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Margreet Z. Zwarteveen & Rutgerd Boelens

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Defining, researching and struggling for water justice: some conceptual building blocks for research and action

Margreet Z. Zwarteveen[a,b]* and Rutgerd Boelens[b,c,d]**

[a]Department of Geography, Planning and International Development Studies, University of Amsterdam, the Netherlands; [b]Department of Environmental Sciences, Wageningen University, the Netherlands; [c]Centre for Latin American Research and Documentation, University of Amsterdam, the Netherlands; [d]Department of Social Sciences, Catholic University of Peru, Lima

This article provides a framework for understanding water problems as problems of justice. Drawing on wider (environmental) justice approaches, informed by interdisciplinary ontologies that define water as simultaneously natural (material) and social, and based on an explicit acceptance of water problems as always contested, the article posits that water justice is embedded and specific to historical and socio-cultural contexts. Water justice includes but transcends questions of distribution to include those of cultural recognition and political participation, and is intimately linked to the integrity of ecosystems. Justice requires the creative building of bridges and alliances across differences.

Keywords: water rights; justice; politics; distribution; recognition; participation

Introduction

The distribution of rights to access water and participate in decision making on water management and governance is extremely skewed in many countries of the world. This has always been so, but risks worsening because of growing competition caused by increasing water demand and decreasing water availability (because of ecosystem degradation and climate change). It is ironic that contemporary water policies and legislative measures to address problems of water scarcity risk further widening the gap between the water 'haves' and 'have nots'. In particular, the water rights and water-based livelihoods of smallholder irrigator communities in many countries in the global South are under constant threat by bureaucratic administrations, market-driven policies, desk-invented legislation and top-down project intervention practices, which tend to steer water flows in the direction of supposedly more productive uses and users (Isch, Peña, & Boelens, 2012; Molle, Mollinga, & Wester, 2009; Swyngedouw, 2005). Indeed, in arid and semi-arid areas, wealth differences between farmers increasingly are as much or more a function of people's differential access to water as they are of differential access to land. Likewise, the dynamics of market-led land reforms are importantly governed by access to water (see Liebrand, Zwarteveen, Wester, & van Koppen, 2012). The question of how to fairly distribute material water access rights and political water decision-making

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*Margreet Z. Zwarteveen is also at IHE-UNESCO, Delft, the Netherlands.
**Corresponding author. Email: Rutgerd.Boelens@wur.nl. Rutgerd Boelens is also at the Department of Geography, Planning and International Development Studies, University of Amsterdam, the Netherlands.

rights therefore deserves attention. In this article, we suggest some concepts and theoretical tools in support of an agenda for research and action on water justice. The article is informed by our interactions and discussions within the Justicia Hídrica/Water Justice alliance, and by the many studies done in the context of the alliance.[1]

The question of water justice combines, in complex and sometimes paradoxical ways, demands for more just socio-economic distribution and for more or better cultural-political recognition (cf. Fraser, 2000; Schlosberg, 2004). Understanding water justice requires creative analyses that link geo-hydrological and climatological insights into water availability patterns with understandings of the socio-technical and legal-cultural determinants of how available water flows are accessed and allocated. The evolving research and action field constituting the political ecology of water (e.g. Ahlers & Zwarteveen, 2009; Bakker, 2004; Boelens, 2009; Budds, 2004; Loftus, 2009; Martínez-Alier, 2012, 2013; Perreault, Wraight, & Perreault, 2011; Swyngedouw, 2005) is inspiring here, as it explicitly begins from an understanding of nature, technology and society as mutually constitutive, forming 'hydrosocial networks' that establish how water is (to be) distributed.

In the rest of this article, we propose and discuss some further theoretical concepts and ideas that are useful for identifying, exposing and challenging water-based injustices. One important criterion in our choice of theoretical tools is that they need to be suitable for recognizing the power and politics of water use, management and governance. This starts with the recognition that power and politics are everywhere, and not confined to the formally designated realms of decision making and official political arenas. Nor is power expressed only in explicit laws, rules and hierarchies, but it also importantly operates through less visible norms that often present themselves as natural or inevitable. These are often implicit in perceptions about what is 'normal' and in cultural codes of conduct and behaviour (Foucault, 1975, 2008).

After this introduction, we first provide a brief sketch of the current water policy discourse, arguing that this discourse requires critical scrutiny in terms of how it actively produces water inequities. We continue with a section in which we discuss and propose a relational and grounded definition of water justice, after which we suggest several theoretical concepts and ideas useful for researching and analyzing water injustices. We then briefly explore how demands for water justice can be formulated and advanced, and end with some concluding remarks.

