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COMMENTARY



Water justice: why it matters and how to achieve it

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Water is life. (Ancient proverb)
Thousands have lived without love, not one without water. (W. H. Auden)
When the well is dry, we learn the worth of water. (Benjamin Franklin)
Whiskey is for drinking; water is for fighting over. (Mark Twain)

The importance of water

We all know the importance of water, but the quotes above help refocus our attention on the many ways that water is crucially important in our lives. Water is the most critical resource on earth because it is biologically necessary and non-substitutable. We need water to hydrate and survive as none of us can live without water. While 70% of earth is covered with water, only 2.5% of the earth's water is freshwater. That small amount of freshwater is used for a variety of needs: mostly for agriculture, then industry, and lastly municipal and domestic use. There are thus numerous competing demands over available water, a resource that is keenly contested and fought over (UNDP, 2006). Clean, safe water is vitally important as it can affect everyone's ability to live a full and healthy life, engage in social progress, and have ecological sustainability. Indeed, one of the Sustainable Development Goals for global development is dedicated to water (SDG6), setting the ambitious goal of universal and equitable access to safe and affordable drinking water by the year 2030.

Despite the recognition of the importance of water and society's complete dependence on it, shortages of water are common around the world. There is uneven distribution of water across the globe, and there is unequal access to the limited amounts of safe water that exist. Water is frequently dammed, piped, polluted and contaminated, resulting in some people gaining while others lose out. Given such realities around the world, water needs to be viewed as a cross-cutting multi-sectoral entity that connects across categories, not just for a specific or singular purpose, the way it is often treated. Governing water is of increasing international concern, with numerous global conferences, policy pledges and action plans occurring annually. A large number of policy documents, ranging from the United Nations' annual World Water Development Reports to every country's water planning documents, elaborate the growing water crises in different forms across scales and the increasing pressures on existing water sources. Scholars and activists have similarly raised the alarm of growing

water crises individually and collectively (e.g. Barlow, 2007; Santa Cruz Declaration on the Global Water Crisis, 2014; Rome Declaration on the Human Right to Water, 2017).

The remarkable thing about water is that seeps across all boundaries and all aspects of life, as it is simultaneously social, economic, political, institutional, cultural, spiritual and ecological. Water plays a central role in various aspects of our lives that we may take for granted or not be aware of: from urban planning, industrial production, agriculture and food production, international development, and economic policies to political strife and conflict, geopolitical instability, ecological sustainability, people's cultural practices and sense of self, and their spiritual and religious practices. Water thus needs to be a lens through which we understand and appreciate complex social and environmental issues (Boelens, Hoogesteger, Swyngedouw, Vos, & Wester, 2016; Budds & Sultana, 2013; Zeitoun et al., 2014). This underscores the importance of understanding hydrosocial cycles (water–society connections) rather than just paying attention to the hydrological cycle (Linton & Budds, 2014). Water crises are thus never only just about water but much more. In what follows, I analyze why it is important to advance knowledge and civic action in water justice as well as how to involve the general public in creating more equitable and inclusive water worlds. Now is the time for active engagement by the average citizen, which is what this piece focuses on.

The global water crisis

To understand the complexities of the ways water affects societies, it is important to know about the existing crises around the globe before possible solutions can be envisioned. There are different uses and values of water across places, where many people experience water crisis and thirst while others do not. Most critically, there are great inequalities around the world in access to safe drinking water. Consider these facts: while some people have plentiful and easy access to water, where they can take water for granted, over a billion people globally do not have access to reliable, safe, clean water daily. There are over 500,000 annual water-related deaths (contamination, water-borne diseases) and 1000 deaths per day of children under the age of five (WHO, 2016). These figures are unconscionable in this day and age. We are witnessing increasing water problems and struggles worldwide that are cumulatively leading to greater water crises around the world (Doorn, 2013; Mehta, 2016).

