



# The Wet

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FREERANGE VOL. 9:  
The Wet Issue

Heraclitus, I believe, says that all things pass and nothing stays, and comparing existing things to the flow of a river, he says you could not step twice into the same river.

- Plato, Cratylus 402a

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**Published by Freerange Press**

Aotearoa, Atlantis, Australia

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Freerange wishes to thank all those who have provided support, assistance or contributions during the creative process.

Also available as a download on our website:

[www.projectfreerange.com](http://www.projectfreerange.com)

**Published October 2014**

ISBN 978-0-473-30318-1 (print)

ISBN 978-0-473-30319-8 (online)

ISSN 1179-8106 (print)

ISSN 1179-8114 (online)

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# Freerange Vol. 9: The Wet Issue

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A cool lake petitions our bodies on hot days. This watery world is transcendental, unclaimable and transgressive, bracketed off from our everyday landed experiences. When we reach the water's edge, our mores fall away and are supplanted by laws of nature. Here we can experience a state of limbo in a blurring or fluidity of boundaries: we can be both on and in the water. It delineates division, yet offers a crossing place. We float on its surface in a brief break with gravity, yet can feel its depth and plunge into it.

When water is provider of sweet and simple succour, we forget its brute strength, which is expressed just as much in powerful presence – giant waves, vicious storms and unforgiving flooding – as in its devastating absence, which is invariably followed by the ravages of desiccation, relentless thirst and drought. That its nature is so changeable, that its manifestations run the full spectrum of experience, has leant water to art, metaphor, songs, philosophy, literature, science and a myriad of other disciplines. The great Urdu poet Mirza Ghalib wrote that 'You cannot separate the drop from the drop's power to raise a storm'.

The drops of which the sea is comprised hold within them the potential to raise it into a storm. This strange and powerful synecdoche is then undone – when the drop joins the ocean, it loses its identity.

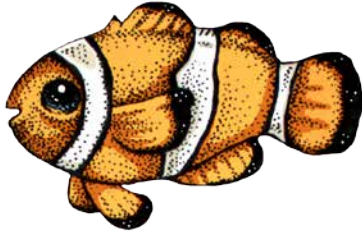
Revered in religious and cultural practice, water is the link that provides spiritual ties to a place, yet it is continually degraded and disrupted by industry and human activities. Water has a symbiotic relationship with humanity.

In the great swathes and colours of words associated with water – like spume, sublimation, deliquescence, oscillation – where language tries to trap its qualities alive, we attempt to communicate and tame its ontological abundance: its diverse phenomenal qualities and its metaphysical currents.

Water's indeterminacy is perhaps, paradoxically, its definitive characteristic.

The most abundant substance on earth offers us both concrete and poetic renderings of the flow of time. There is its startling immediacy and its reflective qualities of which Leonardo da Vinci says: 'In rivers, the water that you touch is the last of what has passed and the first of





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that which comes; so with present time.' It has ethereal qualities, which are observed in the physical world, that are analogous to timelessness. Water's cyclical nature is a fluid rendering of energy – it never goes away, it just goes somewhere else. In continuous movement, its constant mass moves through phases and processes.

It has the ability to carry the spectrum of time, as well as bracketed instances of it. Water's expressions at the confluence of a particular time and particular space open up time's vast expanses. We can see its dense efficiency in the seasonal and changing flood plains of the subcontinent and in the wet seasons of the tropics, which bring immediacy to the elements. Torrential downpours lead to a photosynthetic triumph of verdant explosions – brilliant shocks of green – in the gardens of the tropics. Then there is the rarity of its extent: old water held in the ice sheets of Antarctica and its gradual release through glacial melt.

Whether through its dramatic inflections, such as the colossal volume of moving, tumbling water at the Iguazu Falls or its quiet and still spiritual significance, water defines a place. It gives space a

mood, rendering it localised yet providing it with universality through recognition of its wateryness.

It brings community and isolation. New Zealand's borders are exposed to the seas – we are far removed from the cohesion of the continent, alone and unmoored in the South Pacific. Yet there is relief in that we are here together, awash.

Water is perhaps the ultimate witness to and agent of change; it reflects and impacts history. Water shapes landscape, like in the careful carving of the Banks Peninsula. It defines where civilisations have established themselves and has forced them to move. It has appealed to pilgrims, explorers, scientists, philosophers, weather forecasters, town planners and swimmers. And now with rising sea levels, pollution, increasing reports of natural disasters, water criminals, water degradation and privatisation, water is set to be the definitive resource of time to come.

It has the ability to hold so many things, without precluding any other. Things live not just through direct experience of them, but also through talking about them, thinking about them – through discussion, through belief. In this manner water serves as the great depository. The ultimate solvent and depository – for thoughts, analogies, politics and social concerns. This journal holds a few.

Water is not so much a demonstration of cause and effect, but ebbs and flows that are akin to thoughts and being. This is something explored in Indian philosophy: the ocean is not the cause of the wave, but the source. The universe has risen, is sustained and falls back.





# Splish splash

by JESSE NEWMAN

The musical qualities of water become part of our aural understanding of the world from when we are surrounded by whooshing in the womb. The particular sonic and musical qualities of rain, and sometimes ocean or river, also precede our earliest memories and retain the ability to transcend meteorology (or flow dynamics). Though random and contingent, when we listen to rain we seek to impose a pattern in a particularly accessible and immediate meaning-making project. The simple act of listening to rain becomes analogous to philosophical enquiry.

The rhythms and sounds of the ocean too can provoke this search for and discovery/creation of meaning as in the poem 'Sea' with which Jack Kerouac finishes his novel *Big Sur*. The poem encapsulates the search for meaning in a meaningless world that underpins both the novel and the author's violent lurches toward and back from madness.