Challenging the mainstream

On the waves of a heightened political consciousness of the scarcity of water, the world is witnessing a rapidly growing body of scientific and policy literature that presents models, guidelines, tool boxes and rule systems to govern water affairs. A quick review of these shows that there is a rather strong consensus about what the problems are as well as about what to do about them. Confining it to water for food and agriculture, this consensus has it that there is too little water for feeding the world's population. Although this water scarcity is attributed to a multitude of causes, one that stands out and receives relatively much attention is the wastefulness of farmers, who use far too many 'drops per crop' – something that is linked to the fact that 60–70% of the world's freshwater resources (estimates vary) are used in agriculture. Suggested ways to make farmers use water more efficiently include water-saving technologies (such as drip irrigation) and the pricing of water (or making its allocation subject to market or quasi-market principles), which is expected to induce farmers to use it more cautiously as well as leading to the redirection of flows to where marginal returns are highest.

More generally, solutions that are currently favoured to combat the water crisis combine three sets of beliefs: a belief in markets, a belief in participatory processes of deliberation and a belief in engineering (Sneddon & Fox, 2007). Together, these three beliefs culminate in 'integrated water resources management' (IWRM) tool boxes and recipes that neatly prescribe how water should most efficiently and effectively be used, managed and governed. These, and the larger IWRM discourse that they form part of, are actively disseminated through research and knowledge centres, international banks and funding agencies, government bureaucracies and development agencies (Goldman, 2001). When implemented, they produce new forms of 'water governmentality' that entail the repatterning of water spaces and territories; the reshaping of rules and authorities and of labour and production relations; and the rearranging of water user groups and families in new water power hierarchies (Boelens, 2013; Perramond, 2013).

IWRM is seen and presented as a break with the technocratic, supply-driven and construction-oriented paradigm of the past, to signal a new era in which economic, social, environmental and social concerns are addressed simultaneously and in their mutual interactions. As a growing body of political ecology and water justice studies have shown, however, IWRM, although flagging sustainability and democracy, is often used to hide or sanction processes of dispossession and accumulation of water, processes that are far from democratic or participatory (Allan, 2006; Molle et al., 2009). Often, for example, water scarcity is presented as a global and natural phenomenon that threatens humanity as a whole. Yet, not everyone is equally threatened by water scarcity (Bakker, 2004; Ioris, 2012), and accumulation by some often goes hand in hand with deepening scarcity as experienced by others (Arroyo & Boelens, 2013).

IWRM discourses and the allocations they sanction create rankings of water uses and users on the basis of specific calculations of efficiency, with the most efficient uses and users being awarded the premium of modernity and water citizenship. 'Modern' users – such as large-scale commercial enterprises, agribusiness firms, private drinking-water companies, and mining and hydropower conglomerates – thus become the example to be followed, representing the ideals of water use efficiency and water market rationality that science preaches (Boelens & Vos, 2012). In contrast, people who use traditional irrigation systems for growing their own food crops come to be seen as 'backward'. For water scarcity problems to be overcome, they either need to disappear or they need to correct their water misbehaviour to join 'progress' and 'development' (Castro, 2007; Vera & Zwarteveen, 2008).

The critical examination of these discourses, and of the concepts of efficiency and modernity they employ, forms an essential part of the effort to understand and fight water injustices. It hinges on attempts to unravel the politics and political implications of proposed reforms in water governance and regulation. This entails scrutiny of prevailing modes of water distribution and water authority, as well as of the discourses, institutions and technologies through which these become articulated. It involves for instance the examination of how supposedly neutral efficiency terms rely for their implementation on reallocations of water (Boelens & Vos, 2012; van der Kooij, Zwarteveen, Boesveld, & Kuper, 2013; Van Halsema & Vincent, 2012). It also includes an assessment of which and whose histories, world-views, knowledge systems, norms and practices prevail and why; an analysis, in other words, of the politics of disciplining – the modalities and strategies of power that are (consciously or unconsciously) used to generate a set of values, beliefs and behaviours (e.g. Meehan, 2013; Rodríguez de Francisco, Budds, & Boelens, 2013). On the other hand, it entails understanding and (re)valuing the strategies of deviance and resistance by those water user groups and communities who are targeted, incorporated or

excluded by dominant water policy and governance cultures (Boelens, 2009; Perreault et al., 2011; Vera & Zwarteveen, 2008).

