes four archetypical perspectives: Hierarchism, Egalitarianism, Individualism, and Fatalism. A perspective can be defined as a perceptual screen through which people interpret the world and which guides their actions (van Asselt, 2000).

- Hierarchists believe in controlling water and nature, and in government responsibilities, research, and expert knowledge. Water is mainly seen as a threat to human safety, and a sustainable water system thus highlights safety and flood prevention. As a consequence, preferred water policy options are “dike building”, “raising or widening dikes”, and “channelling” (Offermans et al., 2011).
- Egalitarians prioritize ecological restoration and nature development. More space should be given to nature and water. They prefer participatory decision-making processes giving everyone an equal voice. The water requirements of animals and plants should also be seriously considered, particularly in periods and areas with water shortages. As a consequence, they prefer “Room for the river”, restricting human demands, relocation to higher areas and a precautionary approach. A sustainable water system focuses on high sustainability with space for natural processes and reconsideration of human demands (Offermans et al., 2011).
- Individualists adhere to a more opportunistic point of view. They believe water offers great opportunities in terms of economy, creativity, self-development, and

recreation. They prefer an adaptational approach, and put great trust in technology and the market. In correspondence with their beliefs, their preferred water management policies focus on innovative projects, such as “amphibian housing”, “living on water” and “building offshore islands”. In their view, a sustainable water system is based on weak sustainability (Williams and Millington, 2004) with a focus on economic opportunities and innovative, technological solutions to unsustainable situations (Offermans et al., 2011).

- The Fatalist is not concerned about the future and sees life as a lottery. Everything is predetermined by destiny, which cannot be influenced by policy or individual actions. One has to enjoy every day and make the most of the present. Short-term pleasure and enjoyment are very important and adjusting one’s behaviour to prevent future problems is useless. Developments like climate change or technological innovation are inherently uncertain; information about the past says nothing about the future. Developments may follow trend A today, while tomorrow it may be B or C. As a consequence, they adopt a passive management strategy of doing nothing (Offermans, 2012).

These archetypical perspectives can be operationalised in a so-called perspectives map (see Table 25.1), allowing real-life perspectives to be “measured” as mixtures of archetypes and visualised in a perspectives triangle (see Figure 25.1 and 25.2 in Sections 25.5 and 25.6).

Table 25.1 The perspectives map: for each issue (left column), the beliefs are given according to the four archetypical perspectives (second–fifth columns). To assess a person’s perspective, this person has to endorse the beliefs he or she agrees with. As real-life perspectives tend to consist of a mix of archetypical perspectives, zero, one, two, three or even four beliefs can be endorsed for each issue. Each endorsed belief results in a score of one. All endorsed beliefs together form a real-life perspective and yield a score for each archetypical perspective (vertical sum with every marked cell representing a score of one). We normalise this score to four and calculate x-, y-, and z-values that can be plotted in a standardised tetrahedron to indicate the position of a real-life perspective with respect to the four archetypes. In this chapter, we use the Perspectives Triangle, which excludes the Fatalist, as the tetrahedron is difficult to visualize on paper. For more information see Offermans (2012).

	Hierarchism	Egalitarianism	Individualism	Fatalism
Value of water	Discharge of water, ice, sedimentation	A source of peace and quiet, space, nature	A source of material prosperity & self-development	Making my life more comfortable
Nature of problems	Serious, but manageable	Serious and hardly manageable	Something we do not need to worry about	Useless to think about or prevent
Climate change	Average trends	Extreme trends	Minimal trends	Not identifiable
Trust in technology	Moderate	Low	Large	Unproven
Important values	Structure and stability	Harmony and solidarity	Freedom and independence	Comfort & pleasure

	Hierarchism	Egalitarianism	Individualism	Fatalism
Water function priority	Preservation of current functions	Ecological recovery, compensation, habitat development	Economic functions, self-development, and innovation	Comfort, providing me with enough water
Safety	Flood prevention and control of discharge	Avoidance of flood-prone areas and acceptance of water	Adaptation to water by utilising opportunities & innovation	Interference is useless
Response to drought	Following guidelines and laws	Fair distribution between nature & human consumption	Market forces; rising prices in times of scarcity	No need to think about it. It will be alright
Water supply	Demand driven	Supply driven	Market driven	No different from now
Water system organisation	Control and regulation	Natural development and resilience	Opportunism and innovative technologies	Passivity, human interference is useless
Principle of spatial planning	Water follows functions, preservation of existing space	Water steers; functions follow water. Give up space if necessary	Water offers opportunities; functions utilise water. Creation of space on and around the water	Water should be used to enjoy life
Damage due to flooding	Should be prevented and otherwise compensated by government	Is a matter of solidarity; everyone is financially responsible	Is a matter of individual responsibility. Known risk of living in flood prone areas. Insurance	I do not want to look ahead to that
Responsibility	National Government	Regional governments and NGOs, in fact everybody makes their own contribution	Private companies and in risky areas (for example in flood plains) individuals	As I have enough water I can make decisions myself
Decision making based on	Standards from expert knowledge and research	Participatory processes with input from all stakeholders	Effects of the free market and privatisation. Cost-benefit analyses determine best choices	Not applicable: it is a waste of time
Identity; water contributes to	National identity and traditional export products	Catchment identity and solidarity	International identity and innovative image	My own identity and pleasure

The Perspectives Method focuses on making perspectives explicit and measurable, and can be used for several purposes. Here I briefly discuss three of its applications: as a tool to stimulate dialogue on desirable river management options, as a tool to analyse the past to learn about perspective change and societal support, and as a tool to analyse present and future support for water management policies.