That poem uses a great deal of inventive onomatopoeia and highlights the musical contributions of water to our language.

Water-matopoeia saturate our language and are some of the earliest sounds we make – they also remain some of the most satisfying to utter (try some).

As well as linguistically, water functions metaphorically as an effective way of describing music: Music 'flows', as can a rapper's lyrical delivery; it can 'wash over' a listener; a musician's playing can be 'fluid'. Music is sound in waves in time and water too is (often) waves and rhythm. Water is also a superb conductor of sound and potential generator of sound.

Water as a musical instrument runs the gamut from novelty to the profound: from the imitative (the rain stick; clay bird-caller) to the literal (recordings of water to be used as such or to become an element of musique concrete; 'playing' a river). Drums in which water is instrumental in the creation of sound, as well in varying the pitch and tone (through changing the quantity of water in the drum), can be found throughout North America as well as in Africa and the South East Asia. Within a similar geographic spread, there are also drums that use an inverted gourd floating in a larger vessel full of water.



Using water as an instrument is something the Baka of Cameroon and Gabon (as well as other groups from Africa and Samoa) have incorporated into their music making. A body of water (river, lake, lagoon) becomes the drum and is slapped, swirled, plonked and splashed creating a variety of highly musical and rhythmic effects. Unlike a normal drum however, this type of playing involves no membrane and resonator needing to be brought together to be played – here the membrane is the resonator and vice versa. Listening to this underwater, water would be the totality of the musical experience – responsible for both creation and transmission. In this instance all the qualities of water as pattern, rhythm, music, expression,

exploration, metaphor, memory and philosophy are combined.

The qualities of water as creator and sustainer of life need not be outlined here, nor its rich and varied role in mankind's history from exploration to novels; rather the idea that water works to give shape to these as well as generate them. That splashing in the bath, to playing a river, to rain-rendered reverie – along with expressing these experiences – shows how, just like the river drum has no separation between creation, transmission and experience, there is little meaningful separation between us and the world which cannot be bridged using one or some of a myriad of water-borne philosophies.



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# Taming the waters of the Hellespont

Preparing to invade Greece, the Persian King Xerxes I (519-465BC) built two pontoon bridges across the Hellespont – from Abydos (Asia) to Sestus (Europe) – a distance of seven furlongs, which is about 1400 metres. The Phoenicians and Egyptians constructed one each, using flax and papyrus cables respectively. However, a storm ravaged the successfully completed bridges, leaving Xerxes ropable. According to Herodotus in his *Histories*, Xerxes ordered that the Hellespont should receive 300 lashes and have fetters thrown into it.

He instructed the men with the whips to utter... “You salt and bitter stream, your master lays this punishment upon you for injuring him, who never injured you. But Xerxes the King will cross you, with or without your permission. No man sacrifices to you and you deserve the neglect by your acid and muddy waters.”  
– Herodotus, *Histories*, 7: 33-37







# From Queg

by D. S. LONG

**Queg is the second novel inspired by Hoterene Tawatawa. The first was – at least in part – *Moby Dick* or *The Whale* (1851). This is an extract from a work-in-progress.**

The first father to come to our village wore a tri-cornered hat, a black petticoat, and a pair of Wellington boots. A large crucifix hung on his chest. Even the oldest among us laughed.

Unshaven and splattered with mud, he gagged on the dried shark we gave him, though he ate it with a cold potato none-the-less. To repay us for this food, he said a prayer that immediately appealed to me for the distress it caused the other Christians in our village.

Thus a new division was added to the ones that already divided us, for now some began to learn the French words for things we already knew how to say in English and in our own tongue, and those of us who chose to become Pikopo woke each day to a new routine of morning prayer and crossing ourselves, led by a

catechist. Most of us still attended the Anglican school, remaining Anglicans for that part of the day. And once we learned the sacrament of penance, our sins were forgiven, one after another.

Kawau and Ruahena had long been unhappy about the peaches I'd given away to strangers. After the fathers started visiting us, the tapu on other things began to be questioned, too. Some said that certain things were tapu and some that they were not. Some accused us of worshipping idols. Others accused us of drinking blood. It was at that time that I was baptised and received a new name. On the way back from the baptism, we stopped near the cave at Manawahuna and I went in, only to emerge completely dry. Word of this quickly spread.

'Misfortune will not befall us,' I assured them, 'nor will you fall ill.'

'But we may lose the next battle.' The trouble was, they'd seen the omen and could not let it pass.

I insisted, therefore, that we go to the cave at Ngunguru, but when we threw a stick into the water, it turned to Wehenga, not Kumeroa. After that, I knew they



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wished I'd stayed Anglican. No one had to say so.

At that time, I had only recently married and, shortly after we returned to Whangaruru, another misfortune befell when I caught a fish by its anus. This proof that my wife was unfaithful forced me to leave. Is there a better way to protect the ones you love? I knew that Koro would have done the same. Like me, he too had turned to the sea.

It was a bitter journey to Tapeka, plagued with sand-flies. I deliberately by-passed those places where we had driven stakes into the ground to show where our relatives had fallen.

At Tapeka, I sought the advice of one of our people who lived there, a man I'd helped years earlier. Severely provoked, he'd kicked a local woman of prominent birth. Because he was a Christian, we hadn't gone to war over this and I'd arranged a payment.

He and his wife worked as tonguers, collecting the washed up intestines of whales that had been rendered out at sea. From these and other pieces of carcass they produced a poor class of oil. They earned a hard living selling this to French ships.

After these captains had come to depend on them, they'd moved to Tapeka as word spread of their usefulness. The Catholic fathers came to depend on them, too.