Defining water (in)justice: (re)distribution, (mis)recognition and voice

Many political-philosophical theories have aimed to conceptualize justice as a universal and transcendent notion, focusing 'on what justice *should be*' (Lauderdale, 1998, p. 5). Definitions of justice in dominant libertarian or entitlement theories (e.g. Nozick, 1974) for instance stress the connection between individual freedom (vis-à-vis state control) and private property rights, and posit these as key universal principles of humanity and human society. Neoliberal interpretations of justice (for instance as articulated or implied by Hayek, 1944 and Friedman, 1962) build on and extend these definitions, stressing both that individuals must have the 'freedom' to pursue the maximization of their own interests and that all individuals are 'equal' through their inclusion as participants and players in the market game. In these philosophical-theoretical perspectives, large economic and distribution inequalities are compatible with 'justice' because these are the outcomes of people's own aspirations and strivings.

Also part of the positivist tradition, and in line with the postulates of the political-philosophical founder of utilitarianism, Jeremy Bentham, liberal utilitarian principles of justice consist of those societal orders that bring the greatest happiness to the greatest number of citizens. Hence, the rights and happiness of some individuals may be sacrificed if this would enhance the well-being of most others. These ideas were expressed in a new, uniform language to "establish a system that aims to construct happiness societally by means of reason and law" (Bentham, 1988(1781), pp. 1–2). The calculation of happiness was in the hands of moral and justice experts, since common people were not considered rational enough to oversee the interests of all. Later utilitarian elaborations were more 'participatory' in subtly including the people in (and excluding the 'irrational deviants' from) this empire of liberal justice.

Alternative liberal theories emphasize not equal distribution but 'fair procedures', to guarantee that justice can take place according to autonomous decisions based on ethical principles. Rawls's influential *A Theory of Justice* (1971), for example, uses the metaphor of a "veil of ignorance" behind which people are supposed to make decisions on justice (and in particular, universal efficiency) without knowing the impact these decisions will have on themselves. Although these definitions and ideas presuppose the equality of all, they work to justify distributive planning and decision making in arenas where people are not at all equal but divided along lines of class, gender, education and ethnicity.

Most *legal* justice constructions display variations of these liberal ideas and ideals of justice. They proclaim uniform values of justice and a uniform property framework, based on the proclaimed equality of all citizens before the law. Water laws are no exception: they are commonly presented as objective, rational systems for designing societal life, rather than as deeply cultural phenomena and political products (Roth, Boelens, & Zwarteveen, 2005). For this, the legal systems sustaining water policies emphasize unity and uniformity (the same water rules and regulations apply to all), with the state enjoying a monopoly on water rule making and dispute resolving, subjugating all other tribunals or rights frameworks (Boelens, 2009). In practice, the 'equality of all' that such uniform frameworks presuppose works to deny or ignore existing social hierarchies and differences (such as those based on class, ethnicity or gender), with the reference for the proclaimed equality being (implicitly) based on the class, gender and cultural

characteristics (and normative standards and interests) of a small but powerful minority (Vos, Boelens, & Bustamante, 2006).

Precisely because equality cannot be assumed or simply proclaimed, homogeneous concepts of justice based on abstract, universal criteria tend to poorly correspond (and respond) to the experiences of and claims made by the 'non-equals': marginalized indigenous and peasant societies, for instance, or women. In addition, and as argued by Young (1990), Fraser (2000) and Schlosberg (2004), theories that focus only on (universal) distributive models and procedures are poorly equipped to "examine the social, cultural, symbolic and institutional conditions *underlying* poor distributions in the first place" (Schlosberg, 2004, p. 518). We suggest therefore that definitions and understandings of justice cannot be based only on abstract notions of 'what should be', but also need to be anchored in how injustices are *experienced.* They need to be related both to the diverse 'local' perceptions of equity and to the discourses, constructs and procedures of formal justice. As Lauderdale suggests, this requires a relational, grounded, comparative and historical approach. "The study of justice includes an analysis of the fair distribution of benefits and burdens, including rights, obligations, desserts and needs. The approach includes analyses of public plans and policies set up to implement ideas of justice" (p. 9). Harvey similarly proposes conceptualizing justice as "a socially constituted set of beliefs, discourses, and institutionalizations expressive of social relations and contested figurations of power that have everything to do with regulating and ordering material social practices within places for a time" (1996, p. 330). These definitions emphasize the historical and place-based specificity of justice, using it as a way to examine how specific modes of ordering are rooted in specific societies and the effects this has on the distribution of property, wealth and authority (cf. Zwarteveen, 2006).

