

Water, our relative: trauma, healing and hydropolitics

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Abstract In response to austerity-led reforms of the Irish water sector implemented in 2014, a broad-based, popular movement mobilized and ultimately forced a reversal of these reforms two years later. At least in the formal, public debates, the main contention centered on how water services should be financed and controlled. This is not unique to the Irish case. As campaigns across the world testify, debates over ownership, financing, control and ultimately access to water services are often at the heart of water politics. Without sidelining these important campaigns and movements, this paper calls for other ways of imagining and doing water politics that begin by paying greater attention to water and our complex, uneven, and damaged relations with it. The article draws on inputs and discussions that arose during the day-long ‘Thinkery’ that gave rise to this Special Issue (organized in June 2017 in the University College Cork), as well as ongoing research with rural Group Water Schemes (GWSs) in Ireland. The non-spectacular forms of activism practised by some GWSs invites a form of hydropolitics that doesn’t shy away from the toxic legacies that accrete and materialize (unevenly) in different water bodies. Drawing on the important contributions of Chas Jewett in the ‘Thinkery’, the terms trauma and healing take on an important force for re-directing the energies, assumptions and intentions of more familiar forms of water politics.

Introduction

The ‘Thinkery on Water, Anti-privatisation Struggles and the Commons’ took place in the University College Cork, Ireland in June 2017. Building

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on two previous Thinkeries on the commons in 2014 and 2015,¹ which were more focussed on the general concept and politics of the commons, this Thinkery was specifically rooted in the lively context of water politics in Ireland. As Miriam Planas, one of the invited speakers from Spain, said in her opening remarks, 'Ireland was now one of the places in Europe where water politics was happening'. Miriam was referring to the recent mobilizations of Irish people against the government's attempt to introduce domestic water charges and metering as part of a broader reform of the Irish water sector. The Irish Government presented these reforms as an environmental measure to incentivize individual and household water conservation and as a means of raising much-needed revenue for upgrading a failing water system. But after five years of harsh austerity policies, a significant portion of the population saw them as another strategy to extract money from citizens in the wake of the financial crash and bail out (Hearne, 2015; Bresnihan, 2016). Under sustained pressure from a broad-based, popular movement, the Government suspended domestic water charges in 2016.

Many of the sixty or so people who participated as audience members at the Thinkery were no doubt drawn by their involvement in the anti-water charges movement and ongoing concerns about Ireland's water services. But the anti-water charges struggle was not the only form of water politics represented at the Thinkery. Over the course of the day, individuals raised the proposed Shannon pipeline project that will, if built, abstract water from the River Shannon to quench the growing water needs of the capital city 70 km away. There were representatives of anti-fracking campaigns, the long-standing anti-fluoridation of water supplies campaign, and those who voiced concerns about proposed flood defence walls being built in Cork City – another contested water infrastructure project.

Added to this mix of audience concerns were the three speakers, also from different contexts and representing different sites and forms of water politics. Miriam Planas, from Catalonia, is a leading figure in the Catalan-based movement *Aigua es Vida*, a coalition of environmental and social justice NGOs and citizens groups. She was invited to speak about ongoing campaigns in the Catalan region to reclaim popular control of water services from private, corporate interests that have managed water in the region for as long as people can remember. And while there is no memory of publicly managed water in Catalonia, a key concept in this struggle is 'remunicipalisation', a term that has grown in popularity amongst water justice activists in recent years (see McDonald this issue). A significant spur

1 For recordings of these Thinkeries see <http://www.oxfordjournals.org/cdj/resources/commons/> and <http://www.oxfordjournals.org/cdj/resources/commons-against-and-beyond-capitalism/>

to the movement in Catalonia has been the high number of people whose water supply has been cut-off by private water companies due to non-payment of fees. Non-payment and the recourse to such commercially-driven, anti-social practices on the part of private water companies increased in the wake of the financial crash. *Aigua es Vida* is thus situated within a broader and diverse platform of social movements in Spain that has coalesced in opposition to austerity measures targeting key areas of everyday social reproduction – housing, healthcare, transport and energy.

Marco Iob, from Italy, was invited to speak about the Italian Forum of Water Movements and their highly significant popular political campaign in 2011 to secure public ownership of the water supply. Again, this popular movement arose in response to attempts by the State to privatize the Italian water system in the aftermath of the financial crash. The constitutional focus of the campaign centred on the principle of water as a common good and not as a commodity. This campaign culminated in a popular consultative referendum in which more than 50 percent of the Italian electorate voted in favour of the public control of water. This democratic mandate has however so far been ignored by the Italian government and mainstream political parties and strategies to privatize municipal water services continues.

These two sites of water politics are firmly rooted in the European context. Both campaigns and movements have emerged in response to austerity policies which, as in Ireland, have sought to further erode public control over water services. They are connected through concerns with the ownership and control of water systems, and the implications such institutional arrangements have on the quality and accessibility of water services. The demand for remunicipalization and constitutional change are thus different strategies for warding off the further enclosure of public goods, understood as the privatization and commodification of water services.

