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Water Justice: A Multilayer Term and Its Role in Cooperation

Abstract: In discussing water justice, this paper distinguishes four concepts of water justice: Distributive justice claims a fair share of water, ecological justice focuses on the integrity of water as a vulnerable resource, cultural justice addresses values attached to water reservoirs, and procedural justice explicates fair procedures in negotiating water conflicts. After having given an overview over recent contributions to the various meanings of water justice, the paper tries to answer the question of how standards of justice can be integrated into an approach that overcomes the alleged tragedies of the commons. It focuses on the example of a water reservoir whose access conditions provoke conflicts among neighbors.

1. Introduction

Imagine the following situation: A village has a lake; this lake is used as a sink for waste. For years, this practice has not been questioned. The inputs were marginal as compared to the vast amount of water in the lake. No-one really took notice of the problems resulting from polluting the lake. But one day the situation begins to cause trouble. The lake starts to stink, it poisons a river. As a consequence, the practices of using the lake as a waste dump are called into question. Moreover, neighbors of the lake start to protest against the current situation and call the political leaders to do something about the situation.

Actually, this is very close to an example that Peter Singer introduced into the debate on climate justice (Singer 2002, 27ff.). Singer compares the atmosphere with a common pool resource. The problem that has been labelled “climate change” results from a situation of over-use of the atmosphere as a waste dump. Whereas Singer compares the atmosphere with a giant sink, I wish to address the lake as a common pool resource. Peter Singer interprets the example as illustrating a problem of environmental justice. For decades, polluters have profited from the atmosphere as a sink; now, we are in a situation in which the consequences of these practices need to be faced. As for his normative approach to climate justice, Singer draws two conclusions: *Firstly*, he defends a polluter-pays principle, claiming that the actors who caused the pollution, now also have to repair the damage, summarizing this very broadly in the phrase: “You broke it, now you fix it.” (Singer 2002, 27) *Secondly*, Singer argues in favor

of an egalitarian approach regarding a distribution of the remaining space in the waste dump. He claims an equal share of each person in profiting from the atmosphere (Singer 2002, 35f.). Both principles have been discussed in various approaches to climate justice (Gardiner/Caney/Jamieson et al. 2010). They are part of a discussion of a variety of principles of environmental justice that relate to common pool resources.

In this contribution, I shall discuss fair access conditions to a lake as a common pool resource that provides life-sustaining services to persons and non-human beings. The heading ‘water justice’ will cover a variety of claims that address normative exigencies in defining access conditions that contribute to an overall fair scenario. Yet, I shall also argue that a normative framework will not in itself resolve another set of problems that have been labelled the ‘tragedy of the commons’ (Hardin 1968; Gardiner 2001). According to this interpretation, the degradation of shared natural resources does not primarily suffer from unfair behavior; instead, it results from uncoordinated behavior—which is a natural fact if resources are not equipped with access barriers that regulate the practices of profiteers. In order to respond to this second challenge, I shall give a sketch of a theory of ‘joint agency’ that integrates claims of justice as part of an ethos of a group of persons who are ready to act together.

The article has four sections. *Section 1* gives outlines four dimensions of environmental justice in the discourse on water ethics. Even though basic rights to a minimum share in water resources and fairness in distribution are important issues, there are further concerns addressed in the framework of justice, in particular cultural values and ecological integrity. I shall distinguish distributive justice, ecological justice, cultural justice, and procedural justice. *Section 2* explains the conflict scenario from a different angle. It argues that one of the key issues in debating fair access to water reservoirs is the alleged ‘tragedies of the commons’. The environmental degradation of a natural common pool resource, including lakes, rivers and seas, cannot be resolved without success in cooperation. I shall explain this claim in order to prepare the discussion in the following section. *Section 3* gives a sketch of a model of cooperation that integrates approaches to water justice. It starts with the observation that recent debate on joint agency in social philosophy provides the tools for addressing the alleged tragedies of collective action anew. In particular, it contributes to providing a sketch of how the diverse claims of a water ethics fit together in an approach to cooperative behavior. *Section 4* highlights some consequences from this approach to water ethics for a reassessment of the concepts and roles of environmental justice.