They took me out to a ship named *Le Havre* and I signed on with Captain Privat for a 250th, taking the place of a deserter. I bought the clothes I'd need from the ship. Once we finished loading the vegetables and dried pork Captain Privat had traded for arrack and biscuits, and the watering and wooding was complete, *Le Havre* weighed anchor and set a course north, past Cape Wiwiki. By midday, the whenua was gone.

Right through that first morning, I kept looking for the shark, Tautahi, certain that he would mock me, but even the mollymawks shunned my passing. Perhaps Tautahi wished to tell me that, despite the signs of disaster, my life was not forfeit. In any case, there were no sharks to be seen and the misfortunes that befell me a few weeks later proved to be a mixed blessing, at worst.

Though I thought I knew a few words in French, and could recite some prayers, I didn't understand a word of the mate's orders. He must have come from a

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different part of France than the fathers who visited us at Whangaruru.

That first morning, when the cook was preparing breakfast, I helped him fry pieces of stingray and potatoes, for Captain Privat meant to set us to filling the remaining barrels by filling our stomachs first. It is a simple enough gesture, to serve food, and I made sure that the mate had a good portion. In Whangaruru, I would not have risked my mana in this way, but tapu and noa mean little on a whale-ship, or at least, they go there by other names.

As one of several Kānaka taken on for that part of the voyage, I was assigned to a watch that already included two others, both from Ōtākou. By watching them, I began to see what was expected, for they had served on whaling ships before.

So began my apprenticeship in the work required to kill and flense baleine, with all the differences between baleine à bosse, baleineau, cachalot and the rest to confuse, for it is hard enough to learn a trade in your own language, much less in the language of your prayers.

We had not been cruising for more than two days when the call came from the mainmast head, “... ça y est ... là-bas, elle crache!”

At first, the captain was convinced that it was only a baleineau – a calf – from the feeble way it spouted, but it quickly became clear that it was something else.

I took my place in the boat I'd been assigned to, for here was a chance to prove that I could do more than fry the mate's – now my boatsteerer's – breakfast.

We were soon pulling through a grey sea, which I managed to do without shame. I had seen oars used in this way before.

We quickly came alongside a large sperm whale, a cachalot, after only a short pull, and immediately sank two irons into it. At this, it lifted a little out of the water, showing us its true size. I've yet to see a larger. But it was the subsequent behaviour that we distrusted, for it did not sound, but lay quiet as we lanced it, dying before the ship could come alongside.

‘What's the matter with it?’ the captain shouted.

None of us knew what to reply, though the captain repeated his question in broken English.

‘Perhaps he was an old one,’ someone finally suggested. No one wanted to say that the fish must have been sick.

‘I wish they were all as old as this one,’ the mate called up from our boat. ‘Let's stick to harpooning grandparents from now on?’

This set everyone to laughing, with the boats vying with each other with suggestions for how such a trade might work. One of the Ōtākou told me the joke in Māori.

Cutting in began at once. You do not waste fine weather at sea. The fish was over seventy feet, with an odd thickness through the waist. It was so vast that taking off the head alone took us into the dark, with the ship moving oddly, neither rolling nor pitching, but shuddering with the great weight being hauled onboard.

Gradually, the mood changed to anger, first at the ship for misbehaving, and then at the extent of the work. It was too easy to chop into a leg or lose your footing on the greasy flesh.

As the night progressed, a cross swell set in, and our anger turned to grim purpose as we realised that we could yet lose

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much of this too-easily-won oil. It became harder and harder to keep our footing, with the headless carcass turning under the stage, sucking down in the lee roll of the ship and then grinding the fluke chain as it came back.

My mistake was to let a piece of the carcass swing into the mate. It was not intentional.

‘Crétin!’

So we were no longer friends.

Captain Privat estimated the head to be fifteen tonnes, a tremendous load for the ship’s tackles even in a calm sea. The mainmast had been at risk. A pull of arrack was passed around once the spermaceti was secure.

Though the swell continued rough, the gale behind it failed to develop, which none of us foresaw at the time, and sleep was put aside as we worked through a relentless day and on into the second night, securing every barrel we could before the storm would force us to cut the rest away.

We ceased to be a ship, becoming a factory streaming greasy smoke and sharks. At that time, I had no notion of what a factory was, though I know well enough now. A factory with its doors thrown open on a cold night and the furnace in constant want is hard enough, yet no factory on land pitches a man as it drags through a wave. Even so, a ship under shortened sail will manufacture a hundred barrels of oil, reckoned at ten barrels the tonne, before the peeled, headless carcasses is finally let go, churning with feathered maggots in its wake.

When we finished with the dying, there was still the labour of rendering

the factory itself back into a ship, and converting ourselves to seamen. It should not be called trying out, but trying men. The stingray breakfast was long forgotten before we were cruising again.

Before crossing to the New Zealand fishery, I was told, *Le Havre* had worked the Chilean coast. At Conception Bay, Captain Privat had turned to a French expedition for assistance to put down a revolt. Commander D’Urville had then allowed one of his sailors to join *Le Havre*. Now this man regretted his decision and complained that he would at least have had regular meals had he stayed on the expedition warship. This ill omen too was noted by us all.

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Among the mix of tongues, I came to understand that whale ships leave France with insufficient food for the voyage. Victuals for sixteen months are considered generous by the owners. *Le Havre* had left Bordeaux shorthanded, since the captain knew he would sign crew on at the Azores, as well as poor fools such as us for our minimal lay, counting on crew killed or deserting before they would collect their share. This is common practice and forms the calculation of other owners, too.

The stores the captain purchased in Ōtākou and the Bay of Islands did not suit the French sailors, though we Kānaka held a different opinion. The mate despised the taste of our pigs. He would not have appreciated the joke we shared in Māori at his expense.