The third speaker, Chas Jewett, is a Lakota–Dakota indigenous American from South Dakota. Chas was an organiser of the recent Dakota Pipeline protests, which pitched indigenous peoples against a mega-infrastructure project tied to the extractive logic of fossil-fuelled capitalism. This resistance was not primarily articulated in the name of climate change (as other protests against fossil fuel infrastructures have been) but in the name of indigenous sovereignty and the protection of waters, two struggles that are inseparable from the standpoint of indigenous political ontology. Unsurprisingly, Chas offered a different way of speaking about water and water politics. Drawing our attention away from recent, European experiences of austerity, sites of urban activism and an emphasis on the infrastructures and utilities that mediate the circulation and cost of water, Chas

recalled longer histories of colonialism and deeper considerations of our relationships with water.

As I describe in the next section, one of the most interesting aspects of the Thinkery was the extent to which discussion moved beyond the actions, roles and configurations of water utilities, the state and citizens, to thinking more fundamentally about water. What does privatizing water mean? What does reclaiming sovereignty mean? What does it mean to be responsible to water? What does it mean to be a better relative to water? Like a spiral, these questions brought us closer and closer to considerations of water and our complex, damaged relationships to it. With these questions in mind, the third section of the article turns to my own ongoing research with Group Water Schemes (GWSs) in Ireland. GWSs are community-managed water systems that provide drinking water to approximately 7 percent of the population, almost exclusively in rural areas. The history and development of the GWSs, outside of the state-managed, public water network and the ways this has enabled different relations between communities of people, physical infrastructures, landscapes and the wider hydro-social cycles in which they are embedded, invites a different way of thinking about water politics in the context of Ireland. The slow, difficult and often ambivalent forms of activism practised by GWSs offers a form of hydropolitics² that does not shy away from the toxic legacies that accrete and materialize (unevenly) in and through different water bodies. An important aspect of this form of water politics is the recognition that the damage that is being done to water, and has been over time, cannot easily be solved or remediated. There is no one agent or source of the problem; there is no return or resolution. But neither must this awareness result in despair or apathy. Returning to the important contributions of Chas Jewett in the Thinkery, the terms trauma and healing take on an important force for redirecting the energies, assumptions and intentions of our (often) taken for granted water politics. Attending to and fostering a more-than-human politics is not only an academic 'postmodern' perspective, but an appropriate and situated response to the realities of a permanently damaged world.

Water politics beyond austerity

Until the anti-water charges movement in 2014, Ireland was known for its relative quiescence and passivity in the face of austerity policies. Unlike Greece, Spain, even the USA, Irish people had not taken to the streets in

2. While 'hydropolitics' and 'water politics' are technically interchangeable I use the former to emphasize forms of political activism and intervention that do not precede an engagement with water but rather emerge through ongoing engagements with specific bodies of water and the different concerns they help articulate.

any significant numbers. This is important because the context of austerity and the narrative that water charges was 'just another austerity tax' became the dominant way of framing the politics around water charges and associated reforms in the water sector in 2014. 'The straw that broke the camel's back' became a popular refrain for narrating and explaining the unexpected popular response to water charges (Irish Examiner, 2015; Irish Times, 2016). There is truth to this. The proposed water charges, set to rise after the initial 'soft' period of four years elapsed, were a significant burden on large sections of the population already under pressure with mortgage payments, the high cost of living, the loss of jobs, the chronic stress and exhausting uncertainty that political and economic elites did not seem to understand.

In this broader context of austerity politics, the public debate surrounding the anti-water charges movement was dominated by a focus on the funding of public water services and the threat of further privatization. While we collectively learnt a lot about Ireland's decaying water infrastructure, parts of it inherited from the nineteenth century, and ongoing failure to comply with EU water directives, these problems tended to be routed back into more generic debates over the role of the State in maintaining and funding public services. Dominant voices from the formal political organizations within the anti-water charges movement used the proposed water reforms as a means of bolstering an anti-austerity political platform (Hearne, 2015). While understandable in the context of five years of austerity politics, this form of state-oriented, oppositional politics did not easily make room for other debates and concerns about water in Ireland, not least the cumulative impacts of Ireland's urban and agricultural (over)development on water quality. The anti-water charges movement was hugely significant, and will continue to be so, but there is a sense in which water became a proxy to play out a familiar forms of anti-austerity, urban-based politics, at least amongst the formal political organizations involved in the right2water movement.

While the water movement in Ireland was placed alongside other anti-austerity movements and campaigns, in Ireland and abroad, it was also situated alongside water justice movements around the world, often in very different contexts.³ The three speakers at the Thinkery, and speakers in the audience, reiterated this point: water was something that mobilized people, brought them together in common cause. This is captured in universal slogans that reject the commodification of water and claim as axiomatic the right of all to have access to safe, affordable drinking water.

3 Activists from Cochabamba, Bolivia and Flint, Michigan were invited to Ireland in 2015 and gave talks around the country.