2. Four Dimensions of Water Justice

Environmental justice is not a monolithic concept (Schlosberg 2007). Instead, it covers a variety of normative claims: fair access conditions to a limited resource, including a fair and impartial share for each person and a prioritization of most urgent claims; environmental protection of a critical resource; fairness in ap-

proaching diverse values related to water, including cultural claims; and a set of procedural principles that guarantee fair procedures in articulating and defending environmental exigencies in a political community. In this section, I shall give a sketch of varieties of justice with regard to water. Even though water is not at the focus of concern in theories of justice so far, some claims of water justice can be extracted from the broader debate on water ethics (Brown/Schmidt 2010).

2.1 Distributive Water Justice

Water is a resource whose distribution in terms of water reservoirs is arbitrary. In many regions of the world, drinking water and safe water are scarce resources. Simultaneously, due to water being a fluid resource, distribution is not an easy task to fulfill. Enclosure of scarce water reservoirs is not a satisfactory solution in normative terms (Bollier 2002), nor is it practicable. Instead, it is necessary to develop distributive schemes that respond to water as a fluid entity and to normative claims of fairness.

One important aspect in addressing distributive justice is care for urgent needs. Basic concepts in negotiating access to waters have been provided by recent assertions of a right to water and to sanitation (Gleick 1998).¹ Even though regimes of basic rights are not themselves distributive schemes, the underlying normative claims result from an approach to distributive justice. Guaranteeing an equal amount and quality of water to each person is based on the claim that each person deserves an equal share in a life-sustaining resource. Presupposing that persons have a right to satisfy exigencies, a right to water needs to be included into a debate on equity in life-supporting goods. Henry Shue (1996) follows this line of thought. He argues that rights are basic when “enjoyment to them is essential to the enjoyment of all other things” (Shue 1996, 19). Following Shue, a right to unpolluted water is a basic human right. Moreover, it includes “justified demands for social guarantees against standard threats” (34).²

Recently, the content of a right to water has been spelt out in detail. Three dimensions are emphasized: water needs to be *accessible*, that is: water resources need to be in reach for all, they need to be affordable to all, and they need to be accessible in law and fact; water needs to be given in *adequate quality*, it must be safe; water must be accessible in a *certain quantity*, granting sufficient and continuous measure for personal and domestic use (Scanlon/Cassar/Nemes 2004, 28). Yet, the declaration of a water right—demanding as its realization might

¹ On 28 July 2010, following an intense negotiation, 122 countries formally acknowledged the “right to water” in the General Assembly (GA) resolution (A/64/292, based on draft resolution A/64/L.63/Rev.1). In September, 2010, the UN Human Rights Council adopted a resolution recognizing that the human right to water and sanitation are a part of the right to an adequate standard of living. Yet, a human-rights approach to water has also been discussed in a critical way. For a critical assessment of environmental rights more generally, see Hiskes 2009.

² This line of thought also provides some justificatory background for soft and hard law sources, which translate a right to water into legal obligations, both on a national level and in international law—whereas customary law plays an important role (Kravchenko/Bonine 2008, 113–146).

be—can only be a starting point for further concepts of distributive justice. If water must *be accessible*, be given in *adequate quality*, and in a *certain quantity*, institutions that care for the distribution of water need to be equipped with principles of justice that guarantee fair access conditions. In order to develop these principles, the first question is: What are the goods that will be distributed? In answering this question, three aspects need to be distinguished. *Firstly*, a lake and water resources are distributed in a literal sense when amounts of water are transported into households or to institutions that profit from water. *Secondly*, by distributing water, the profits from various water-uses are also being distributed. Industries and agriculture need water for their products. *Thirdly*, burdens will also be distributed. This includes burdens that result already from realizing distributive schemes: Institutions that care for distribution need to be upheld. Yet, burdens also include procedures of ecological conservation of water resources that reconstitute the quality of water after using it. It might also include investments in techniques that improve the performances of distributing institutions.