Drawing on work which looks at how processes of environmental change work to reallocate incomes, resources and power, Schlosberg (2004) follows the suggestions of Fraser (2000) in a lucid attempt to conceptualize environmental justice. He proposes a "trivalent conception of justice" (Schlosberg, 2004, p. 521) which includes, along with distribution, the dimensions of recognition (e.g. of specific cultural identities, rights and practices) and participation (in decision making).[2] According to Schlosberg, justice "requires not just an understanding of unjust distribution and a lack of recognition, but, importantly, the way the two are tied together in political and social processes" (p. 528). Like Schlosberg, we think it is important to add dimensions of (cultural) recognition and procedural democracy to those of (re)distribution. Next, given the life-securing and life-threatening nature of the resource and its embeddedness in delicate and dynamically shaped socio-natural environments, and the need to sustain livelihood security for current as well as future generations, a fourth sphere of water justice struggle may be referred to as 'socio-ecological justice' (socio-natural or socio-ecological integrity).

Understanding (in)justice, then, encompasses the examination of both *formally accredited justice* (formal schemes of interpretation and legitimization, and legal-positivist constructs of 'rightness') and *socially perceived justice or equity* (location-, time-, and group-specific constructs of 'fairness' – see Boelens, 2009) that are used by different societal groups.[3] In addition, an analysis is needed of why certain views on justice or equity gain prominence while others are ignored, and how this works to reproduce or challenge prevailing social hierarchies and relations of power.

An overview of key concepts

The following section presents a number of important concepts and terms which we think are crucial to identify, understand, analyze and react to water-based forms of injustice. We acknowledge that not everyone working in the diverse 'water worlds' is familiar with all these terms, but we think that they open opportunities to deepen the understanding of the particular and entwined political, socio-economic, technical-biophysical and cultural dynamics that contribute to overt and covert injustices.

Situated knowledges. Determining what is unfair, inaccurate, or incomplete cannot be done from a transcendent outside position but always implies engagements and identifications with those whose lives and worlds are the objects of inquiry (see Baviskar, 2007). This knowledge position starkly contrasts with the one implied by much water knowledge, which continues to be based on the belief in the possibility of 'objective' truth that can be obtained through the unclouded gaze of a detached observer. Indeed, much water knowledge speaks 'as if' from nowhere, from a value-free and god-like position, by someone without interests or background, representing the universal good. Sceptical of the possibility of producing such universally valid statements about reality, the powers of reason, and the subject–object split (Baviskar, 2007; Butler, 1995; cf. Donahue & Johnston, 1998; Foucault, 2008; Haraway, 1991), we instead see meanings, discourses and (the production of) truths as internal to inequitable water orders, rather than external: they come about through situated perspectives that need to be made as explicit as possible. Awareness of the specificity and positionality (or situatedness) of all knowledge also prompts a heightened vigilance about the political effects of certain discursive representations, in particular when they travel from one site to another.

   Thus, truths, concepts and language are never 'neutral' denominators of objective realities that are out there waiting to be discovered, but co-constitute – or are an intrinsic part of – such realities. They emerge through social processes in which agreement, persuasion, belief, culture and world-view play a role. Research and analysis mediate between different, yet mutually conditioned, views – those of the researcher(s) and those of the people and environments who are being studied – each forming part of their own socio-natural environments. Rather than the latter being simply the 'objects' of research, they 'talk back', interacting with researchers and co-developing meanings, truths and interpretations. In recognition of the relational dialectics between researchers and researched, a self-conscious research attitude is needed.

   Self-consciousness, accountability and reflexivity are important for all research, but are of special importance for researching and understanding questions of justice, because understandings of justice more obviously combine 'facts' (about water availabilities, for instance) with opinions and values (about what is fair or just). Facts and values to name and judge specific socio-natural orders often come together in, and are expressed through, particular discourses. For Foucault (1975), discourses comprise groups of related statements which govern the variety of ways in which it is possible to talk about something and which thus make it difficult, if not impossible, to think and act outside them. Discursive practices are characterized by "a delimitation of a field of objects, the definition of a legitimate perspective for the agent of knowledge, and the fixing of norms for the elaboration of concepts and theories" (Foucault, 1977, p. 199). Because discursive practices are mixed up with power, certain representations of reality serve certain interests and interest groups better than others.

Explicit attentiveness to the ways in which realities, problems and solutions are discursively framed is therefore important. The current preferred language for thinking about water is clearly neoliberal in flavour. Although seldom made explicit, it reflects a specific political (but objectified) ideology with very particular ideas about the nature of human beings and the preferred direction of development (see Achterhuis, Boelens, & Zwarteveen, 2010; Boelens & Zwarteveen, 2005). Efforts to identify and expose injustices in water need to critically question such established water discourses in order to arrive at a *repoliticization* and a *contextualization*: at visualizing the workings of power in and through discourse, at showing how particular ways of phrasing and techniques of governance serve to hide contentious distributional and representational questions, and at exposing the specificity of time, place and positionality of the knower(s).