Miriam Planas works with *Aigua es Vida*, which as its name suggests ('water is life' in Catalan) is an organization that foregrounds the universal dimension of water. As a coalition of water justice activists that includes environmental scientists and engineers, it also shares an understanding that water does not just flow from a tap but is part of a wider hydro-social cycle. But Miriam described how one of the biggest challenges faced by *Aigua es Vida* is the lack of knowledge they and the wider population have about their water systems. Most shocking in this regard was the absence of any publicly accessible data on the number of households that had their water cut by Agbar, the private water company that manages water in Barcelona, since the recession. For Miriam, reclaiming our knowledge about our water systems is the first step towards recovering sovereignty over our water. In the case of *Aigua es Vida*, this knowledge extends beyond the city limits, to better understanding the ecological status and pressures on the source waters that provide water to the cities. From Miriam's standpoint, the concept of remunicipalization has the radical potential to disturb the familiar separation of urban and rural, society and nature, by re-articulating cities as part of larger territories that need to be drawn into political processes and decision-making. But this is not easy. As Miriam said, 'from the cities you don't see what is happening outside the cities'⁴. Miriam talked briefly of a new alliance that had been developing in one part of Catalonia where grievances around the costs of water services was linked with the poor quality of the source waters, polluted in large part by commercial salt mining. Here were faint but present possibilities for making connections, sharing knowledge, building alliances, through the tracing of water and the people, places and processes it draws together and composes.

Chas Jewett also spoke about connections and relations between water and her community, but situated within a much longer history of oppression and genocide of the indigenous peoples of North America. She spoke about the many forms of systemic violence inflicted on her, her native people, and the lands in which they continued to live. This violence was not just enacted through direct physical abuse and exclusion but in the systematic destruction of indigenous, other-worldly relations. Other-worldly here does not primarily refer to the spiritual world (though this is part of it) but to radically other ways of being that were not perceptible within a

4 Similarly, Oscar Olivera [unofficial leader of the *Coordination for the Defense of Water and Life* during the Cochabamba Water Wars] talks about how much the urban activists in Cochabamba, Bolivia, learnt from the campesinos and irrigators about water during the Water Wars in 2000. 'For example, when you divert a river or an irrigation ditch the birds and animals disappear. The irrigators claim the water for all living things. I think this is what the irrigators are like and we learned a lot from them' (Olivera 2015, personal communication).

Eurocentric onto-epistemological order. Violence did not just work on individual bodies (as the liberal, humanist tradition would see it) but on the *relations* between different bodies, human and non-human, relations that sustain different worlds, including cultures and languages. Such networks and relations rely on practices and rituals of care that cannot simply be reduced to ‘cultural’ artifacts.

There has been a recent interest in turning the commons into an active verb, ‘commoning’, the making and re-making of mutualistic and reciprocal relations between situated collectives of humans and non-humans (Linebaugh, 2008; Bresnihan, 2015). We could also talk of enclosure as an active process, ‘enclosing’: the unmaking and breaking of such relations, or what Marisol de la Cadena has described as ‘the violation of networks of emplacement that make life locally possible – and even into the destruction of place’ (De la Cadena, 2010, 357). In this sense, the process of enclosure is not simply about the erection of fences or enforcement of private property. These acts of enclosure are effects of a more fundamental bifurcation of nature and society, human and non-human, that runs deep in Euro-Western thought despite historic and ongoing resistance – one only has to read the poetry of John Clare to find articulation of ‘indigenous’ political ontologies in Britain in the early nineteenth century (Bresnihan, 2013).

When Chas spoke of water, she spoke of it as a relative, and of the importance of being a good relative in every way. This demands what Chas called an ‘intense responsibility’ to our non-human relatives, the elements on which life depends. To be a good relative to water, and other elements, involves *collusion* – Chas’ word. To collude means to conspire or plot with someone. To collude is to collaborate, but unlike the origins ‘co-laborare’ (to work together), collude traces its origins to ‘co-ludere’, to play together (see Weston, 2016 on water and playfulness). There is something more precarious and contingent about colluding, less of a clear and formal plan and more of a figuring out. In the context of Chas’s talk, the choice of the word ‘collude’ was designed to de-centre the privileged position of humans as organizers of nature and agents of social change.

Lee Maracle, a member of the Sto:Lo nation in North America, writes that, ‘[w]e do not own the water, the water owns itself. We are responsible for ensuring that we do not damage the water’ (Maracle, 2017: 37). For Maracle, the problems all stem from the conceit that water can be owned – be it by an individual, a state or a community. She writes, ‘[w]e are entitled to overuse what we own, to destroy what we own – burn it should we choose – but if we don’t own it, then we can only engage it in relationship. We have to seek permission from it and to use it, we must care for it’ (ibid). This radically different ontological standpoint moves us away from the idea of sovereignty as possession, towards the idea of sovereignty as

responsibility and care – taking care of lands and the elements within it to secure sovereignty.⁵