Accordingly, principles of fairness go beyond principles of fair access conditions. In particular, two groups of principles of fairness that have been proposed in the context of climate justice (Leist 2011; Ott 2012) provide a good starting point in the debate on water justice, too. The first one is rather a group of principles that support rules that give priority to some claims due to urgency or further criteria; the second group of principles focuses on responsibility for flawed behavior or from arbitrary distribution of good luck. As for the first group of principles, it might be argued that priority needs to be given to the most vulnerable stakeholders in a shared natural resource, presupposing the resource is life-sustaining. If this imposes costs on other persons, the duty to support the ‘worst off’ comes down to the question of the range of persons who should be asked to care and the limits of what they should be ready to pay for the worst off. As for the second group of principles, the polluter-pays principle has been argued as a principle of responsibility. This implies that institutions who contributed to the destruction of a shared resource need to pay for it. This is particularly plausible if causal chains can easily be reconstructed. Yet, responsibility can also be given to institutions which are in the best situation to contribute to constructive solutions; this principle has been reasoned as a capacity principle.

The examples of distributive principles that have been addressed so far rely on the premises that both the distribution of gains, as well as the distribution of burdens resulting from care for a common pool resource need to be shouldered by persons or institutions who should do so. The principles outline the reasons for the selection of the adequate group of persons or institutions. Different from this, some authors favor a market system, in which costs accrue exclusively to profiteers. Actually, proposals like these result from the insight that water markets are best in distributing water. Instead of wasting water, profiteers start to save water; in particular in a situation of scarcity, prices automatically rise and force persons to handle water with care. Yet, a market system has some shortfalls. In particular, it does not necessarily yield the most effective schemes in access to common pool resources, nor does it necessarily promote justice. In

particular, its focus on pricing mechanisms leaves out too many aspects of a comprehensive water management system, as for instance the need to regulate water shortages actively, to care for ecological standards etc. Doreen Burdack (2011) argues that in the case of Australia, the establishment of a market system of water distribution has failed—the mentioned critical aspects are among the reasons of why the system failed. In addition, that system did not care for ecological integrity of water cycles.

One further aspect of distributive justice shall be mentioned here.³ In regions of the world where institutions that distribute water have not been installed so far, water needs to be transported from the water supply well to the households. In water ethics, feminists have focused on the injustices in the provision of water-services. In particular, feminists recommend adequately accounting for the services of women in water supply (Gaard 2001). These claims for water justice are related to a more general theme in theories of justice. Claims of environmental justice in terms of distributive claims are closely related to fairness regarding vulnerable groups of society. In order to prevent status injuries, unfair power relations that favor access conditions to natural resources of select groups of persons need to be disclosed and corrected (Schlosberg 2007, 136–145).

2.2 Ecological Water Justice

Environmental justice in terms of distributive justice has been opposed to another concept of justice. One of the objections against distributive environmental justice says that an approach to fairness in distribution neglects the conditions of water flows, and more importantly “the need for protecting water cycles in their ecological functions” (Kowarsch 2011, 45). In this contribution, I shall therefore discuss *ecological water justice* as a second aspect of water justice. Different from environmental justice, ecological justice focuses on justice between humans and the rest of the world (Baxter 2005). In the context of water justice, I wish to argue that keeping water reservoirs intact is more than just a prudent approach to profit-seeking behavior. It pays respect to the fact that water is a necessary resource for a variety of living beings. Moreover, it acknowledges the fact that ecological integrity is a prerequisite for a variety of eco-functions.

At its core, ecological justice claims that *ecological integrity* needs to be respected. A water system is intact when it is in a situation to deliver the range of eco-functions that are central for the ecosystem as a whole (De Groot et al. 2002). Moreover, a water cycle that is intact is resilient in that it can cope with incidents of stress without losing its capacity to display the eco-functions in the long term. This quality of a river has been explored by Sadoff and Grey (2002) in terms of a “healthy river” (393–395). Water resources can be described as items

³ Note that the distribution of water assets is of course much more complicated than the example of a lake suggests. Certain sectors of industrial production and agriculture in particular are reliant on water resources; people who live from agriculture and from industrial production need water resources in the indirect way of sources of livelihood. Moreover, even though water is a local resource, water trading and indirect water trading by selling water-intense goods contributes to new patterns of distributing water resources. In this contribution, the example of a lake serves as a starting point for clarifying basic concepts in discussing water justice.