Socio-natures. A second set of theoretical starting points for naming and understanding water (in)justices are those that question the boundaries between nature, technology and society (or humans) by positing that such boundaries are themselves the products of human minds and social conventions. This is an important insight, because the act of relegating phenomena to the realms of nature – naturalization – is a well-known and much-used strategy to depoliticize water problems, placing contentious questions of distribution outside of the domain of public debate. Water scarcity is for instance often referred to as a *natural* problem caused by climate change and changing weather conditions, rather than as a problem of distribution or of power relations (e.g. Bakker, 2004; Ioris, 2012). Frequent calls for using river basins as 'the natural unit for water management' can for instance be seen as a way to depoliticize water management by recourse to the "naturalizing metaphor" (Bakker, 1999) of the river basin (see Saldías, Boelens, Wegerich, & Speelman, 2012; Wester, 2008). As pointed out by Blomquist and Schlager, "the definition of a watershed and the selection of boundaries are matters of *choice*. As soon as the matter of choice is present, there is a role for politics" (2005, pp. 104–10). Notions of water scarcity obviously may have 'absolute' subsistence and survival properties, but they are always deeply mediated by humans and determined by power relationships that construct 'scarcity' far beyond just the wickedness of nature.

The ambition to conceive nature and society as co-constituted can draw upon science and technology studies, where vocabularies of hybridity are used by actor-network theory scholars (see Latour, 1993; Law & Hassard, 1999) as well as by feminist science studies (Haraway, 1991). Words like "waterscapes" (Baviskar, 2007; Swyngedouw, 2003), "naturecultures" (Haraway, 1991) and "hydrosocial networks" (Boelens, 2013; Swyngedouw, 2003; Wester, 2008) all convey the idea that infrastructural and institutional water developments develop 'part natural part social', as material dynamic reflections of historic and never-ending socio-political-geographical struggles (Ahlers & Zwarteveen, 2009; Swyngedouw, 2003; Zwarteveen, 2006).

Contestation. As the previous sections have indicated, existing and emerging ways of using, accessing and distributing water tend to be contentious. The coproduction of waterscapes or hydrosocial networks is constituted by, and simultaneously constitutes, the political economy of access and control over resources (Budds, 2004; Harvey, 1996; Swyngedouw, 2003). Water reforms thus unquestionably also imply changes in access to and control of this resource; as water is a finite resource, those who receive more generally do so at the expense of others who receive less. Water, in other words, is an intrinsically contested resource. We distinguish four main echelons of water contestation:

● First, the very distribution of the *resource* is contested: Who has access to water, to hydraulic infrastructure, to the material and financial means to use and manage water resources?

● Second, conflicts and disagreements also and importantly occur over the *contents of rules, norms and laws* that determine water distribution and allocation.

● A third way in which water rights are contested relates to struggles over *authority*. Who decides about questions of water distribution? Who is entitled to participate in water law and policy making? Whose opinions and norms are listened to and accommodated? Whose definitions, priorities and interests prevail?

● A fourth and last important area of contestation lies in the *discourses* used to articulate water problems and solutions. What are the accepted languages and practices for framing and shaping water laws, and what are the preferred ways of conceptualizing water problems? How do different regimes of representation characterize the relations among actors, the social and technical environment, and water access and control; and how do they devise or promote institutions, techniques, strategic artefacts and practices to realize their views and objectives?

These echelons of water struggles directly relate to each other and are shaped in mutual interaction. For example, a particular discourse will also entail a particular way of organizing decision making, and work to legitimize some forms of authority over others; it will also favour some rules and priorities for resource management and allocation; this then fosters the ways in which available resources are being distributed and used – privileging some groups over others.

Complexity. Water allocation and management involve often contradictory and complex (or 'wicked') problems: that is, clusters of interrelated problems, characterized by high levels of uncertainty and a diversity of competing values and decision stakes. Typically, 'knowing' and representing wicked problems, let alone proposing solutions, is a highly controversial matter, in which many different accounts of reality compete with each other (Wester, de Vos, & Woodhill, 2004; Whatmore, 2009).

One possible way to deal with complexity is to develop ever more sophisticated expert devices that allow mapping environmental phenomena – such as water pollution, floods and droughts – into knowledge and incorporating them into 'evidence-based' management strategies. Increasingly, such devices are based on and make use of remote sensing and GIS, and include predictive models, risk indicators, monitoring instrumentation and ways to calculate environmental services. Without disputing the wonders that can be done with new observation techniques and models, their use does involve a risk: it may work to strengthen the faith in the possibility of objectively 'knowing' and rationally managing water problems. It allows, in other words, proceeding as if water problems were largely about ordered events and as if it were possible to produce one singular best account of their causes, effects and solutions.