As Cleo Woelfle-Erskine writes in this issue, the resistance at Standing Rock ‘articulated human health and tribal sovereignty as bound up with river health and river sovereignty’. Indigenous struggles for treaty rights have long articulated these reciprocal relations as sovereignties. The title of ‘water protectors’ does not describe something new. The spectacular opposition at Standing Rock can even detract from the more insidious, slow and less perceptible forms of violence that leach away the life-giving capacities of waters and lands in indigenous territories (Nixon, 2011). Chas briefly described the uranium mines that have been left open in Western South Dakota since 1978. Over that period, the Cannonball river, and other rivers, on which her people have relied has become gradually contaminated. They can no longer drink the water or eat the fish that swim in the water. The water is dying, and so the people are dying. This is just one toxic legacy, one form of chronic trauma that Chas and her people must contend with. In response, indigenous Elders and activists are focussed not just on protecting their territories but also finding ways to heal the damage that cannot be undone. According to Chas, one of the most positive outcomes of the protests at Standing Rock has been the mobilization of native resistance that has brought many native young people back to political engagement and the hard work of healing what has come before. This resonates with recent scholarship on the upsurge of indigenous politics (particularly in parts of Latin America) that understands the proposal to become indigenous as being about recovering that which we have been expropriated from, and ‘regenerating the practices that the expropriation has destroyed’ (De la Cadena and Blaser, 2018: 14). This should not be taken as an idealization of the indigenous, or nostalgia, but a move to recuperate *and* re-invent alter-ontological possibilities and potentials that have been excluded by the ‘singular biopolitics of improvement’ (De la Cadena, 2010: 346).

Chas’ contribution to the Thinkery clearly resonated with all those present. It was not just the force of her testimony or a detached sympathy for

5 In her own work, Marisol de la Cadena (2015) gives the example of an indigenous peasant woman, the ‘guardian of the lagoon’, refusing to sell her land to a mining company. De la Cadena (2015) proposes that the ‘refusal to sell’ may express a specific relation, ‘one from which woman-land-lagoon (or plants-rocks-soils-animals-lagoons-humans-creeks-canals!!!) emerge inherently together: an ecological entanglement needy of each other in such a way that pulling them apart would transform them into something else.’ In this sense, her refusal to sell may enact a locally situated world of interdependent entities ‘that simultaneously coincides, differs, and even exceeds – also because it includes humans – the object that the state, the mining corporation and environmentalists seek to translate into resources, whether for exploitation or to be defended.’

the tragic histories she recounted. The invitation to think about water as a relative, and what responsibility towards and collusion with water might look like, took the focus of the Thinkery away from financial, constitutional and other legal-institutional concerns and specifics – a shift from ‘valuing’ water to ‘caring’ for water. ‘We are all indigenous’, Chas exclaimed at one point to general approval. Though Ireland has had its own experience of colonialism and dispossession this was not what Chas was referring to. It is becoming harder and harder to avoid confronting the scale and intensity of ecological damage that extends, albeit unevenly, across the planet. Indigenous people around the world have experienced this most acutely, and for much longer, and it should come as no surprise that the tools they have developed to respond to and potentially heal such trauma may hold clues for the rest of us. How can the language of trauma and healing help us develop different forms of water politics than those which continue to rely on the limited language of problems and solutions, and the inflated promise of human agency?

Hydropolitics

Group Water Schemes (GWSs) are community-managed water suppliers in rural Ireland. Most of the GWSs developed in the 1960s and 1970s in response to the lack of public water supply in rural areas. In the last twenty years, however, GWSs have undergone considerable change within the Irish water sector. At first glance, it may be hard to understand how the experience of GWSs relates to the content of the Thinkery, indigenous water politics or the language of trauma and healing. This will hopefully become clearer but for now it is worth signalling some important points about the GWSs. First, GWSs originate from a history of uneven development that even today maps on to the geographic presence/absence of vital infrastructures. As the Irish state pushed to modernize, particularly after World War II, the networked, public infrastructures so crucial to this project were not extended to all areas. While benefitting from some state aid in the beginning, and then more significantly from the late 1990s, GWSs are effectively community-based responses to water provisioning. Second, this history of uneven access to state-provided infrastructure is reinforced through the uneven exposure of many GWSs to the main sources of water contamination, namely the pollution associated with industrialized, pasture-based agriculture and untreated wastewater. It is through a confluence of these exclusions that GWSs have had to develop localized ways of responding to these damaged environments, including caring for the water sources they depend on.

Some GWSs began functioning as early as the late 1950s (Brady & Gray, 2010). While small government grants helped them establish, voluntary, collective labour dug in the original water pipes and mains and has maintained the networks and supplies in the years since. They developed most rapidly over the 1960s and the 1970s, largely in response to economic demands and opportunities: tourism in the 1960s, and agricultural expansion from the 1970s. When Ireland joined the European Economic Community in 1973, it opened up Ireland's agricultural sector, and particularly its dairy industry. Piped water became necessary to not only facilitate this expansion but also for compliance with EU regulations on dairy production. Thus, transformations at the local, rural scale in terms of water abstraction and use were tied inextricably to transnational political economy and regulatory frameworks relating to public health and hygiene. But with the industrialization of the dairy sector from the 1970s, problems of eutrophication and microbial contamination of water also increased, damaging the very water sources that rural-based communities relied on.

