

A satellite photograph of the Mississippi River delta region. The river is a prominent dark blue-green line winding through a vast, arid, tan-colored landscape. The river's path is highly irregular and meandering, especially in the lower half of the image. The top of the image shows the river's mouth where it meets a larger body of water, likely the Gulf of Mexico, with a dark blue hue. The surrounding land is mostly flat and devoid of significant vegetation, with some lighter-colored patches that could be salt flats or sand dunes.

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OPEN RIVERS :
RETHINKING WATER, PLACE & COMMUNITY

PARADOXES OF WATER

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from multiple perspectives within and beyond the academy.

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The cover image is of The Nile River, July 19 2004. To the right of the Nile is the Red Sea, with the finger of the Gulf of Suez on the left, and the Gulf of Aqaba on the right. In the upper right corner of the image are Israel and Palestine, left, and Jordan, right. Below Jordan is the northwestern corner of Saudi Arabia. Jacques Descloitres, MODIS Rapid Response Team, NASA/GSFC.

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INTRODUCTION

GUEST EDITOR'S INTRODUCTION

TO ISSUE ELEVEN:

THE PARADOXES OF PEACE AND WATER

By Joseph B. Underhill

This issue of Open Rivers, anticipating and drawing on the upcoming Nobel Peace Prize Forum in Minneapolis, explores the complex intertwining and paradoxes of water, conflict, and peace. Anything so fundamental and complex

as water or peace must, of necessity, contain seemingly contradictory or opposite qualities. The beauty of water is in how it reconciles and provides space for those complex, muddy mixes of qualities and characteristics. The contributors



The mixing of the clear and turbid, rural and urban at the confluence of the St. Croix and Mississippi Rivers (detail). Image courtesy of Minnesota Pollution Control Agency (CC BY-NC 2.0).

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to this volume help us to see the manifold ways in which water, particularly in rivers, is a source of both peace and conflict, life and death, connection and separation, purity and filth, the sacred and profane. At a time when the human impulse to simplify and isolate from these complexities of the world is so apparent, these voices call us to recognize and live into what it means to exist on a planet soaked in water, and as such, a world saturated with paradox.

The Nobel Peace Prize Forum, taking place at [Augsburg University](#) on September 13-15, 2018, will include, among many others, the authors of the five forum articles in this volume. Each explores different dimensions of the complex relationships between humans and water. Water, as the great solvent, carries with it our collective

waste, and in washing away our sins, then tells the tale of them. To know how we are doing, we need look no further than the waters around us. Clear waters reflect attentiveness and mindfulness. Polluted waters tell the tale of late industrial capitalism and the collective impacts of what is being called the Anthropocene—stolen lands, removed populations, topsoil erosion, contaminants, PFCs, and eutrophication. In this great rinse and mix of stories, we find room for both hopefulness and grave concern. Today we swim and drink and fish from the river, yet at its mouth in the Gulf lies the hypoxic dead zone, so rich in nutrients that it chokes out all marine life from an area that grows to the size of Connecticut. At the same time (but for different reasons), the Louisiana Delta itself dissolves into the Gulf at a rate of about an acre every two hours.



The mixing of the clear and turbid, rural and urban at the confluence of the St. Croix and Mississippi Rivers (detail). Image courtesy of Minnesota Pollution Control Agency (CC BY-NC 2.0).

As Irene Klaver recounts in her essay, the early Greeks extensively explored these paradoxes of change and constancy; we see variants of these paradoxes in so many aspects of water in our lives today. Economists point to the water-diamond paradox that, despite water's value, we pay so little for this vital substance. Water is both something wild and civilized, a force that we try to control, yet one that is continually slipping

through our fingers. It is at the same time global and local, universal and particular. There is both the great joy of being in water (the "oceanic feeling of oneness") and the terror of the deep. It is a source of great pleasure, but also of "water torture" and waterboarding. Too much and we drown; too little and we die of thirst. We use it constantly, but instead of being "used up," it is endlessly recycled.