that deliver a range of services. These services are not restricted to services to persons or to civilization. Instead, eco-functions include services to eco-systems, services to the climate, and services to animals and plants. Man-made influences contribute to changing the patterns of eco-functions as well as narrowing down the range of eco-functions. This is not in itself bad or regrettable; instead, water systems have been reshaped since civilizations worked with water. But due to a diversification of engineering technical options in shaping water cycles, the effects might be more intense than in former times. Ecological justice says that the consequences of civilization and of industrial and societal use of water need also be assessed in terms of a loss of eco-functions and in terms of possible disturbances of patterns of eco-functions.

In the context of ecological water justice, the concept of integrity serves as a criterion for defining limits beyond which the water resource is no longer intact in an ecological perspective. Simultaneously, it denominates a good situation of the natural resource that deserves to be protected from incidents of arbitrary harm. Ecological justice says that in evaluating practices that have a direct effect on a water resource, negative effects on the integrity of that resource need to be accounted for within a normative framework. An underlying normative idea is that water needs to be regarded as a resource that does not only serve persons, but as something that serves animals, plants and eco-systems as well. If there are reasons for respecting the needs of animals and plants, there are also reasons to protect water from causal effects that contribute to narrowing down the range of eco-functions. In particular, respect for claims of ecological justice is not the same as a conservationist approach to water. It rather is in line with “active co-designing” of nature (Delli Priscoli/Wolf 2009, 121). Standards of integrity contribute to developing a future outlook for designing the path that societies wish to develop.

In order to sharpen the meaning of ecological justice, it is helpful to contrast this approach with another integrated approach to water ethics that refers to sustainability as a normative yardstick. A group of theories that lay emphasis on sustainability have been grouped together as ‘Integrated Water Resource Management’. This is a normative approach to water ethics which has three pillars: economic efficiency, socio-economic equity, and environmental sustainability (Hefny 2009). Even though sustainability is taken into account, it is not an integral part of the theory. Instead, it serves as a criterion that sets limits to efficiency and to distributive claims. As Hefny states: “IWRM [Integrated water resource management, A.K.] is a process, which promotes the coordinated development and management of water, land, and related resources, in order to maximize the resultant economic and social welfare in an equitable manner without compromising the sustainability of vital ecosystems.” (Hefny 2009, 28) In this approach to water ethics, sustainability contributes to defining best practices in profiting from water. Yet, sustainability does not yield beyond a norm that forbids over-exploitation. Ecological justice transcends this line of thought in claiming a healthy natural environment.

2.3 Cultural Water Justice

Water has been at the center of the narratives of cultures and religions (Shaw/Francis 2008). These narratives respond to water as a life-sustaining gift, yet in a different way than moral theory does. The narratives contribute to regarding water as something very precious and they point to the unique powers of water. In many of the Western world's oldest myths such as those of ancient Mesopotamia and Greece, water is regarded as sacred. It gives birth to life. In Islam religion, water is explicitly interpreted as a blessing from God. These presumptions still influence water law in the Arabic world (Naff/Dellapenna 2002). Cultural water justice resonates with cultural values that societies and groups of people attach to water. Here, I wish to defend the view that cultural water justice is part of a framework of water justice. In particular, cultural values that groups of people attach to specific water resources need to be respected.

In defending cultural water justice, one particular challenge needs to be confronted. Cultural values that relate to water resources are manifold; in particular, in some communities of people, they relate to ideas of sacredness and to myths. Paying respect to these relationships with water might be particularly demanding. Emmanuel M. Akpabio reports ceremonies from rural areas of a region in Nigeria that express taboos, the acknowledgment of spirit deities as well as religious functions among other functions of water (Akpabio 2011, 160–164). It is believed that the deities in the water world are particularly important in shaping the fortunes and misfortunes of individuals and society (162). An approach to water ethics does not have to accept these approaches straight away. Instead, a minimum requirement is that “[...] a new ethic, even in our advanced technological age, should be based on finding a new balance of the sacred and utilitarian in water” (Delli Priscoli/Wolf 2009, 121).