The global water crisis that is progressively becoming acute requires urgent attention to the processes through which such realities are being created and perpetuated. Water is rapidly becoming a scarce resource, but this is not just about physical quantities of water but also about quality, accessibility, affordability and reliability. All these aspects are part and parcel of the ongoing crises. There are great differences in the history, spatiality and social difference in who has access and control over what kind of water across the world. Inequities in water access, use, management and control further complicate the problems that exist. Water crises affect communities in many different ways, and it is imperative to understand the multifaceted ways water management can facilitate or hinder well-being, progress and development. A few multi-scalar processes that are compounding problems globally and need greater attention are the following.

First, climate change will exacerbate already-existing water crises around the world (Bates, Kundzewicz, Wu, & Palutikof, 2008). This is because climate change is essentially

about changes in the hydrological cycle and related ecological change. Climate change will exacerbate existing disparities and create new water crises (Falkenmark, 2013; Wescoat, 2014). Even in places that currently have plentiful water and where water is often taken for granted, there should be concern about water on a finite planet. Second, water is increasingly under threat by attempts to privatize and control water sources under global forces of neoliberalism. The rising commodification of water means that water is given an economic value driven by a market logic (McDonald, 2016). This often results in the poor not being able to afford water at all (Bakker, 2010; Shiva, 2002; Swyngedouw, 2005). Such realities further exacerbate inequities in access to water. Third, keener recognition is needed on the connections between secure access to safe water and increased educational, employment and health opportunities and reduced gender disparities, as women are often the managers of water in the home (Cleaver & Elson, 1995). Water is very much a gender issue, as women and girls are burdened with providing water for their families worldwide (O'Reilly, Halvorson, Sultana, & Laurie, 2009). They spend hundreds of hours a week fetching precious water, undertaking care work or domestic labour that involves water, which is important for the household's survival and flourishing. Water thus comes to affect individuals and their roles in the home and society at large but is highly dependent on the physical and emotional labour of women and girls (Sultana, 2011).

To summarize, the various water crises that currently exist will only get worse with climate change as well as increased privatization of water. These two processes need more urgent attention from those with authority. Water is essentially about power – the power to decide, control, allocate, manage – thereby affecting people's lives. This is intersectionally experienced by gender, class, race, and other axes of social difference, therefore affecting different groups of people in varied ways. Isolating a specific water issue thus often misses out on broader connections that tie peoples, places, policies and ecologies in far-flung places.

Connections between the Global North and Global South

Water crises are no longer issues just in the so-called Third World or Global South, as they are becoming widespread in the Global North, too. It is thus urgent and imperative that we pay more attention to the different ways that water affects people in different locations and notice the numerous connections and commonalities. Some of the issues found in the Global South versus the Global North may vary depending on context, but they are similar in that water crises produce suffering and injustice that can be solved.

In the Global South, there are various kinds of water access issues, with millions without access to clean water across different countries. For instance, fetching water from far away, during droughts and floods, is an arduous task that results in girls dropping out of school, and women missing out on opportunities for employment and leisure. This has inter-generational consequences for sustainable development. Burgeoning slums or informal settlements in large cities often have no water or sanitation at all, where millions of urban poor live without any legal access to municipal water supplies, even if they live close to water sources (Bakker, 2010). They pay exorbitant prices for water, often illegally obtained, in the various expanding mega-cities such as Cape Town, Dhaka, Mumbai and Lima, among many others. Marginalization and exclusion from having access to and benefiting from safe water in both cities and countrysides demonstrate the ways that water

is a health and well-being issue as well as about development politics and inclusive citizenship for almost all developing nation-states (Ranganathan, 2014; Sultana, Mohanty, & Miraglia, 2016; von Schnitzler, 2008).