Ōtaheite, with its nearby island of Aimeho, was the first landfall after leaving the bay, and had I known what other landfalls I must endure, I might have stayed onboard and not gone ashore.



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We anchored close to La Reine Blanche, a frigate unloading deserters from an Australian ship. I wouldn't have joined the jeers had I known how quickly I would share their fate.

Pape'ete had only just raised the tricolour, pulling down Queen Pomare's flag and replacing it with French colours under threat. The Queen, in the midst of giving birth, had been forced to sign a treaty to avoid bombardment. Over arrack in a grog shop, first my thoughts and then my fists were loosened, as we spoke of treaties and I told the first mate what I thought of them.

So I woke the next morning in the Calabooza Beretanee with my ankles fastened in a stock, among a group of seamen off several ships. It pays not to argue with those you've offended.

Among the prisoners were a group from the *Lucy Ann* from Poihākēna, though they hardly had to tell us, what with the scars they'd earned there. Few leave that place unflayed. First their ship sailed and then *Le Havre*. We were left in jail while our wages disappeared through the gap in the reef.

The people of Ōtaheite are known to us. I'd met some of them before. The trade in kūmara binds us together. Whale ships bring their kūmara south and return with our pork. In Ōtaheite, I could see why their kūmara is so much larger than ours – kūmara like warmth. We share a language, of sorts. Arrack washed the differences in any case, which I earned by translating what could not be said by the other prisoners. With our ships gone, the local people agreed to unlock us each morning so long as we shoved our ankles into the stocks at night.

The gaol was a mile or so from Pape'ete, along a path they call Broom Road, which goes on to a missionary station. It was surrounded by coconut palms and breadfruit trees, but consisted of little more than stocks for ten or eleven men, between white thatch and urine-stained sand. Geckos chirped at us at night. During the day, we were free to wander, though not to the town.

The man stocked beside me that first morning, rubbing on an embrocation in a poor attempt to keep off the mosquitoes, was a sailor named Melville. He had a beard where I have a tattoo. Released from the stocks, we stood about the same height.

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'You speak their language.' By the way he spoke I knew he was American. I threw up. Melville fetched a half-shell of water, for which I was grateful.

'How do you know I speak yours?' I asked him in English.

'In your sleep, you swore in English. And in French. And in a language that sounds like theirs. In any case, we're speaking English now.'

Honesty is a good companion in a jail though talking in your sleep is not. He was a revolter off the *Lucy Ann*. When we compared our fates, I learned that the mate on the *Lucy Ann* had been a drunkard and, when their captain was taken sick, Melville had refused to work the ship, claiming that he'd signed to the captain, not the mate.

'And you?'

So we learned that our circumstances were sealed by mates, not captains. We agreed to have our ankles locked side-by-side that night.

Melville had first signed on as a green hand on a ship called the *St Lawrence* and sailed to Liverpool and back, before serving on another, the *Acushnet*. He'd

deserted at Nuka Hiva in a rainstorm, which he told as a tale of adventure. We were a poor audience for this story, for as seamen we knew that the danger in a rainstorm is principally of getting wet.

After adventures he was reluctant to speak of, though which he described, he shipped for Ōtaheite on the *Lucy Ann*. 'A worse ship than the *Acushnet*,' he assured us, 'and good riddance and be cursed.'

Melville was the sort of man who seeks the good opinion of others through telling stories, but the stories he told of Nuka Hiva were lies. The people there could not have been so different from us at Whangaruru. I've since had the book he wrote about these adventures. A true account would not be so entertaining. Nor did he get the language right, as I've had occasion to tell him since.

'But a story is like a course,' he assures me. 'Once sailed, you cannot set down in a longboat and move the wake about until you're satisfied.' This seems a hard truth. I fear it leaves me a poor audience for stories. I'd rather stick to a true course.

# Objects as water in our world of theatre making

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by ASHLEY HOLWELL  
WITH KATY MAUDLIN  
AND LAUREL DEVENIE

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Over the past two years we, Company of Giants, have been on a journey with the great seafaring story, Homer's *Odyssey*. First formed at an old quarry-turned-arts centre in Whangarei, the story continued as we remade the show in a local warehouse, in a theatre, a carpark and a town square before we took the show to the banks of a river. The remaking of the story keeps flowing and evolving, and our acknowledgement of incompleteness fed into the way the work related to the objects we used.

Like the work itself, we began to embrace the idea that the objects we use live on long after the play, and they have lived long before the play. Our intervention into their lives is not one of momentary use followed by destruction, it is of care and continuation. That water passes through a cycle, from sea or puddle, river or lake, making clouds and thunder, before raining down into streams and trickling back to the oceans, is analogous to the

objects themselves. Each molecule has been with us from long before we were here, and will continue on long after us.

When adding bamboo to a wrecked van to make a ship, we avoided cable ties or resin or other such things that bind easily. Resin and paint set, cable ties only go one way. When considering the next part in their cycle, we used cord that can be reused, learned binding techniques and made as few cuts as possible. This came with the understanding that the thing would need maintenance and attention as the bindings loosened, and that time would be spent carefully unwinding cords so they could be used again. We attempted to acknowledge the continued lives of the objects we were working with, and this acknowledgment led us to learning new skills, the creation of unique objects and informed the way we made our stories. We were able to preserve their future capacity for use by others, akin to the cycling of water through natural systems.

In this way I see that the 'water', which flowed through our work, stayed clean. Clean in such a way that huge processes akin to osmosis or evaporation, such as thousands of years of degradation, weren't needed to return the objects to





Figure 1: *Odyssey* entrance, Hamilton Gardens Arts Festival 2014.

Figure 2: *Odysseus'* forlorn crew on the Black Ship. *Odyssey*, Whangarei, February 2012.