In modern societies, a second challenge needs to be addressed. It might be argued that cultural water justice declines when technologies in transporting and processing water are advanced. To many persons, the water reservoirs that contribute to delivering services have become invisible. Moreover, water is not regarded as sacred any longer. Nevertheless, authors in the field of environmental ethics claim that persons are still in a situation to attach values to water that are neither utilitarian nor do these values mirror preferences of consumers of water. Some scholars go so far as to claim an attitude towards nature which includes ‘compassionate retreat’. This attitude has also been reasoned for water bodies in nature and includes an attitude of appreciation of the complexity and beauty of water reservoirs and water cycles in nature (Brown/Schmidt 2010). At the very least, there might be aesthetic values that resonate with water.

In my view, water justice implies fairness regarding the close ties between water and some cultural values. In particular, cultural water justice provides a focus of concern that differs both from distributive issues and from claims of ecological justice. Again, I do not wish to defend the claim that values provide the backdrop against which water institutions should be evaluated. Instead, a debate on cultural values that accrue to water systems need to be part of the debate on water justice.

2.4 Procedural Justice

One further central dimension of water justice has not been mentioned so far. This is environmental justice in terms of *procedural justice*. This type of environmental justice is closely tied to insights in theories of democracy. The initial insight is that fair access to natural resources as well as a fair distribution of environmental burdens cannot be achieved without a guarantee of fairness in participatory practices in the political sphere. This extends to fair practices in order to include the citizenry in deciding over natural resources and burdens resulting from those decisions in various ways. It is not the space here to unfold this fourth group of claims of justice in detail; yet, some comments may illustrate the importance and the content of procedural justice. Authors in the field of procedural justice argue that participation is particularly important in three respects: Citizens need to have access to information, they need to be in a situation to participate actively in the decision-making procedure, and they need to be in a situation to express their voices in the public; the latter includes freedom of speech as well as freedom of association (Engel/Westra 2010).

Before turning to the problems of cooperation, I wish to summarize some aspects of the debate in this section. The discussion of water justice mirrors the diversity of the discourses on environmental justice. In particular, the diverse concepts of justice cannot be reduced to each other. *Distributive justice* highlights fair access conditions to water. *Ecological justice* claims restrictions on those practices that endanger the integrity of water reservoirs. *Cultural justice* addresses the values that have been attached to water in societies with diverse cultural backgrounds; this means that cultural values need to be respected, yet they also need to be part of a process of explication and debate. *Procedural justice* claims institutions that guarantee fair access to environmental negotiations and to political decision-making procedures.

In particular, the goal of a theory of water justice is not the justification of a rigid scheme of distribution or of regulation. Instead, debates on water justice provide yardsticks for processes that need to be interpreted as “active co-designing” of nature (Delli Priscoli/Wolf 2009, 121). In order to give these general outcomes a more distinct shape, I wish to go back to our example of a lake as an endangered natural resource. In particular, a discussion of this example demonstrates that the claims of justice are not reducible to each other. Instead, the four types of water justice provide claims that need to be part of a comprehensive framework of water justice. The following remarks on the lake serve as an example of what that framework might include in reasoning fair access conditions to a lake.

In terms of *distributive justice*, the regulatory framework gives priority to guaranteeing an amount of freshwater from the lake to each person that meets her daily needs. Moreover, it guarantees access to the private sector—yet, not without installing two restrictions. Following the polluter pays-principle, polluters will have to shoulder the costs for environmental restoration; and following the ability-to-pay principle, one might discuss the question of what rich institutions that profit from water reservoirs should be asked to do in terms

of an improvement of the overall distributive schemes, including investments in new technologies. In terms of *ecological justice*, neighbors of the lake and profit-seekers are asked to pay respect to ecological integrity; this includes regulations regarding water sport, fishing, and foremost waste-water that needs to be cleansed before released into the lake. As for *cultural justice*, we would need to know more about the society we are talking about. In primarily traditional societies, it is important not to destruct water reservoirs that are sacred. In modern societies, it is important to remind people of the value of water that transcends the values of a resource. As for a lake, one might also contribute to conservatory practices that keep its aesthetic qualities intact. Regarding *procedural justice*, the main claim is that all relevant groups are in a situation to participate in political decision-making. Moreover, information about the processes of co-designing needs to be available to all citizens.