While water is important in addressing poverty and development planning in all countries, social differences dictate who matters and who counts, and thereby influence who gets clean, safe, sufficient water. Technological and infrastructural solutions are often pursued, but these can be both positive and negative. We need to look at impacts, benefits and negative outcomes across scales and peoples. For instance, building dams on rivers to control or divert water through massive pipelines and canals has led to water being taken from one area to another, depriving local communities of traditional water sources (Richter et al., 2010). Solving water issues in one area may exacerbate problems elsewhere. Some of the starker examples of intensifying water problems while trying to solve them are large dam and diversion projects, such as the Three Gorges Dam in China (Stone, 2011), as well as not equitably sharing transboundary rivers (Salman, 2006; Zeitoun et al., 2014). Socio-ecological and spatial analyses of costs and benefits demonstrate the true complexities and politics involved in each instance. Infrastructure and water technologies have also created tensions between water for city versus water for rural areas, as well as between humans and nature (Finewood & Holifield, 2015).

In the Global North, water concerns and crises are becoming increasingly important and apparent (March & Sauri, 2017). Some examples from the US demonstrate the crises in a country of financial and political might. The most widely known case is the lead poisoning in Flint, Michigan, where water quality failures and lack of resources and political will to resolve water contamination resulted in years of exposure to high amounts of lead in drinking water (Butler, Scammell, & Benson, 2016; Morckel, 2017). Contaminated drinking water supplies exist in many cities, due to aging infrastructure problems across the US, amid a lack of priority by local, state and federal government. While Flint is the most dramatic case of poisoned water in a racialized minority community that remains unresolved to this day, other cities across the US have contaminated water at varying levels, and a concerted effort to fix the infrastructure and provide safe water to citizens remains a low priority.

The recent California drought is another example, where a historical drought resulted in lack of water for irrigation of crops and demonstrated the different understandings and acceptances of the importance of water. During the drought, bottled water companies were extracting groundwater to sell water to other places while residents had water restrictions, creating considerable controversy. Lastly, Standing Rock has been an example of an ongoing crisis of governance, where protecting an indigenous water source against a large corporation and the Dakota Access Pipeline has gained international attention (Whyte, 2017). The Water Is Life movement emerged with global support, as water protectors have been fighting to prevent the pollution of sacred and necessary water sources on Native American land. But it has been about more than water, as it is also about indigenous sovereignty, native land rights, and state-led violence against protestors and water protectors.

Water justice

All these examples demonstrate water's connection to broader issues of democracy, citizenship and development. We are thus seeing crises, injustices and sufferings of different kinds around the world, in wealthy countries as well as in developing countries. This is why water justice becomes an important analytical and political issue and needs broader public understanding and support (Ioris, 2016; Joshi, 2015; McLean, 2007; Neal, Lukasiewicz, & Syme, 2014; Perreault, 2014; Zwarteveen & Boelens, 2014). Water justice requires appreciation that there are no easy, simple or singular solutions to the global water crisis, and that water problems cannot be resolved through technical solutions alone but require broader recognition that they are inherently ecological, political and social issues simultaneously. Water justice is based on principles of fairness, equity, participation and justice. Justice has to be 'relational, situated, and context-sensitive rather than universalistic' (Roth, Zwarteveen, Joy, & Kulkarni, 2014: 949). While water justice is often tied to anti-privatization movements, remunicipalization efforts, and ensuring public water for all (Hall & Lobina, 2007; McDonald, 2016), water justice activists and scholars have also advocated and mobilized around important concerns of democratizing water governance, recognizing struggles, and addressing equity and social injustice (Joy, Kulkarni, Roth, & Zwarteveen, 2014; Zwarteveen & Boelens, 2014). Scholars have simultaneously promoted ideals for water ethics to be adopted in water governance (Groenfeldt, 2013). Brought together, such principles guiding positive actions for water justice can result in context-specific solutions.

The status quo of water crises around the world is unacceptable to many who have demanded changes to the system we live in. Global social justice movements over water (often known as water justice movements) have been central in efforts to change existing realities and share information on the various water crises and injustices globally (Barlow, 2007; Davidson-Harden, Naidoo, & Harden, 2007). Resistance and justice movements in different places over the last few decades highlighted the importance of water and also how to relate to water, and what needed to change in each context. These movements raised awareness of the broader issues linked to water, highlighting both local crises but also global connections, and argued for a right to water and sanitation in the face of dispossession, exclusion and inequity. The cumulative effort of activists, scholars, practitioners, community members and others were successful in transforming international policy a few years ago, which is no small feat.