Figure 3: Friends sneak Odysseus' son Telemachus away by boat, on the Waikato River. *Odyssey*, Hamilton Gardens Arts Festival 2014.



Figure 4: The land of the lotus-eaters. *Odyssey*, Hamilton Gardens Arts Festival 2014.



where they came, or for them to continue on a new path. Taking glues and resins and paints to an object is like pouring acid, ink, or nitrogen into flowing water – they are intensely difficult to remove. If one ties, places, assembles and respects the lives of an object, or a molecule, it facilitates further life for the thing. Objects were used with little modification, assembled into new things then disassembled, easily returned to their previous jobs, positions, and places. They were given a chance at a different role, an unconventional experience, unharmed and cared-for in the process.

Our decisions not to pollute our waterways are akin to protecting the potential lives of objects, of things. Each act of destruction and assimilation with other things has the potential to reduce the ability of that object to contribute to the world. Like water, an object never ends: its parts simply form other unique assemblages and the object simply takes on new forms and meanings. Over and over again. Part of our responsibility, in the relationships we have with objects, is to provide and care for these potential forms and meanings.



Figure 5: The object collection of *Odyssey* at Hamilton Gardens Arts Festival 2014.

Time trickles  
like water  
through our  
negligent hands:  
Megan Cope's  
*Twice Removed*

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by LISA BRYAN-BROWN

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Megan Cope's recent series of *Twice Removed* paintings take an in-depth look at the history and future of the bodies of water that define the edges of five sites in and around Brisbane, Queensland.

Her perfectly circular, complexly layered canvases drown the aerial landscapes of carefully researched historical maps with the swollen seas and rivers of our post-climate change future, flooding areas which are currently densely populated localities in an ominous but all-too-plausible scenario.

In shimmering dot-work Cope engorges the elegantly curved sweep of Moreton Bay

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Figure 1: *Meanjin*

and the snaking courses of the Brisbane and Logan rivers, applying a calculated 5 metre sea level rise to the geography. Cope's practice, which explores toponymy, cartography and geomorphology, considers the environment, language and history through a post-colonial lens. Her *Twice Removed* series of paintings emphasises the fact that the landscape, and particularly the coastal landscape, is not a static entity.

Coastal erosion poses one of the most significant ecological challenges of the twenty-first century, particularly

in Australia where so much of our population and infrastructure is based on the sandy edges of this vast island. Short-sighted colonial town planning coupled with little to no action taken on climate change can only viably result in one possible outcome – not next week or next decade and not necessarily even next century, but certainly eventually – sea levels will rise and coastlines will shift; the environment as we know it today will be radically altered.

Cope is a Quandamooka woman, from North Stradbroke Island, and her family

have stories from a time when the area we now know as Moreton Bay was in fact a valley, knowledge that has been passed down through generations orally and through art and music for centuries. Recently this information has been verified by geologists, who estimate the valley began flooding 18,000 years ago and reached it's present state approximately 6500 years ago (Walters 35). Archaeological evidence shows that Aboriginal people, Cope's predecessors, were living in South East Queensland at least 20,000 years ago at a conservative minimum (Neal and Stock 618).

While there is no certainty amongst climate scientists as to exactly when we might experience a 5 metre sea level rise, there is a general consensus (according to the Department of Environment) that we will see a rise of 50-110cm by 2100, a mere 86 years away. Considering Cope's family hold in memory a time so long before the bay even came into being, to forecast the reality of the landscape as it might be in 500, or even 5000 years becomes less incomprehensible. It connotes a radically different attitude to that of Western progress regarding the perception of the natural environment, one that adapts to and embraces, rather than denies and resists, transition and change.

It is a shameful truth of the process of colonisation that Cope's family, as with all other Aboriginal Australians, were subject to forced displacement and relocation, which for many individuals and families resulted in the loss of important ancestral ties to Country. In *Twice Removed* Cope's five large scale paintings depict locations where local indigenous populations experienced forcible displacement from their lands, or conversely the new areas that they were relocated to.

In Beenleigh (Yugambah) at the German Lutheran mission of Bethesda, on Bribie Island at the reserve at Woorim and on North Stradbroke Island at the Catholic mission at Myora, Aboriginal people were used as a source of cheap labour. At Wynnum (Winnam) Black's Camp became a gathering and camping site for those who'd been displaced, as did the Roma Street Parklands near the centre of Brisbane (Meanjin). Cope's depiction of these historically loaded sites use as their basis the equally loaded maps authored by the very entities responsible



Figure 2: Woorim  
Figure 3: Wynnum

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for the repression and dislocation of Aboriginal populations – the church and the military. These records serve as a sombre reminder of our nation’s history, and how the events of that past have led us to our current suburban geography. They also reveal interesting insights into the evolution of sites and local place names, topics of great impotence in understanding the political motivations at the forefront of Cope’s artistic practice.

By claiming land and water resources and beginning to build structures and conduct agriculture, European settlers not only displaced local Aboriginal populations but fundamentally disrupted their relationships with areas held sacred as country. The deep ties held by Aboriginal communities to their traditional environments are a foundation of their culture, and as such the sites themselves are pivotal to the continued understanding of each language group’s artistic, linguistic, spiritual and ancestral heritages. Cope’s own Quandamooka country has been changed irreparably through development and urbanisation, and from the devastating impacts of sand mining and its effects on the island’s ground water and numerous dependant eco-systems.