25.4 A tool to stimulate dialogue

One application of the perspectives map (which is a fundamental part of the Perspectives Method) is that it makes beliefs underlying preferences or rejections regarding river management strategies explicit. Instead of just stating disagreement about strategies, measures or safety standards, it indicates possible reasons why people disagree. Disagreement may result from different beliefs concerning climate change, the role of water in spatial planning, the best way to achieve safety, parties that should bear responsibility for water safety, and multiple other aspects mentioned in the perspectives map. The map allows perspectives to be compared in terms of the beliefs that underlie agreement or disagreement. It thus functions as a basis for dialogue and offers opportunities for discussion and finding synergies. The archetypical perspectives can also be used to identify the strengths and weaknesses of different strategies according to each perspective. Consideration of the weaknesses identified by some perspectives may contribute to adapting the strategy and making it more robust (see Table 2 and Offermans et al., 2008).

Table 25.2 The Perspectives Method can be used to stimulate dialogue and reflection on a strategy from different perspectives. This allows strengths and weaknesses to be identified. By taking concerns from other perspectives into account, a strategy may become more acceptable and hence robust.

	Hierarchist response	Egalitarian response	Individualist response	Fatalist response
<i>Example of a measure</i>	Safety issues need more attention, notably prevention from drowning (children/ elderly) and accessibility for emergency services in times of high discharges. How to keep the entire infrastructure functioning in times of high discharges?	Appreciate that water is given more space. Fish, amphibians, and other fauna and flora should not be negatively affected. Is the river bank still suitable for breeding (fish and birds), is water pollution controlled?	Amphibian houses offer opportunities for ultimate housing enjoyment. Integration of water into spatial planning in an innovative way	Nice idea, but will only be beneficial for people who can afford to buy such an expensive house. Guarantees should be given that the water remains accessible to all: prevention of private, isolated "river islands".

25.5 A tool to analyse the past

Another application of the Perspectives Method is to use the perspectives map to analyse past changes in river management strategies. An example is the analysis by Offermans and Cörvers (2012), who explained how perspective change contributed to changing societal support for strategies and ultimately to the implementation of different river management strategies, based on a literature study and a workshop with

experts. As of 1900, they distinguished three periods that were unique in the way they deal with river management in the Netherlands (see Figure 25.1 and Offermans & Corvers, 2012). For each period the authors completed a perspectives map and tried to explain why perspectives changed, why they changed in a particular direction and what this perspective change implied for public support for strategies and policy changes. The authors identified catalysts for perspective change, for example media attention, and the occurrence (or absence) of events. They also found aspects that prevented perspective change or its acceleration, such as events that happen soon after the implementation of new strategies. Prevailing undercurrents (significant deviations from the dominant perspective) turned out to be important to explain the direction of change. For more information, see Offermans & Cörvers (2012).

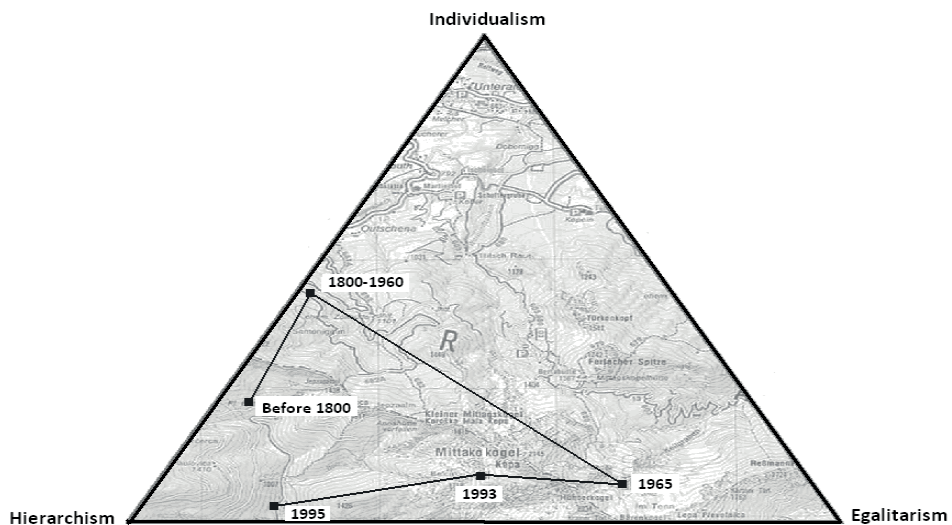


Figure 25.2 Visualisation of perspective change in Dutch water management from 1900 to 1995, based on perspectives maps for each period. The dominant perspective shifted from Hierarchical-Individualistic towards Egalitarianism, and back to Hierarchism again. Simultaneously we have seen the water management policy shifting from control, normalisation and dike reinforcements (1800-1960) towards restoration of floodplains and side-channels (from the 1960s onwards), and back to controlled flooding of the winter bed (after 1993). An important aspect is that perspective change does not evolve abruptly, but gradually.