We instead suggest that there is merit in acknowledging that most water problems belong to the domain of the 'unordered', where decisions are based on power, perception, and situated perspectives and understanding (cf. Kurtz & Snowden, 2003). Therefore, we argue for the need to remain vigilant about the temptation to unequivocally use 'science' and the objectification it entails in dealing with water's complexity. Knowledge about water will always and necessarily be uncertain and provisional. Relaxing the search for the one most accurate and reliable account of water problems and realities usefully opens the door to

accepting diverse and plural knowledges about processes of water-related change – including those based on the experiences and knowledge of people who live in changing environments.

Water rights. Water injustices are importantly about structural water scarcities caused by resource capture, and the resulting patterns of unequal access to water and decision-making spaces (Ahlers, 2010; Wester, 2008; Zwarteveen, 2006). Understanding how injustices are produced or how to support greater fairness or democracy, therefore, hinges on insights in the dynamics of water allocation: on how water rights are defined or understood. We propose an ontological definition of water rights that departs from more mainstream conceptions, which tend to see 'clear and enforceable' water rights as a tool and condition to make water managers and users mutually accountable or market-based trading of water possible. In line with our definition of water justice, we base our understanding of water rights instead on the explicit acknowledgment of their historical specificity and embeddedness in particular ecological and cultural settings. In this under-standing, locally existing norms and water control practices, and the power relations that inform and surround them, are deeply *constitutive* of water rights (see Boelens & Zwarteveen, 2005).

Because of the variable availability and fluid characteristics of the resource of water, and because of the difficulties in rigorously monitoring and controlling water flows, there is a lot of scope for users at different levels to act in ways that diverge from distributional agreements as stipulated in state laws, regulations, infrastructural layouts and technolo-gies. To capture the difference between 'rights on paper' and actual water control and distribution, we have suggested the following distinction of categories of rights: reference rights, activated rights and materialized rights. As we have explained in more detail elsewhere, these categories can be seen as different manifestations of rights (Boelens & Zwarteveen, 2005). In most water-use contexts, water rights exist in conditions of legal pluralism. This implies that multiple rules, norms and principles of different origins and sources of legitimization coexist. Therefore, even when there appears to be legal and administrative uniformity, water rights' complexity in practice can be huge. Understanding justice likewise requires insights into how water rights and rule systems are being shaped in everyday water-use practices; the complex and often divergent ways in which they interact with various socio-legal frameworks and power structures (at different scales); and the potential and actual conflicts among different rights systems (over water use, rules, authority, and discourses or ideologies).

Scale and scalar politics. Naming, defining and understanding water (in)justice is intrin-sically scale-sensitive, with judgements of whether a situation is just or not changing with the units of time and place used. Appreciating the fairness of water distribution within an irrigation system, for instance, critically depends on how the boundaries of the command area of the system are drawn. Intra-system fairness may be achieved over time by gradually reducing the area irrigated, to the detriment of those whose lands are situated in the parts that are no longer included in the system. Temporal and geographical scales are always socially constructed, and hence contingent and dynamic (see McCarthy, 2005), with the choice and definition of scales and scalar configurations sometimes themselves being contested in struggles over what is fair or equitable (Brown & Purcell, 2005). Indeed, 'jumping' scales can be an effective strategy to make injustices disappear. That mining companies dispossess peasant communities of their water rights, for instance, is unjust from the perspectives of these communities, but such injustices tend to be seen as

minor by governments and the general public when measured against the financial contributions of mining companies to national development.

As Swyngedouw and Heynen assert:

> The priority, both theoretically and politically, ... never resides in a particular social or ecological or geographical scale; instead it resides in the socio-ecological process through which particular social and environmental scales become constituted and subsequently re-constituted. In other words, socioecological processes give rise to scalar forms of organisation – such as states, local governments, interstate arrangements and the like – and to a nested set of related and interacting socioecological spatial scales.... The continuous reorganisation of spatial scales is an integral part of social strategies to combat and defend control over limited sources and/or a struggle for empowerment. (2003, pp. 912–13)

What this means for understanding questions of water justice is that these need to include an explicit understanding of how scales are used, constructed and entwined in hydrosocial dynamics and networks, among others, through political struggle (cf. Brown & Purcell, 2005). In this respect, it is particularly important to critically examine terms such as 'local' and 'global', because so-called 'local' phenomena often consist of specific manifestations of supra-local processes and powers. Harvey (2003), for example, shows how processes of dispossession, appropriation or theft form an integral part of the reorganization of capital on a global scale.