Cope’s work, in reflecting upon the future environment that potentially faces Moreton Bay and the rivers that flow to it, places emphasis upon rising, unstoppable waters; a poignant image in light of her family’s oral histories regarding Moreton Bay. While much of the work’s initial impact is tied to the sheer comprehension of the scale of economic and infrastructure loss being imagine, it is important to note that since the environment has so deeply affected Aboriginal culture, the scenario proposed in Cope’s *Twice Removed* paintings would also result in irreplaceable losses of important sites

which inform Aboriginal peoples’ spiritual connections to country. The impact Cope’s radically altered landscape would have on Aboriginal culture (and indeed, the collective accumulated culture of all contemporary Australian society) is undeniable, and a little considered aspect of the potential effects of climate change.

In the way that the environment is intrinsic to Aboriginal culture, with references to sites inextricably intertwined within knowledge of Aboriginal heritage, so too with the many Aboriginal languages. Prior to colonisation more than 250 Aboriginal languages were in use by the numerous Aboriginal communities, but today, as the Australian Bureau of Statistics records, only a handful remain spoken. As Cope has wryly observed, the most common contemporary use of Aboriginal language words (and in reality the only continued use of Aboriginal language words by non-Aboriginal people) are in fact where the words have persisted as current place names. Cope’s works draw attention to this phenomenon through their use of historical maps authored by colonial forces, which bring with them the loaded past of how language has been used in relation to mapping Australia’s environment.

Generally, throughout history, the role played by language in the process of marginalisation of groups and individuals is paramount, particularly in the various ways language is mobilised by an aggressor to assert dominance and enact oppression over another. In the abhorrent and protracted process of the systematic and fundamental disempowerment of Australia’s Aboriginal population, the erasure of centuries-old languages is only one of many injustices carried out against Australia’s First People as part of the routine of British colonisation.



The British explorers and settlers went about recording the particulars of this previously 'unfound' land with a disregard for – and obliviousness to – the existing place names. Generally commemorating European monarchs, explorers, battles and noblemen, English labels were applied to the features of the Australian landscape; seemingly arbitrarily inscribing the presence of foreign British national heritage upon a land to which they were really immigrants. In doing so Western naming proclaimed a possession of sites, where the existing Aboriginal names instead had a tendency to reference prominent natural features like bodies

of water or clusters of trees – naming practices which reflect two distinctly different conceptions of ownership.

Boldly rendered in meticulous calligraphy, Cope reasserts the Aboriginal place names in her *Twice Removed* suite of paintings, marking them prominently over historical maps of the regions surrounding Brisbane, or rather Meanjin. Cope's use of parish maps commissioned by various churches in the late 1800s and locality maps commissioned by the military in the 1940s form the basis for each work. This is an acutely calculated political statement on Cope's part,



Figure 4: *Yugambeh*



Figure 5: *Quandamooka*

effectively interrogating and challenging the power and privilege commanded by these institutions, which generated a certain level of ambivalence towards Aboriginal people and undermined their ownership of their own country.

It is through the simultaneous depiction of historical and future incarnations of Quandamooka, Winnam, Woorim, Meanjin and Yugambah that Cope's *Twice Removed* series articulates to viewers the precarious nature of the relationship contemporary Australian society has built with our land and its First People. That history cannot be undone and hopefully will eventually be repaired through genuine reconciliation. One aspect of that process is revaluing the environment and its role in heritage, a well as Aboriginal languages and the place names that were bestowed upon the sites of this land centuries before Europeans even imagined they could sail here. Artwork like Cope's is an important part of this process, concisely articulating the circumstances of decades of past conflict and future ecological change that frame and face the Australia of today.