This example does not only entail that those claims of justice are not reducible to each other. It also demonstrates that the claims do not cohere with each other. Instead, conservationist goals might collide with distributive schemes that are fair; ecological standards are not necessarily correlated with cultural values etc. As for this problem, two proposals shall be developed in the remaining part of this contribution. I shall argue that it is important to coordinate activities that have an impact on the lake by means of negotiation and cooperation; yet, I shall also argue that the fourfold scheme needs to be part of that process. Even though conflicts among the various claims cannot be reconciled easily, a commitment to basic claims in all four dimensions contributes to developing forward-looking and cooperative strategies in addressing a limited resource.

3. Transcending the Tragedy of the Commons

Water is the “bloodstream” of our planet (Ripl 2003). Access to clean water is a precondition for organisms to survive. Moreover, water is a critical resource in many cultural practices and industrial processes, including agriculture. As a consequence, conflicts of interests that relate to water resources are particularly dense and manifold. In some respects, this is due to the fact that water is a particularly multi-functional good. In order to settle conflicts, it is necessary to prioritize forms of use that cohere with claims of justice. The variety of practices include domestic use, agriculture, use for electric power, industrial use, navigation, fishing and other beneficial uses (Delli Priscoli/Wolf 2009, 73). Moreover, water conflicts often are cross-border conflicts. Rivers and water resources do not cohere with the borders in the political landscape (for examples of cross-border conflicts, see Beaumont 2000; Kolars 2000). As already noted, diverse values and cultural goods have been related to water reservoirs. In assessing the value of water, Anderson and Gaines (2009) list the following types of value statements: water as a social good, water as an economic good, the ecological values of water, and religious, moral and cultural values of water. These distinctions resonate with the types of justice that are at stake in addressing water and that have been addressed in the second section. In particular, following Delli

Priscoli and Wolf (2009) “finding a new balance of the sacred and the utilitarian in water” (121) is one of the key challenges in reasoning a water ethics.

Simultaneously, the scarcity of freshwater resources is already a worldwide problem (Sarni 2011, 1–29). In particular, it results from the so-called ‘tragedy of the commons’ (Gardiner 2001; Hardin 1968). The alleged tragedy does not result from over-exploitation by a single profiteer. Instead, it is the natural outcome in a situation in which actors do not coordinate their activities, but instead try to realize their individual interests in the resource. The drama that unfolds is due to the properties of natural resources as properties of public goods, in particular in terms of lacking clear-cut entrance barriers (Kallhoff 2011; 2012).

The story of the ‘tragedy of the commons’ claims that degradation of a natural pool resource results from three causes: *Firstly*, if each stakeholder in a natural collective good focuses on optimizing individual outcomes, over-exploitation is the necessary consequence. *Secondly*, uncoordinated behavior provokes degradation, because various forms of use are incompatible. Dale Jamieson explains: “Some of the most serious environmental problems occur when the same resource is used both as a source and as a sink: for example, when the same stretch of river is used both as a water supply and as a sewer [...]” (Jamieson 2008, 14) *Thirdly*, even though it would be rational to cooperate collectively, actors do not do so, if they are in a situation to pass the burden from profit-seeking behavior to next generations (Gardiner 2011, 160–164). Since negative effects on natural resources often have a cumulative structure—including the fact that really bad effects result from tipping-points—negative side-effects are not necessarily experienced now.