Holy Water

Given these complex and contradictory qualities of water, it is no surprise then that it is both sacred and profane. From the beginning, humans have gone to the watering hole to dip their cup and drink. We have planted seeds and raised animals and gathered around the table for the communal meal. Terje Oestigaard, in his rich account of the religious significance of water, reminds us of the multiple ways that religious traditions have conceptualized water: as purifier and purified (consecrated); as punishment (flood) and blessing (nourishing rain); as the body of the goddess, a divinity itself with the ability to purify, even as it is contaminated with the untreated

sewage of millions of people (as in the case of the Ganges). Oestigaard's essay, drawing on his fieldwork in Ethiopia and Uganda, delves into the complex theology of water at the headwaters of the Blue and White Nile. The source of the White Nile is seen as flowing directly from heaven—the holiest of waters. In contrast, the Blue Nile is conceived by the local community as not having special religious significance, while the waterfalls and cataracts there are seen as powerful spirits, in need of appeasing, sometimes with blood sacrifice.

Thirsty People on a Watery Planet

Reflecting this theological notion of water as both a divine gift and divine punishment, water is both abundant and scarce. The figure is often cited that only 1 percent of the earth's water is readily available for human use. But the flip side of that equation is that we get by with using only a fraction of that 1 percent, and that there is still 99 percent of the world's water available as a reserve. Each year, humans use about 5 cubic kilometers of water; but each year, the earth receives from the heavens 500,000 cubic kilometers of distilled water in the form of rain. The earth's surface receives in one hour more solar

energy than is used by humans in an entire year. In this aggregate sense, our cup runneth over. As with most resource issues, it is a matter not of the total supply, but how access to those resources is distributed and controlled. The global economy produces a superabundance of food and material goods, while over a billion people still live in the absolute poverty of less than \$1.25 a day. In the Jordan River Valley, Darfur, or the Aral Basin, water demand far exceeds supply, while wealthy countries and communities enjoy virtually unlimited access to clean water. To meet the UN's Sustainable Development Goal 6 (Access to Clean

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Water and Sanitation) will require providing almost a billion people with clean drinking water, and over 2 billion people with access to sanitation by the year 2030.

This contrast between plenty and water scarcity is being exacerbated by climate change. Al Gore, in his 2007 Nobel Peace Prize lecture, characterized it as “a planetary emergency – a threat to the survival of our civilization.” The Intergovernmental Panel on Climate Change (IPCC), likewise noted the “the link between climate and security” has “raised the threat of dramatic population migration, conflict, and war over water and

other resources as well as a realignment of power among nations . . . the possibility of rising tensions between rich and poor nations, health problems caused particularly by water shortages, and crop failures as well as concerns over nuclear proliferation.” In this issue, noted water scientist Peter Gleick provides us with an update and report on the many water management challenges we face in the twenty-first century and the very real dangers of water conflicts, as well as the ways in which we can mitigate these threats and reduce the chances of water being a trigger, or weapon, of war.



The mixing of the clear and turbid, rural and urban at the confluence of the St. Croix and Mississippi Rivers (detail). Image courtesy of Minnesota Pollution Control Agency (CC BY-NC 2.0).

Waters of War and Peace

The research clearly shows that water, as often as not, is the foundation for the diplomatic and negotiated settlement of disputes. The roots of the modern nation-state system are often traced back to the Treaty of Westphalia that ended the Thirty Years War in 1648. It is here that international relations scholars trace the problem of anarchy and the bloody dynamics of geopolitics in the Modern Age. Westphalia established clear lines between sovereign nation-states, but that story, as the Norwegian water historian Terje Tvedt points out, is also one of cooperation and recognition of the complex interconnectedness of communities in seventeenth-century Europe. The negotiations included extensive discussion and agreement on the joint management of shared waterways, particularly the Rhine River. So the Westphalian system is one in which the paradoxical coexistence of war and peace can be seen as two sides of the same coin. Giulia Giordano's article in this issue shows how water diplomacy, facilitated by a range of regional stakeholders such as Ecopeace, has provided one of the few promising areas for constructive dialogue between Palestine, Israel, and Jordan. These cooperative ventures are rooted in the fundamental need of everyone in the region to have adequate access to clean water and provide one of the few rays of hope in that otherwise deeply troubled region.