In 2010, the United Nations passed the resolution on the Human Right to Water and Sanitation, which states: 'The right to safe and clean drinking water and sanitation is a human right that is essential for the full enjoyment of life and all human rights' (UN, 2010). This resolution was approved in both the UN General Assembly and the UN Human Rights Council. Water justice advocates were instrumental in bringing this international policy into fruition. However, the right to water was not ratified by all countries; 122 countries supported the resolution, but 41 countries abstained, including the US, Canada and several European and other industrialized countries. There were no votes against. The resolution means that the right to water is universal and must be ensured by governments. Guidelines developed for the progressive realization of the right to water included paying attention to quality/safety, quantity, reliability, affordability, accessibility, availability and acceptability. Such aspects are not prescriptive and need to be figured out in each context

by each country (Sultana & Loftus, 2012). The logic driving water management in any situation thus becomes important to investigate: is it about equity and justice or something else? This is important to heed since rhetorical invocations of the human right to water do not always imply equitable, affordable, fair or just water governance.

To ensure that more people have access to clean, safe water daily, greater attention to a range of factors is needed: equity, sustainability, rights, fairness, local accountability, democratic process, and addressing different needs. What has become evident over the years is that even without national policy support, the discourses around the right to water can open up and foster conversations around democracy, citizenship and development, often acting as a galvanizing force for the poor and disenfranchised to demand water democracy and citizen participation in water management (Mehta, Allouche, Nicol, & Walnycki, 2014). Understanding water justice and the right to water thus helps put into perspective the water-related issues that exist locally and globally, how peoples and places are all connected, and how water is entirely about power and control yet is the very stuff of life (Sultana & Loftus, 2015). Successful water justice movements have been the historical one in Cochabamba, Bolivia, among other ongoing cases, such as the remunicipalization of many urban water utilities to provide more affordable water to the poor by publicly held entities (such as in Jakarta, Indonesia). Community-based water management and indigenous solutions have also enhanced the democratic participation of people in managing their water locally (such as those found throughout Latin America, Asia as well as in Africa) but on much smaller scales.

What can be done

Increasing education and awareness on water issues and water justice more broadly is essential in advancing citizen participation in water governance. Those who are already suffering from water scarcity or injustice are often more aware than those who do not, but they are not always knowledgeable of complex connections across scales and sites. It is often difficult to galvanize those not currently feeling the effects of a water crisis to see how they are connected to watersheds throughout the world through the very things they consume and their lifestyle choices. But everyone should care about the global water crises and water justice, not only because it's the right thing to do but also because water crises may affect water-secure areas some day very soon. There are several things individuals, especially students and educators, as well as local communities, can do towards advancing cross-scalar water justice. I discuss some below.

Water education: learn and become aware

We need greater robust education on water so that all the multiple and complex connections can be made clear and people are empowered with knowledge to make informed decisions and take action. Once each person educates and empowers themselves, they can then educate and empower others. An easy first tool in schools is to cultivate ways to increase knowledge among students about their local watershed, and also undertake exercises such as measuring their water footprint online (waterfootprint.org). These first steps can help build water consciousness that is sorely lacking,

especially among the global wealthy populations and water-rich locations. This can be followed up with further research and readings on important water issues to enhance repertoires of knowledge and education about water that can encourage greater civic engagement in water.

Water investigation: ask the right questions and research

Asking the right questions in any situation is important as context matters. So is undertaking complex analysis to understand complexities and factors involved. Many issues may take time to solve, so commitment is essential. Through greater water education, individuals can focus on local–global connections, examining complexities that are often overlooked, understanding why things are the way they are, where power lies, and what could be changed to improve situations. Asking difficult and challenging questions about these aspects avoids localism and myopic solution-seeking. Encouraging students, average citizens, and community members to join water scholars, practitioners and planners to collect and share information and knowledge can help them also become water educators and investigators in their locality. Civic engagement in water can then flourish.