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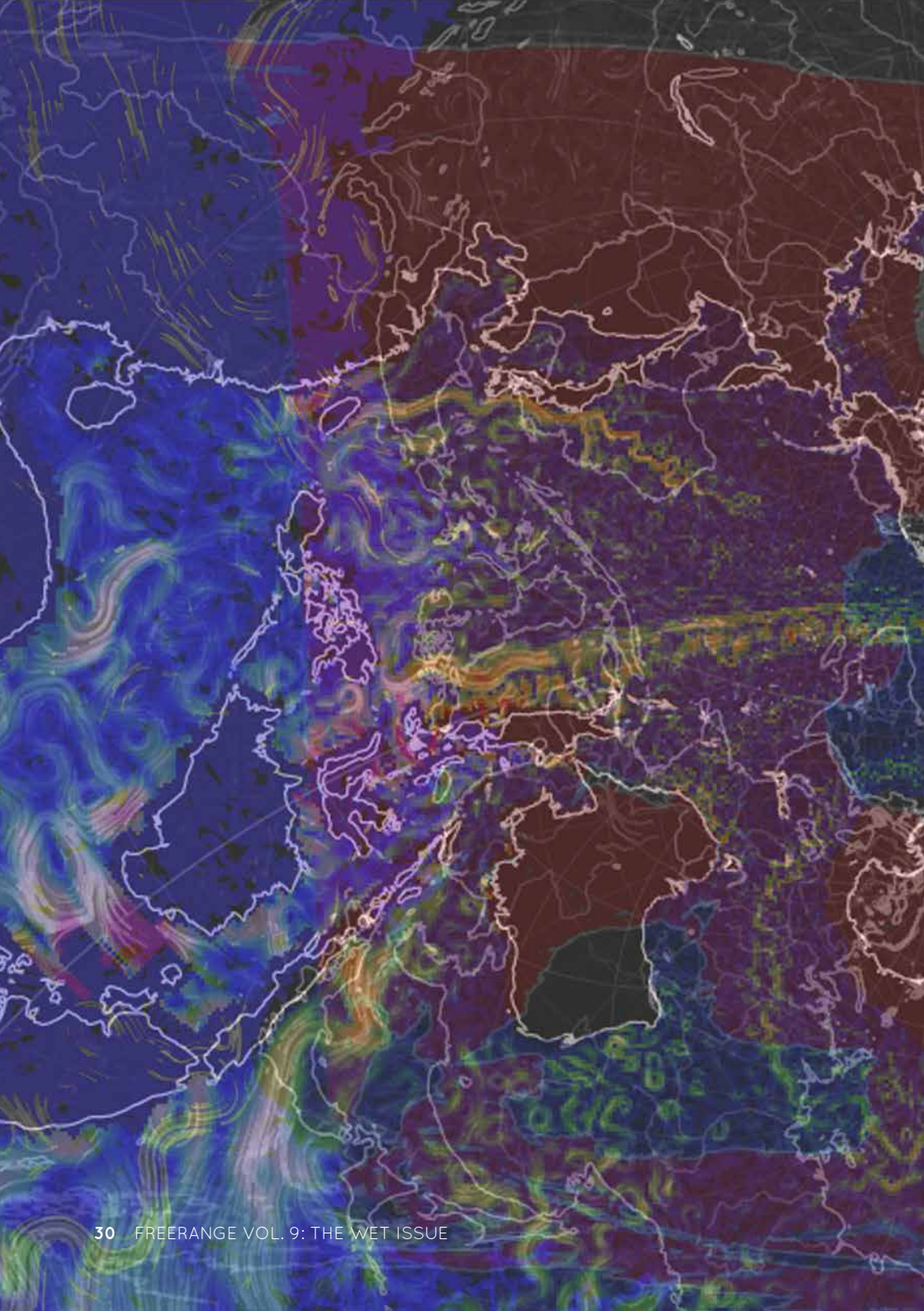
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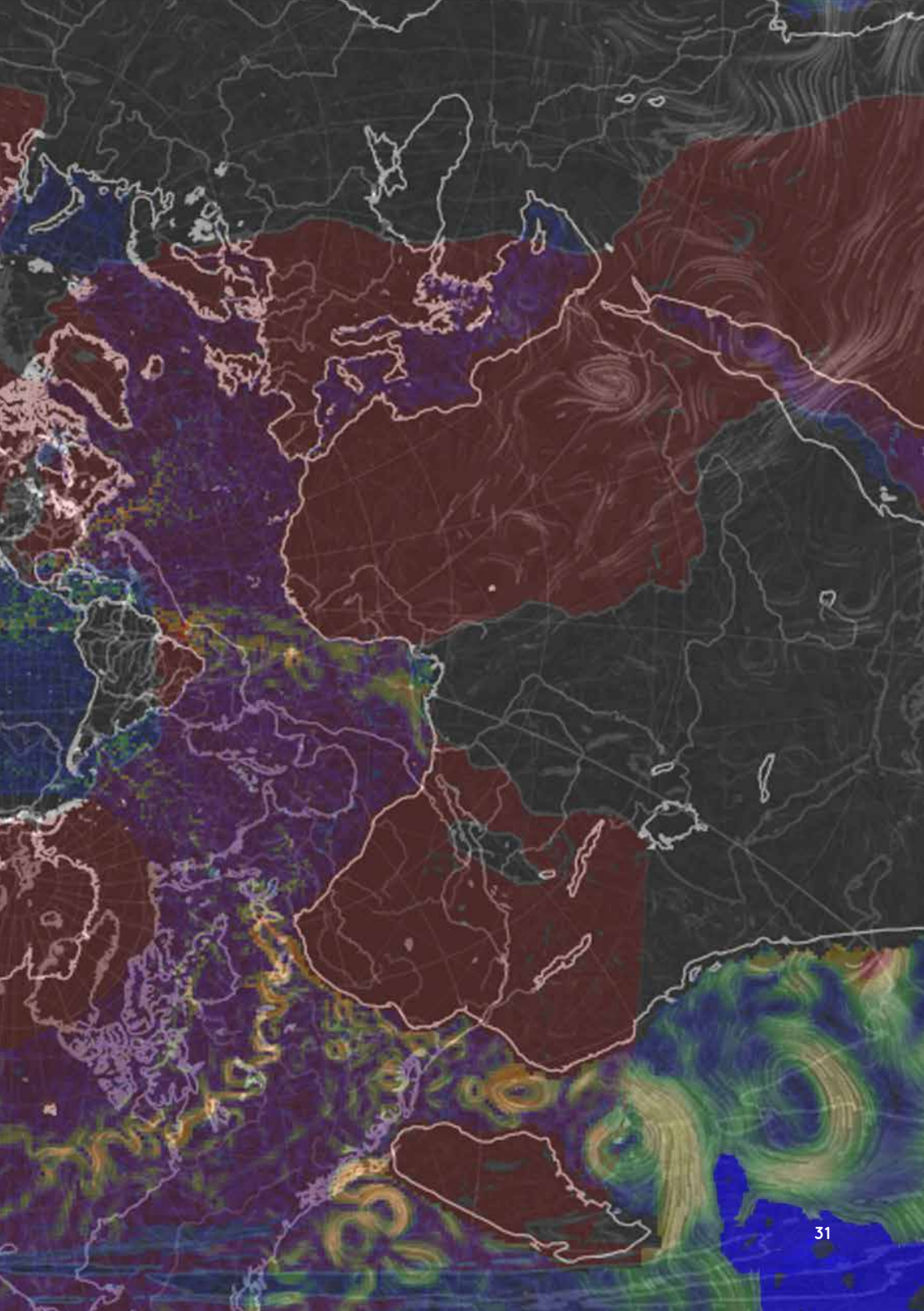
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# The continents

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by LYDIA CHAI

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Many creation myths are stories about separation: between sky and earth, god and man, mother and child, lover and beloved.

The simple version of this story is that two people met, fell in love, had to part and eventually led separate lives. In a word, well, almost two: star-crossed.