In seeking these pools of hope, the paradoxes of water call us to draw on the Greek notion of *metis*, a kind of artful cleverness, in addressing these political and environmental challenges of our day. In the face of these complexities, we must avoid the problem of over-engineering, or what John McPhee has called "the control of nature." McPhee, in his discussions of lava flows, the Mississippi Delta, and mud slides, points to this basic problem of the inevitable need for humans to attempt to control nature, in the face of our ultimate inability to do so. Living with paradox requires of us the difficult give and take that stands in contrast to the U.S. Army Corps of Engineers' mandate to maintain the flow of the Mississippi River at Old River Control at the precise and Congressionally mandated balance of 30 percent flowing down the Atchafalaya and 70 percent down the main stem. Historian Richard Campanella recounts these problems of over-engineering in the quintessentially paradoxical city of New Orleans, half of which is below sea level. New Orleans remains an illogical and magical place, its residents engaged in a defiant and dream-like suspension of disbelief in the face of this engineered vulnerability. And there are great lessons to be learned, both from the problems caused by over-engineering, and in the exercise of *metis* and hopefulness, by the residents of New Orleans.

Swimming in It

The answer to many of these "problems of Modernity," we are learning in our meandering way, lies in letting in more water, more mud, more wetlands. In trying to "stay dry," the city engineers have made the Crescent City, particularly the lower-income and lower-lying neighborhoods,

vulnerable to the kind of inundation and destruction experienced during Hurricane Katrina. Paradoxically, to keep the city from drowning, it must let in more water. Irene Klaver invites us to embrace this "fluid" and meandering frame of mind and draw on the wisdom of the river's

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slow, steady, circuitous traverse of a landscape. To move toward justice, peace, and sustainability will require a fuller and deeper understanding of how water works and flows. The multifaceted cultural understandings of water in our lives, and a balanced way of living with water call us not to be subjugating or conquering rivers, but dancing with them. We fight each other, we fight nature, we fight water, we fight rivers, trying to tame them and bend them to our will to suit narrowly defined human interests. And in the process, our societies and cities are made more precarious and less sustainable.

The Kenyan environmental and human rights activist Wangari Maathai concluded her 2004 Nobel lecture by reflecting on her childhood experience:

I would visit a stream next to our home to fetch water for my mother. I would drink water straight from the stream. Playing among the arrowroot leaves I tried in vain to pick up the strands of frogs' eggs, believing they were beads. But every time I put my little fingers under them they would break. Later, I saw thousands of tadpoles: black, energetic and wriggling through the clear water against the background of the brown earth. This is the world I inherited from my parents. Today, over 50 years later, the stream has dried up, women walk long distances for water, which is not always clean, and children will never know what they have lost. The challenge is to restore the home of the tadpoles and give back to our children a world of beauty and wonder.



The mixing of the clear and turbid, rural and urban at the confluence of the St. Croix and Mississippi Rivers. Image courtesy of Minnesota Pollution Control Agency (CC BY-NC 2.0).

Rivers, as I have learned in taking students out on them for many years now, are patient teachers. They flow endlessly, tirelessly, efficiently, the perfectly complex manifestation of the combination of water, topography, and gravity. The peace that “flows like a mighty river” lies not in the stark divide between black and white, but in the countless shades of brown and tan and grey. It is to be found neither on dry land, nor in the deep blue sea, but in the messiness of mud and wetlands, in the semi-permeability of the letting in of some things and the keeping out of others. Peace is in the both-and, not the either/or. As the authors in this issue show us, to be at peace is neither to surrender nor to try to walk on water; it is to be in the agonistic space between

selfishness and selflessness, to be in the water but afloat, to be both carried by the current but also steering the boat, in the ongoing dance between agency and contingency. In the images of the confluence of the Mississippi and St. Croix Rivers at Prescott, Wisconsin, we see this muddying of the waters. Human development, wilderness of a sort, run-off from the farmlands of the Minnesota River watershed, rail and road infrastructure, all combine to create the turbid and fecund mix of human and natural, primeval and modern that constitutes the waters we must navigate, with metis and a thorough embrace of paradox, if we are to create more just, sustainable, and peaceful communities.

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