25.6 A tool to analyse present and future support

The perspectives map can also be used to assess perspectives prevailing in policy documents and – subsequently – to compare these with the present dominant perspective among Dutch water professionals (see Offermans et al., 2013). The idea behind it is simple: if the policy perspective and the professionals’ perspectives are too different, this may lead to problems regarding support from water professionals in the

short term. If the two perspectives are similar, this is expected to be beneficial for short-term support. As they share the underlying beliefs regarding river management, the professionals may conclude that the policy recommendations are indeed the right thing to do. However, perspectives have proved to be dynamic and change over time. Change may lead to a divergence between the professionals' perspective and the perspective inherent in the policies. So even if both perspectives match now, this does not exclude problems regarding support in the future.

Figure 25.2 visualises the perspectives of Dutch water professionals who completed a questionnaire (the small dots with numbers). The black star refers to the dominant perspective in a major policy report (the "The Delta Committee Report", (2008). Here we see that the perspective adopted in a current policy report is more hierarchical than the currently dominant perspective among Dutch water professionals. In view of what was said above, this may lead to problems regarding support in the short term. Taking a closer look and comparing the perspectives maps of the policy report and the dominant professionals' perspective, we see that the disagreement can largely be reduced to different beliefs concerning three issues: response to drought, organisation of water supply, and the relation between water and spatial planning. Discussing these three issues may be a first step towards finding a more widely supported – and hence robust – policy. Of course, as regards *societal* support for the measures in the policy report, the perspectives of the Dutch public should be assessed, but this is something we have not done yet.

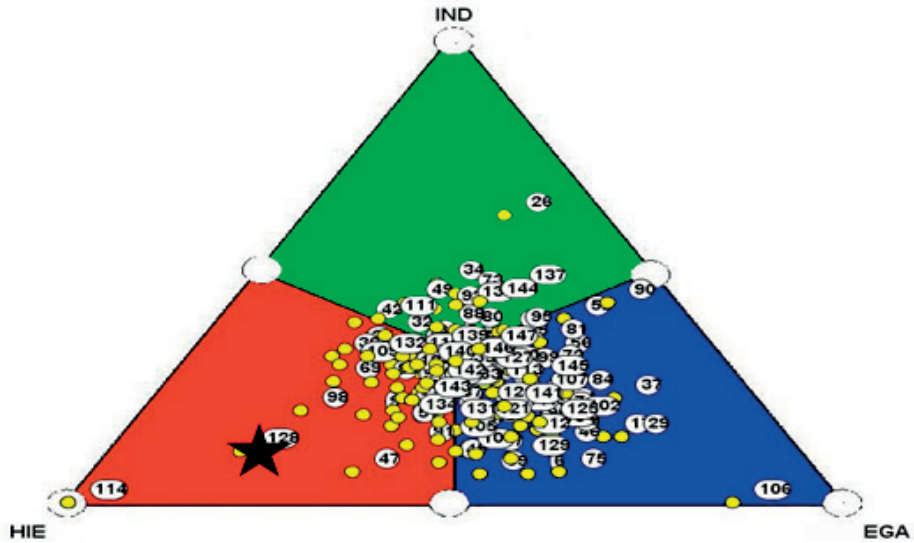


Figure 25.3 Visualisation of the present perspective of Dutch water management professionals (small dots with numbers) and the policy perspective (Delta Committee report, 2008). The current policy perspective is rather Hierarchical, whereas the Dutch water management professionals also show strong Egalitarian and Individualistic characteristics. A look at the perspectives map (which forms the basis for this figure) shows that differences mainly exist regarding the beliefs on drought, water supply and the place of water in spatial planning.

25.7 Conclusion

This chapter has summarised the Perspectives Method and three of its applications. Whereas the possible effects of climate change on water policy targets and objectives have been studied extensively, the consequences of perspective change have remained largely neglected for a long time. However, sustainable, robust river management strategies should not only be able to cope with developments in our physical environment (like climate change and variability), but also with developments in our social environment (perspective change). The Perspectives Method offers a first tool to explore and explain perspective change and its consequence for societal support and socially robust river management strategies. This chapter also illustrates that normativity plays an important role in issues related to sustainable river management. To solve sustainability issues, we not only need to obtain, accumulate, and integrate knowledge, but we also need greater insights into the different, normative interpretations of this knowledge. A dialogue may be a first step towards understanding the different normative interpretations underlying sustainability issues. Here I have presented one option to stimulate such a dialogue with the help of a perspectives map.

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