By the 1990s, GWSs supplied approximately 29 percent of rural areas (Deane, 2003). In these years, GWSs have catered to agricultural as much as rural community needs, supplying water for domestic and commercial use from as few as two households to over one thousand (Brady & Gray, 2010). Two developments in the 1990s would re-shape GWSs' relationship to the state and their water systems. In 1996, under pressure from the 1990s anti-water charges movement (the predecessor to the more recent movement), the Government abolished domestic water charges within the public water network. Those on GWSs saw this decision as unfair as it meant funding from general taxation was channelled into the public water network and not the self-financing GWSs. In response, in 1997, GWSs organized to form the National Federation of Group Water Schemes (NFGWS) to advocate for increased state funding of rural water supply upgrades and subsidies for their operation.

At the same time, alarming reports from the EPA found that Ireland was consistently failing drinking water standards. In 1998, 42 percent of GWSs failed to meet standards for human consumption (*The Irish Times*, 2000). The main water quality risk at this time was from *Escherichia coli*, a bacteria that lives in the intestines of humans and animals and was beginning to flourish in the guts of Ireland's expanding dairy herd, entering into water courses and ultimately humans through the run-off of slurry of shit. New pressures mounted from the 1998 EU Drinking Water Directive, which had set new parameters for water quality and drew threats of prosecution and fines from the EU. The EU held the Irish state responsible for these compliance issues within GWSs. Many rural supplies did not have adequate

treatment or funding for upgrades, and faced strains from decades of agricultural stressors on source waters.

The Irish state moved to solve these water-related problems through increased investment in rural water services, largely through the Rural Water Program (RWP), established in 1998. Rather than incorporate non-compliant GWSs into the public water supply, the state gave GWSs the option to rationalize and upgrade through 'Design Build Operate' (DBO) schemes. DBOs formalized new relationships between GWSs and private water service firms to design, build, and operate water treatment facilities over a twenty-year contract. To make DBOs more economical, GWSs were encouraged to 'bundle'. Under one DBO contract, multiple schemes utilized one water treatment facility but continued to manage their own water distribution networks and source waters. Most DBO projects were negotiated and started in the early 2000s with the last significant DBO bundles agreed to in 2009. By 2009, more than 42,000 householders were supplied by water that had undergone DBO bundling upgrades (RWN, 2009, p. 1).

The DBO strategy for modernizing the rural GWS sector seems to anticipate much of the rhetoric and form that the national water sector reforms took in 2014. The way GWSs were enrolled by the Irish state to address non-compliance, namely through contracting with private companies and professionalizing, could be understood as the advance of private enterprise and corporate logics into a previously communitarian sphere. And while the capital costs of DBOs were covered 100 percent by the state, along with 85 percent of the operating costs (Brady & Gray, 2010), user charges and meters were introduced to help cover the remaining costs and incentivize conservation. But the transformations that began in the late 1990s in the rural water sector also generated less obvious or expected shifts in the relationships between GWSs and the water sources they relied on.

As part of DBO service contracts, private water treatment companies were only held responsible for the quality of water their plants treated when the source water entered at a standard agreed upon in the initial contract. Many of these contracts were signed on the basis of just a few, often insufficient samples. In the years since the contracts were signed in the early 2000s, deteriorating raw water quality has thus become more of an issue for GWSs, highlighting their responsibility not only for the networks of water delivery, but also the quality of their source water.

In certain respects, then, the demand for infrastructure upgrades and the DBO contracts that followed in the early 2000s facilitated new relationships between GWSs and the wider hydro-social cycles in which they were embedded. Connections between the catchment area, agricultural pollution and drinking water quality were magnified by financial arrangements and responsibilities created by DBOs. Since the mid-2000s, GWSs have focused

on source water protection in addition to upgrading water treatment plants. In 2005, for example, in collaboration with the Dundalk Institute for Technology, the NFGWS entered into a multi-year research project, the National Source Protection Pilot Project (NSPP) to identify and remediate points of source water pollution. The project using catchment as a way of conceptualizing and addressing drinking water quality, working with specific understandings of the hydrological cycle drawn from the WFD. It reframed drinking water treatment in GWSs by '[m]oving from a treatment philosophy to a protection philosophy' (Lianne *et al.*, 2011).

A different set of relationships surfaced in the NSPP's work that highlights connections between water, people, and landscapes. The agricultural sector's contribution to water pollution was unequivocal as the source of source pollution, according to the project's findings, and contributed to poor source water quality through slurry spreading, fertilizer use, as well as through soil compaction and nutrient loss. The NSPP entangled agricultural practices, agricultural policy and water quality, reframing source water as a part of the water infrastructure and demanding a different kind of political intervention surrounding water delivery. From the NSPP's findings, the NFGWS has encouraged farmers to install fencing to reduce animals and their faeces from entering waterways and to educate farmers on better practices to protect water supplies from agricultural slurry. The NFGWS has developed education programs for schoolchildren to learn about the broader catchment area, the hydrological cycle and its contributions to their drinking water. The NSPP also identified new areas of research to protect source water. This includes the NFGWS's research on protecting groundwater sources, studies on septic tank pollution and the delineation of zones of contribution⁶ through catchment mapping in GWSs.