Proposals for resolving a situation like this have already been made. Elinor Ostrom argues that *Governing the Commons* (1990) includes a framework of rules that societies subscribe to in order to protect a life-sustaining natural resource as an ‘Allmende’. She provides the theoretical background for theories of green governance. Yet, one of the shortfalls of this proposal is that it appears to be limited to societies that are in a situation to develop normative frameworks and supervise them in a more or less traditional way. Philosophers, instead, favor a theory that introduces fairness in terms of a regulatory framework for political institutions. The problem with this latter approach is that a comprehensive system of regulation, and moreover of punishment of non-compliance, is very difficult to achieve regarding goods that are—by nature—open-access regimes. Moreover, it is still difficult to mediate an ideal theory of justice with non-ideal realities. The proposal that will be sketched in the next section develops an approach to collective action that resonates with insights on group behavior in social philosophy. In the context of this article, it is restricted to a very rough sketch; it serves at introducing a rather broad alternative.

4. Water Cooperation as Joint Action

I shall first explain some conceptual and theoretical points that appear to contribute to overcoming the tragedies of the commons in a theoretical way. In particular, recent research questions the long-lasting paradigm of cooperation as a process of voluntary exchange among profit-seeking individuals. Instead, approaches to social philosophy explain that joint action can be addressed as an alternative to voluntary cooperation as a mutually beneficial process of exchange. After having introduced some theoretical ideas of approaches to joint action, I wish to indicate that engaging in joint action in addressing water reservoirs correlates with a four-dimensional approach to water justice. In particular, the model I wish to present gives room for introducing water justice at a specific point: In forming an action-guiding and collective goal, shared normative beliefs provide a critical resource for acting together on a joint resource. An ethos that is informed by a multilayer approach to justice serves as a guideline for group behavior which people might accept—even though they might not share a comprehensive set of values in their lives; moreover, it helps formulating a shared goal for shaping the collective resource according to a variety of interests.⁴

One key claim working in the background of the alleged tragedies of the commons and the explanation of failures of cooperation is methodological individualism. This approach implies that an explanation of collective action needs to start with the general premise of self-interested individuals whose rationality focuses on self-set goals and their self-interest. In the interpretation of collective-choice theory, individuals act strategically. And in doing so, individuals contribute to destructive scenarios regarding collective goods (Gilboa 2010; List/Pettit 2002; Nitzan 2010, 93–175). In opposition to this interpretation of profit-seeking behavior, social philosophy has recently portrayed joint agency as a counter-model. In that perspective, “acting together” (Gilbert 1996; 2003; List/Pettit 2011; Tuomela 2002) as well as institutions that mirror normative aspects of collective agency (Miller 2010) have been explored. It is not the place here to recall this debate on joint agency. Instead, I wish to discuss developments and ideas that are helpful in discussing a water ethics-approach to cooperation.

The proposals of Raimo Tuomela (2002; 2013) in discussing cooperation are of particular interest here, and two basic insights in particular: Besides a variety of types of loose cooperation or spontaneous cooperation, cooperation has also been conceptualized as a collective endeavor of a group of persons (Tuomela 2002). As members of a group—that is not necessarily a long-lasting or natural group, but might also be a temporary task group (164)—persons engage in *we*-attitudes. They start reasoning and intending as group members. Moreover, a shared goal resonating with *we*-intentions is also action-guiding for group members—at least in a situation in which the goal is tied to an ethos that participants of the group subscribe to. “In this case of collectively intentional collective cooperative action, the group members, in effect, has a collective intention expressible by ‘We will cooperate to achieve goal G.’” (166) Moreover: “The group will at least try to

⁴ This section gives a short sketch of a theoretical approach that I deliver in more detail elsewhere.

bring it about that G is satisfied or promoted in accordance with its ethos.” (166) The ethos gives expression to a collective commitment.

In *section 2*, I have tried to explain four dimensions of justice that are particularly basic in addressing a fair distribution and fair access conditions to water. In a situation in which persons with different interests and with different commitments are asked to develop a vision of good practices in profiting from a shared good, justice is an important baseline. In my view, water justice might serve as a starting point for developing a shared ethos that person with different personal commitments might subscribe to. Let us also presuppose that this ethos suffices in order to identify as members of a group who wishes to develop a scheme for good practices in profiting from a water basin. In reasoning and acting as a group of persons—persons who all wish to profit from a shared resource by meeting standards of justice—persons focus on reasons that they can share in acting together. In particular, the ethos serves as a baseline that helps to work out a set of more concrete rules that matches the specific situation. If this process really succeeds, the outcome is a situation in which group members partake in a process of thinking through joint action. Instead of asking “What’s best for me given what others do?” the paramount question for each of the persons is now: “What is best for us or the group as a whole?” Even though this is only part of the reasoning of each single person, it contributes to developing practices that focus on the shared interests in an agenda of water justice.