Connecting struggles for redistribution, recognition, participation and socio-natural integrity

Where authors such as Harvey (1996) insist on environmental-justice movements to transcend particularity and pluralism and work towards the singular and universal in order to be able to confront globalizing capitalist injustice, Schlosberg argues that an environmental-justice movement can be unified but it cannot be uniform. "If Foucault taught us anything, it is that power is multiple, and arises everywhere in everyday situations and must be constantly resisted where it is experienced. It is no different with (in)justice" (2004, p. 534; see also Martínez-Alier, 2012). In environmental and water justice movements, there is (and only can be) the possibility of unity when there is no uniformity regarding how the notion is or should be defined. In line with Schlosberg, we suggest therefore that while accepting and acknowledging diversity, difference and plurality it is important to examine how bridges can be established among the diverse ways of viewing and struggling for water justice: engagement and alliances across contexts, continents, scales and differences (cf. Mouffe, 2007; Schlosberg, 2004).

Injustices in water may sometimes produce very open conflicts, with people who feel treated unjustly actively protesting, for instance in cases of resistance against the introduction of water privatization policies or when water grabbing or large-scale pollution are the evident outcomes of such new policies (Bebbington, Humphreys Bebbington, & Bury, 2010). Although such injustices attract much attention, most injustices occur in less spectacular ways and involve more subtle and long-winding processes of struggle, in which officially endorsed and unofficial water cultures confront each other to create clashes between social, political and economic water values, meanings and decision-making powers. Some injustices never produce open disputes or struggles but instead consist of the silent sufferings. These are often provoked by the water reallocations and dispossessions that accompany the erosion of existing water cultures and forms of knowledge (see Ahlers, 2010; Vos et al., 2006). Indeed, the strong policy push to make water

rights transferable through the uniformization of rights systems, which some scholars interpret as a new round of 'enclosures' of the commons or processes of 'accumulation by dispossession', is more likely to create such silent take-overs instead of provoking spectacular water wars.

Proposals to improve the water security of marginal water user communities often dangerously go along with such calls for uniformization, by demanding the formal recognition of plural legal and normative systems. However, whether such recognition indeed means improvement is a question, the answer to which is not straightforward. And is recognition enough? Recognition, the cultural dimension of justice, refers to acknowledging and respecting various forms of dealing with, organizing around, and talking about water. This has to do with diversity, identity and culture, and relates primarily to forms of injustice that deny or discriminate against particular socially and culturally embedded rules and practices of water management and control (e.g, Crow & Odaba, 2010; Zwarteveen, 2010). Granting autonomy to groups of people or water user communities to devise and apply their own water rules addresses a form of cultural recognition, as does the acceptance and recognition of women, indigenous and peasant users and leaders as legitimate water actors. This also relates to representational justice – the issue of political participation in control and decision making, of sharing in water authority – both at local management levels and at broader scales of water governance.

Water justice questions may also extend to public water investments and often include the socialization of technology and reform of land tenure. Cultural recognition, participation and redistribution are related and influence each other in complex ways. They are intimately tied up with questions of power and hegemony, and reinforce each other dialectically. Cultural norms that are unfairly biased against some groups (on the basis of class, ethnicity, gender, caste or a combination of those) tend to become institutionalized in the state and the economy, and serve to justify their lesser access to water. Meanwhile, their economic disadvantage impedes equal participation in the making of water-allocation rules and laws, and in actual water-distribution decisions. The result is a downward spiral of economic and cultural subordination.

Yet, despite the entanglement between socio-economic, cultural-political and representational justice, there is merit in distinguishing them, because the remedies to address these kinds of injustices are different, and sometimes even conflicting (see Fraser, 2000; Zwarteveen, Roth, & Boelens, 2005). For example, claims for recognition often take the form of calling attention to the supposed specificity of some group and then affirming its value. In contrast, redistribution claims often call for abolishing economic arrangements that underpin group specificity. Instead of calling for the right to be different, these call for the right to be equal. Distinguishing the different kinds of justice allows asking questions about the relation between claims for recognition, claims for participation and claims for redistribution, and about the interferences that arise when these claims are made simultaneously. It also draws attention to the politics involved in claiming rights for specific groups, or in calls for redressing historical injustices and inequities.

In sum, demands for greater water justice require a critical view that acknowledges its cultural, political and material dimensions – which, moreover, are all embedded in socionatural environments asking for stewardship. Good scholarship and policy making, as well as balanced activist and grass-roots action, require conceptualizing cultural recognition, political participation, socio-economic equality and care for socio-ecology in forms that support rather than undermine one another. And they require clarifying the political dilemmas that arise when trying to combat these injustices simultaneously. Therefore, we realize that strategies of empowerment, resistance and users' appropriation of water

control that challenge existing water distributions, laws, authorities and expertise are only successful when headed by those who demand more control: groups of water users (e.g., Bebbington et al., 2010; Hoogesteger, 2012). Through struggle and well-organized representation at negotiating platforms, they can define and negotiate their water rules and defend and enforce their water rights, and influence the formulation of the rules of play.