At one level, much of this sounds technical and piecemeal, a world away from the spectacular anti-water charges demonstrations in the capital city. Indeed, the NFGWS were not opposed to water charges, recognizing the utility of making visible the costs and value of water to water users. The work of the GWSs is also inescapably localized – measures to protect specific bodies of water, a lake or even a single well. But at another level, the work of the GWSs, and their relations to their water sources, can disrupt well-worn and possibly limiting conceptualizations of scale and agency, particularly as they relate to water politics. While the source water protection measures undertaken by certain GWSs are localized, that does not mean there is no understanding of how global and entangled the sources

6 The zone of contribution is the geographic land area through which water percolates before recharging to groundwater wells.

of water contamination are. The imbrication of vast spatial and temporal scales with local, even molecular, scales only becomes perceptible through situated and shared forms of knowledge-making.

How can we animate and make perceptible the often invisible impacts and legacies of intensive agricultural development in Ireland? We have statistics. Between 1984 and 2014, the number of dairy farms reduced from 80,000 to 17,500. Over the same period, there was a 48 percent increase in output per cow, a 470 percent increase in output per farm, and a 340 percent increase in the average herd size (from 18 to 64). These developments were driven by successive national governments, EU agricultural policy and a globalizing market for dairy-based products. From one perspective – the one that is more easily measured – these developments have been a sign and source of progress: technological, economic and institutional innovations that boosted productivity, reduced costs and stimulated growth. From another perspective, these developments resulted in reduced employment in rural areas, consolidation of land in the hands of fewer, larger farmers, vertical integration of farmers into global supply chains (in which they have little power to influence price or quality), and a cascade of cumulative ecological impacts that are measured and assessed but escape serious political debate or discussion. These impacts include GHG emissions (the agricultural sector is responsible for the highest proportion of emissions in Ireland – more than transport or energy generation); deteriorating water quality through run-off from fertilizers and slurry; loss of biodiversity through the expansion of grasslands; and soil degradation through impaction of heavy machinery and overuse of fertilizers.

Over the course of a long afternoon, Joe, a long-standing and committed activist with the NFGWS, paints a vivid picture for me of what decades of intensive farming has incrementally and often imperceptibly done to the water, land, and wildlife in County Monaghan. He explains why the seemingly benign and banal policy to extend loans to farmers to build cow sheds so that cattle could be wintered indoors has untold implications for a part of the country that was not historically able for dairy production. He speaks rapidly and eloquently of how the soil has been compacted over the years from heavy machinery and permanent grass production, killing the living components of the earth, making it more difficult for the increased amounts of slurry and fertilizer to be absorbed. We stop at a small reservoir, the source for a local GWS. He cuts the engine of the car. At first, the silence suggests the peace and calm of the countryside. ‘When I was a child there was always a buzz. Now there is no buzz’, Joe says. Buzz is the white noise of life going on, nothing specific, just the morass of insects, birds, microorganisms, burrowing, feeding, reproducing and crawling.

Moving through the landscape, his territory, Joe is able to surface the toxic legacies of Ireland's agricultural modernization and his concern for these legacies in a way that statistics and more familiar environmentalist accounts are not always able to. He points out where former natural buffers of reeds that bordered fields have been removed as every inch of land is turned over to grass, facilitating the run-off of slurry into rivers and streams. He shows us a stream that has all but died from eutrophication, strangled by algae. He makes us imagine the bottom of the lake to picture the residue of phosphates that lie at the bottom of it: forty years of cow shit, fertilizer, and who knows what else, that has built up, bringing with it new risks and unknown problems for the GWSs reliant on that lake as a source of drinking water.

The Irish rural landscape tends to be perceived as green and benign countryside – an image that has been sold around the world. Joe was able to render perceptible a very different kind of landscape, one that surfaced the entanglements of microorganisms like *E. coli* with EU agricultural policy, cow sheds, and even increased intensity of rainfall due to climate change. The water that provides for the people living in that area is intimately and inescapably connected to these various histories and political ecologies that play out at vastly different temporal and spatial scales. As Astrida Neimanis (2014) has argued, water doesn't forget, it collects and holds what the earth cannot recycle whether we like it or not.

What or where is the potential politics in this? First, there is politics in making something perceptible *otherwise* (Murphy, 2006). This is the work of surfacing relations and entanglements that are otherwise made imperceptible – made in an active if unintentional sense because of the dominant ways we are enabled to perceive through cultural, scientific and other aesthetic practices. In this case, our perception not just of rural Ireland and its (damaged) landscapes but of the relations between the (over)development of industrial agriculture, water sources, infrastructures and our own bodily health. It is not that Joe or the GWSs are shining a light on the 'hidden story', more that they are seeking to trace differently the complex entanglements, across time and space, that compose the watery landscapes in which they live and on which they rely. Surfacing these connections involves understanding better the lifecycles of molecular organisms alongside political economic accounts of globalizing dairy markets: political ecology from the molecular to the planetary (see Murphy, 2013). These political ecological stories are not just waiting to be revealed but need to be actively constructed through situated knowledge practices that could potentially bring together different forms of expertise – history, water chemistry, geology, engineering, ecology and folklore. These accounts are not satisfied or driven by the need to identify a clear enemy or single causal agent. This is

not a local or even national story but one that spins out across time and space, incorporating, for example, a growing Chinese demand for infant formula manufactured from Irish milk.