Water ethic: rethink your relationship to water

Encouraging people to investigate the ways by which each person’s lifestyle and choices impact water resources around the world can help people make more informed decisions. It is important to recognize that our relationship to water is the product of various struggles and processes, and these reflect much deeper societal, political, economic, legal and ecological issues. Through what is eaten, worn, used, and thrown away on a daily basis, everyone is already connected to faraway and near places, people, and their waters. Thus, learning to cultivate a water ethic and changing water habits become building blocks to getting involved in issues where water plays a central role in various struggles. Cultivating an ethical relationship with water can help shift consumption and production patterns, thereby impacting water governance more broadly.

Water justice and advocacy: get involved and become a water warrior

To advocate for water justice, we need to think critically and commit to making changes in our lives and advocating for others. Getting involved in local or regional water justice efforts can be a good start. But this requires recognition that water justice is never only local, but cross-scalar and global. It is also critical to pay attention to the ways that water is about gender, class, race, ethnicity, identity and place, and appreciate how it is linked to broader issues of social justice. Such action and advocacy can foster collectivizing, alliances, and working with others to promote equity, human rights, and justice. Changing institutions, laws and norms are long-term goals that require sustained involvement, which is important to cultivate and support. The first step, though, is to commit and remain engaged, and thereby become a water warrior. Galvanizing other water warriors can create transformations.

Water democracy: promote equity and inclusivity

We need to democratize how water is managed and governed, so that various voices can be heard and included. Thus, people need to participate in water management issues to the extent they can. Governing water must include voices across the spectrum and across scales – local, regional, national, international. This means ensuring that the poor, the marginalized and the silenced are given a voice and heeded in planning processes. An important way to do this is to ensure that water is seen as a common good or public good. This means learning about challenges to the realization of the human right to water, as well as understanding how power operates across scales and places. Such insights can help nurture an ethos of water democracy.

To create a water democracy, all the prior ideas and propositions have to be appreciated, understood, negotiated contextually, and adopted. The principles of equity, collaboration and inclusivity must be central to this. Through such processes, it is also crucial to recognize and appreciate that water is ultimately a moral issue, and not just about access, distribution, protection, conservation and consumption. It is thus about politics and power. Those who have the power to control water can decide whose lives and livelihoods matter. It becomes imperative to stress to decision-makers and those in power that water is essentially a moral and ethical concern, not just an economic one or one to politicize at the expense of people's and the planet's well-being. Water issues are thus never just only about water, but much more.

Conclusion

In promoting education about water and cultivating consciousness about water, it becomes imperative to reinforce and encourage hope and action in the face of daunting crises and enormous struggles. Across age groups, students can be encouraged to learn more about water, to think differently, to think across scales and spaces, and to be open to critical thinking and research to build their arsenal of knowledge, make informed decisions and actions, and advocate for others. Creative ways that challenge average citizens to learn more, to get involved, and to cultivate opportunities for friends and family to learn and be involved are increasing through the efforts of various non-profits, community groups, and activists. For instance, encouraging citizens about what changes each person can make in their own life individually can be done in multiple ways that can actualize change over time – such as to conserve water, enhance water stewardship, buy and consume more carefully and ethically, think long-term about climate change, get involved in water justice movements, understand how political decisions affect water, become engaged and participate in decision-making, and build civic networks around water. Fostering a water ethic and promoting water knowledge can assist in mass education from the bottom up. This can focus on building collectives that can scale up at different levels, like schools, towns and states, and thereby promote involvement to bring about change. Starting small is easier and more manageable, and the various global water crises do not have to seem daunting or definitive, or such that they can only be solved in a top-down manner. Advancing an ethic of care towards water is the first step for revolutionary changes in our relationship to water and to promote

water democracy. This is why understanding and appreciating water justice is important for transformations that are equitable and inclusive. Fighting for water justice means creating a more equitable and just world.

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