Of course, this framework is idealistic in several respects. Usually, water supply is not a matter that can be negotiated from scratch. Moreover, negotiations over water resources are mediated by institutions—both in terms of political institutions and in terms of infrastructure. Yet, the proposal to start with group reasoning instead of starting with individual profit-seeking behavior might contribute to developing a theoretical alternative to the alleged shortfalls of collective action. In particular, it has been observed that initial scenarios that are asymmetric do not speak against cooperative schemes in distributing a shared resource (Ostrom/Gardner 1993). Instead, asymmetric initial situations contribute to an enhanced willingness to develop schemes of fairness, particularly so if fairness is not reduced to egalitarianism, but instead pays tribute to asymmetric initial scenarios, as for instance asymmetries between upstream and downstream riparian of a river (Beaumont 2000).

Moreover, one of the main obstacles to engage in cooperation and to transcend a limited individual profit-seeking perspective is the presupposition that cooperation is costly and does not yield immediate benefits. Yet, empirically, this assumption has not been verified. In studying various types of negotiation on rivers, Claudia W. Sadoff and David Grey (2002) explain four types of cooperative benefits—benefits that are the immediate result of cooperative behavior. Their analysis starts with an acknowledgment of benefits from sustainable management of river ecosystems. A healthy river is a pre-requisite for deriving any further benefit from the river (395). A further point is the gain from cooperation in terms of savings of the costs of non-cooperation (398). If tensions contribute to severe conflicts, costs in terms of human and financial costs are estimated to be high (398). Finally, the authors also discuss “the catalytic river” (399), saying

that cooperation among persons may serve as a door-opener for further political cooperation.

Yet, before drawing too rosy a picture, I also wish to address two major obstacles in realizing an integrated approach to water justice that tries to integrate water justice into a shared ethos. *Firstly*, justice as portrayed in section one needs to be adapted to concrete situations which contributes to a variety of normative claims that cannot be reduced to each other (Walker 2012). Indeed, there is a plurality of approaches to environmental justice that do not necessarily cohere. As a consequence, the process of group-formation needs to imply a debate on how to handle trade-offs between various claims of justice. This is not an easy process. *Secondly*, this approach to environmental justice as integrated into group agency needs to explain how ‘crowding in’ might work. How can persons be convinced to join the group that cares for water justice? In my view, arguments that support cooperation instead of defection are an important ingredient in that process. Yet, in practice, the process needs to be supplemented by institutions that support water justice by legal means and by institutions that support environmental education.

5. Conclusion

Theories of environmental justice provide the normative yardsticks in defining fair access conditions to natural resources. I have defended the view that there is not one single and most important approach to environmental justice. Instead, in discussing water ethics, four dimensions need to be distinguished. These are: distributive justice, ecological justice, cultural justice, and procedural justice. Due to this diversity, one of the key issues is: Are these theories mutually exclusive approaches to water ethics? Or are they part of a framework that integrates them? My answer subscribes to the second option. Instead of discussing the varieties of justice as competing approaches, they have been integrated into a framework that supports and channels cooperation and negotiation.

In addressing conflicts over water reservoirs, theories of environmental justice alone will not resolve the problems. Instead, they need to be integrated into a theory that highlights options to work together and to cooperate. The hope that this approach will serve as a model for future developments is not too far-fetched. Instead, there is some empirical evidence that cooperation will take place. Delli Priscoli and Wolf (2009) even give a long list of trends pushing toward cooperation in addressing and hopefully resolving water conflicts. This list includes among others the following aspects: The growing insight that the price for agreements and having control over a natural water resource is cooperation; growing constraints on a shared resource that make the opportunity costs for not cooperating even clearer; and a general shift in politics from distributing benefits towards policies that resonate with the perception of rather redistributing a decreasing pie (Delli Priscoli/Wolf 2009, 3–4).

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