Unlike the dominant way of framing deteriorating water services in the public network, the locus of the problem is not just the decaying physical infrastructures, the domain of the state, and thus aligned with relatively bounded questions of finance and state responsibility towards its citizens. The GWSs tie water quality to a lack of investment, and a longer history of state abandonment, but also to the deteriorating quality of water, and its ongoing re-composition and degradation brought about through changes in production and consumption – the ubiquity of microplastics, for example. But changing forms and trends in production and consumption are not the only matters of concern for good water relations in rural Ireland.

The groundwater supplies in County Roscommon seep and flow through a cracked Karst rock layer that lies beneath a foot of soil. The springs and wells this water surfaces to are often marked and remembered as Holy Wells with long, pre-Christian histories and meanings. Even with the tracing techniques of hydro-geologists and local knowledge, it can be hard, if not impossible, to be sure of where the source of waters consumed begins and ends when it is hidden beneath the surface of the ground. The main risks to water quality here are *E. coli* and *Cryptosporidium*, microorganisms whose hosts are both humans and animals, and whose passage into water courses is facilitated by leaching from septic tanks and, mostly, the run-off of slurry from the fields. These bacteria can live in the tiny cracks of the Karst rock; the Karst provides conditions for them to exist outside their usual hosts. There is little hope or expectation of getting rid of these bacteria entirely; neither is there any wish to stop raising cattle in the fields, a vital source of income and identity for people in Roscommon. Until recently, much of the County was on a Boil Water Notice (up to thirteen years for some parts of the water network) due to the presence of *Cryptosporidium* in drinking water supplies. This is partly the result of landscape features and changes that facilitate the existence and spread of microorganisms that cause ill-health, but also chronic under-investment in treatment infrastructures for this poor part of Ireland. How to respond to such a situation, where water contamination becomes part of a complex, temporally and spatially distributed series of encounters and processes? Source water protection projects offer some, faint response by opening possibilities for shared learning and intervening that arise through closer attention to the entanglements of bacteria, Karst, agricultural policies, institutional abandonment, animals and people.

Returning to the language used by Chas Jewett, we can say that the surfacing of these water relations and entanglements is about confronting the

often slow but accreting layers of trauma that our lands, water, air, and in turn selves, have experienced, if unevenly. How to heal this trauma? The GWSs have organized into a National Federation and sought and gained state assistance. This was at least in part due to their lobbying and representations to elected politicians. It also comes with compromise and conditions – including uneasy relations with private water companies and the need to comply with often demanding requirements. But this is only part of their politics. As outlined above, the GWSs attention to protecting their source waters has become a key focus of their activities. This work is not at first orientated towards changing the destructive political economy of Ireland's agricultural sector by appealing to government (though this might at some point become part of it). The work is first orientated towards the specific qualities of the water bodies they depend on, whether surface water or groundwater. By confronting difficult, if not quite impossible, situations through greater attention to specific bodies of water, the GWSs suggest a hydropolitics that does not easily translate into more familiar forms of (dualistic) water (nature) politics (society). From this perspective, 'politics can be understood as a space of ethics, as the proposition of social projects in which life flourishes through obligations and solidarities among diverse collectives, human and otherwise' (Liboiron, Tironi, Calvillo, 2018: 341). Political interventions become less about voicing a claim or representing an interest than about finding ways to care with others, to make the conditions necessary for living better.

Conclusion

The Thinkery began with an important intervention from Roisin O'Gorman (Theatre Department of UCC and contributor to this Special Issue). Roisin guided participants in a bodily exercise designed to enable us connect with the water within us. It was a ritual for remembering our watery selves. More than an icebreaker, this playful connection with the water within provoked us to consider what it means to be composed of at least 50 percent water. What does this watery composition do to our sense of self? What can physical invocations of this abstract knowledge do to our sense of self – training our attention to feel the ebbs and flows inside our bodies? As well as calling attention to our own watery bodies, the very idea of water within and without evokes a state of porosity: our bodies always inhaling and exhaling water, and with it the molecular selves of others. Water flows through bodies, but bodies also flow through water. This makes water bodies not only porous but also vulnerable. We were left

less certain of our assumed solidity and integrity, more conscious of the unseen traffic between our bodies and the environment around us.

Linton and Budds (2014: 170) define the hydro-social cycle as ‘a socio-natural process by which water and society make and remake each other over space and time’. While this helps to bridge the unhelpful divide between hydrological science and social context it isn’t quite messy enough. Water is just too multiple and entangled from the outset. As Feminist theorist Astrida Neimanis (2014) argues, water is never just water:

Water is surely a transcorporeal substance par excellence. Just as the many waters we ingest have travelled from and through other watery bodies (aquifers, rivers, reservoirs, treatment plants), so too do we return these waters to other bodies – albeit in new mixtures – to be taken up and absorbed into other human and non-human bodies: mother’s milk to a hungry infant, pharmaceutically-laced urine to plumbing system, tears of grief, or elation, to a growing garden. Cloud becomes rain becomes puddle becomes frog becomes bird becomes human becomes river... to become all over again (18).