Conclusions

In some countries in the global North, and in many countries in the global South, growing demand and decreasing availability of water of sufficient quality are leading to intensifying competition and conflict among different water uses and users. Globalization and a neoliberal policy climate tend to help certain powerful actors – local, national and often transnational – accumulate water resources and rights at the expense of the economically less powerful. New competitors, including megacities and mining, forestry and agribusiness companies, claim ever larger shares of available surface-water and groundwater resources. Unequal water distribution and related pressures on land resources and territories, both legally condoned and through large-scale extralegal appropriation practices, generate misery and poverty among smallholder families and in rural communities, while posing profound threats to environmental sustainability and national food security.

This constitutes the backdrop of this article, in which we have outlined some basic theoretical notions and reflections which, when taken together, provide a loose conceptual framework for starting to name, define and understand water (in)justice and the mechanisms and processes producing it. The embeddedness and situatedness of (in)justice, and of the possible ways to remedy it, is central to the approach we propose. It brings with it an acknowledgment of diversity and plurality – in views, knowledges, rights systems, ideas and norms about fairness, etc. This does not mean that we embrace a cultural relativist stance or that we deny the larger similarities across specific instances of injustice, or the parallels in the processes and mechanisms that produce them. One obvious similarity between very diverse cases of water injustice is that they often entail transfers of water from supposedly less to more productive uses, and more specifically from lower-value food crops to high-value export crops or industries. Such transfers are actively promoted and legitimized through the uniformization of rights systems that are part of neoliberal (policy) discourses, which have become quasi-hegemonic in thinking about and acting on water.

We propose a conceptualization of 'water justice' that explicitly thematizes its relational character and contextuality, and that recognizes both its material and economic dimensions ('redistribution') and its cultural and political dimensions ('recognition' and 'participation', respectively; cf. Fraser, 2000; Schlosberg, 2004), while taking place in the arena of struggles for socio-ecological justice ('socio-natural integrity'). For this, we argue that it is important to recognize that politics and power as much pervade the allocation of water as ways of thinking and talking about it. Changing water allocations – whether through reform policies, new technologies, or markets – implies complex processes of political contestation, negotiation and struggle. These happen around the water resources themselves, but are also about the rules, norms and laws that form the basis of distribution processes and about who has (or should have) the political authority and legitimacy to decide these questions. Contestations and struggles also occur over the discourses and knowledge used to frame or legitimize water policies or ways of distributing water. In addition, we argue for a post-positivist and constructivist epistemology and a reflexive research attitude; a conception of nature and society as mutually constitutive; an

understanding of water control as multi-layered, complex and 'wicked'; an ontological definition of 'water rights' as reflecting and co-constituting locally and historically specific constellations of property relations, expressing and embedded in social relations of power; and an understanding of the scalar dimensions of resistance and civil-society action.

We are aware that water justice will not happen as a result of accurate theories and well-intentioned philosophies, and that it cannot be 'legally engineered' or 'donated' by policy makers. It instead calls for the transdisciplinary co-creation of knowledge, involving mutuality and reciprocity among water users, policy makers, activists and scientific communities. It starts with taking seriously, and developing awareness of, the many manifestations of injustice, from brutal water grabs to much more subtle politics of disciplining and normalization. It involves the critical questioning of 'official water truths' and their claims to rationality, efficiency, democracy and equity. In the end, though, change will only happen through critical engagement and solidarity with those who experience injustice. It importantly consists of attempts to creatively link demands for redistribution with those for cultural recognition; of efforts to improve the political participation of those who are excluded or whose voices are silenced; and of actively interweaving diverse struggles for water justice across context, differences and scales.

Notes

1. The Justicia Hídrica/Water Justice alliance (www.justiciahídrica.org) is a research and action network that sets out to support water policies that contribute to an equitable distribution of water and democratic allocation procedures. As a broad alliance of researchers, policy makers, professionals and grass-roots organizations, its activities combine: interdisciplinary research on the dynamics and mechanisms of processes of water accumulation and conflicts; training and awareness-raising of a critical mass of water professionals, leaders and policy makers; and support for civil-society strategies that engage with the questions, needs and opportunities of marginalized groups.
2. A crucial difference between liberal theorists like Rawls and Miller on the one hand and Young and Fraser on the other is that the former, in their liberal search for perfect justice, assume and subsume recognition "within the distributive or procedural spheres of justice" (Schlosberg, 2004, p. 520).
3. These fairness or equity perceptions differ enormously; therefore, they cannot be reified or romanticized and constitute a power relation in themselves.

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