Neimanis refers to this thoroughly imbricated, multiple water imaginary as ‘a more-than-human aqueous ecology – that is, an ecology in which humans and other bodies of water (animal, vegetable, meteorological, geophysical) are always already implicated, as lively agents, in one another’s well-being’ (Neimanis, 2014: 6). From this more-than-human aqueous ecology standpoint, the task becomes less about knowing about water (in order to protect it), and more about learning from water (in order to protect ourselves). In other words, to know better the needs of water so we can become better relatives.

What Neimanis, and other feminist STS scholars, posit in this radical queering of entrenched liberal, humanist perspectives on water (and nature more generally), is not a fuzzy eco-centrism that assumes we just need to re-connect harmoniously with a nature we have become alienated from. Recognizing the material and cultural depths of our ‘implicatedness’ with other bodies of water is deeply uncomfortable and troubling. In their thoughtful edited collection, Dorothy Christian and Rita Wong write, ‘[t]he challenge to reimagine ourselves beyond our skins, as a living part of a larger watershed, can hold both frustration and promise. A complex gift carries many lessons, two of which are interdependency with one another as well as dependency on fresh source waters, whose energies we need every day.’ (Christian & Wong, 2017: 7). Calling attention to intense interdependence on water, and, by extension, the extent of the industrially manufactured burden we have placed on water can be paralyzing. The ubiquity and penetration of industrial chemicals in living systems has led scholars to question the efficacy and appropriateness of traditional models of action

against toxicants such as clean up, avoidance or antidote (Liboiron, Tironi, Calvillo, 2018; Nash, 2006). It is hard to argue with this. As indicated in the previous section, the complex, long gestating and widely distributed political ecologies that have resulted in contaminated waterways and bodies make it hard to assign responsibility, let alone remedy the problem. We may be able to take back control of certain social and political institutions, even re-organize parts of the economy, but how will this help us cope with the traumatized, toxic environments we have inherited? And what other forms of politics might we conceive and experiment with that offer a different emphasis and direction?

It is both in posing and attempting to answer these questions that Chas Jewett's contribution to the Thinkery was so important. Along with Roisin's opening intervention, Chas' stories of both colonial violence and dispossession, and of enduring efforts to become a better relative to water, took the focus of discussion away from institutional politics and the social control of water. Yes these questions matter, but it is good to be reminded that water also owns itself (Maracle, 2017). How do we continue to do collective, hopeful politics without the mainstay of human agency? One place to look is indigenous politics where coping with 'blasted landscapes' and practicing more-than-human politics has a long history. But as we learn more about the interpenetration of human activities and water – from the changing molecular composition of water to the erratic climate that brings with it intense rain and flooding – it becomes easier (and harder) to acknowledge that humans are not the sole, or even main, agents of water politics. In this sense, we can start looking closer to home, to those damaged sites and forms of activism that are not usually considered 'political', at least not in terms of formal, representative institutions or the tactics and aesthetics of much (urban-based) oppositional activism.

For GWSs, institutional relationships forged over decades have underscored the complex relationships that entangle legacies of abandonment and an acknowledgement of the wider hydro-social cycle as part of water infrastructure. The politics of GWSs is ambivalent, particularly at a time when the public functions of the state are being re-distributed to communities and individuals. Localizing water systems is not the answer to problems of contamination, or any other of the water-related challenges Ireland faces. However, the experiences of the GWSs and some of the responses they have elicited can provide an *invitation* to scholars and activists involved in water justice to re-think the sites and forms of politics that matter. Clearly, recognizing that the costs of water treatment are related to wider dynamics of (over)development and environmental degradation is relevant to debates about the assumed disrepair of the national water infrastructure. Even without the implementation of domestic water

charges, the deteriorating quality of source water ensures the transfer of public money (from general taxation) to private water companies to provide solutions to 'decaying' water infrastructures.

Less clear perhaps is how the slow, everyday work of individuals in the GWS sector represents a form of political activism. The work I am specifically referring to is the effort to learn more from specific water bodies – about the relationships between *E. coli* and Karst rock, EU agricultural policy and nitrogen, animal guts and *Cryptosporidium*. Making these relationships by working with and across diverse forms of expertise (water chemistry, water ecology, history) and media (maps, photos, story-telling) can help us to surface what we are dealing with, how we are implicated, and why we need to re-consider some of our most deeply held ideas about social change and human agency. Such localized, background work may seem unimportant but it is the kind of non-spectacular activism that is capable of provoking new ethical relations between human, animals, plants, bacteria and so on, the first step towards moving 'politics in a diversity of directions that can texture and expand concepts of agency and action in a permanently polluted world' (Liboiron, Tironi, Calvillo, 2018). The challenge is how to translate between different forms of hydropolitics, to forge alliances (without reducing difference) that rupture entrenched urban/rural divides, that might be capable of politicizing otherwise the complex ecologies of water, infrastructure and the environment.

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