I like this telling of it instead:

In the beginning were two continents, known then as Bha and Mara. Bha was the larger of them. They were joined together by a slender isthmus rather like the hyphen in *star-crossed*. This isthmus was long but shallow, making its existence so precarious as to depend on the tide.

Bha and Mara loved each other so much it was as though they had love enough for thousands of others. Continents, after all.

As Mara's love for Bha grew deeper, she felt the walls of her heart pushed so far and wide that at the base of it a crack opened. From this crack welled saltwater and, before she could manage another breath, a sea had grown inside her. Eventually it overflowed and joined the larger surrounding ocean.

By this time, the isthmus had submerged altogether and the continents were split forever. A yawning gulf was born between Bha and Mara and they could not but regard the distance as if it were a child who reminds its parent of a deceased lover.

But they remember being one.

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# Son net

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*by* GARY LANGFORD

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He grew up feeling trapped, a fish out on the shoreline.  
Larger hunters were waiting the further out he swam,  
whether in his own skin or on borrowed lines and hooks.  
The first fisherman to haul him in was his father,  
staring at him as if he was eating jealousy.  
That hook in the mouth was never really repaired.  
Smiles grew less and he mumbled more,  
lacking the confidence to show his chipped teeth.

You're not my bloody son was said one night.  
It was an easy habit they both accepted.  
The bitter line was his mother leaving shore  
to never return, regardless of being implored,  
mostly in soft nights of the watery moon.









# International waters

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by NICK SARGENT

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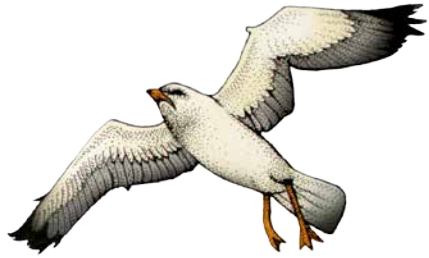
Long said to be a person of the distant past, the enemy of all is closer to us today than we may think. Indeed, he may never have been closer.

– Daniel Heller-Roazen,  
*The Enemy of All: Piracy and the Law of Nations (189)*

At the height of their dominance of Mediterranean maritime trade and fishing, the Roman Empire boldly named the sea ‘*Mare Nostrum*’, which means ‘Our Sea’. Despite this confidence in their naval superiority, Roman law never claimed possession of the water. Instead water was categorised as being of a class of objects, *res communis omnium*, that were, like air, ‘common to all’ and unable to be reasonably claimed by any entity. From its shifting tidal edges and mysterious depths *Mare Nostrum* flowed beyond the known world. The transgressive and unceasing qualities that made the ocean common to all also prefigured a terrifying depredator who possessed similar elusive qualities and whom Roman statesman Cicero was to famously describe as being ‘the enemy of all’ – individuals we now call pirates.

To vulnerable sea merchants and seaside residents, pirates were a constant terror, hidden behind the horizon and ready to appear at any moment. Being of uncertain origin and indiscriminate in their attacks, they were deemed to lie outside of human society and, unlike criminals or the legal enemies of war, be deserving of no fair treatment.

But this indeterminacy was not always terrible. In the *Decameron* Boccaccio tells the story of a married woman named Bartolomea whose husband, a judge, is more interested in his work than his wife. One summer day she took a boat ride and was kidnapped by the infamous pirate Paganino. She was naturally distressed, but Paganino gently comforted her and before they arrived in his hometown he had won her over. Learning of her whereabouts, the judge spoke with Bartolomea in private only for her to declare that even if Paganino abandoned her she would not return with her husband, whom she calls ‘the banisher of holidays’. The judge returned home and Paganino made Bartolomea his legitimate wife. Through his outsider status and transgression of law Paganino had the heroic power to set things right.



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As Andrew Orpitz writes in *Pirates and Piracy*:

Although the actual history of maritime robbery is sordid and contradictory, the pirate has become a compelling symbol of freedom: freedom from oppressive work routines; freedom from polite behaviour; freedom from institutional controls; freedom from restrictive property laws; freedom from unjust social conventions surrounding race and gender roles. We now apply the pirate label to an assortment of activities – from the formation of transgressive sexual identities to the technology-assisted defiance of copyright law – that have little or nothing to do with the sea or those who “go down to it in ships”.

The realities of piracy are, of course, more complex and less romantic. Pirates were often also state-sanctioned, desired by governments as navies for hire (in which case they would be pardoned for prior crimes) or, far from being placeless, represented cities or states of contested political legitimacy. In the early twentieth century through increased international cooperation, stronger navies and less

valuable freight cargoes piracy rates reduced to the point where the act was considered extinct. However the latter part of the century saw an aptly enigmatic increase in maritime piracy in the busy shipping lanes of South East Asia and off the coasts of Somalia and Nigeria, places where local governments’ control of their territorial waters is ineffective and where wealth disparity has reached perverse levels. We have also seen a resurgence in the concept of piracy through its modern manifestations, such as depredations on copyrighted content via the placeless internet or the ‘illegal enemy combatants’ of modern terrorism.

In his book *The Enemy of All* Daniel Heller-Roazen argues that the ‘piratical paradigm’ is defined by four characteristics:

1. It involves a territory of exceptional legal status such as the high seas or international air space.
2. The pirate or pirate group antagonises a universal rather than an individual, which is to say a pirate will attack any ship irrespective of individual identity. They are the ‘enemy of all’.

3. Because of these factors the pirate causes a collapse of the legal code: the pirate cannot be said to be a criminal within a particular national legal framework, nor a political enemy. They cannot be prosecuted as criminals nor have war declared against them.
4. They therefore cause 'a transformation of the concept of war' and must be treated simultaneously as both criminal and belligerent using techniques of prosecution and warfare

It is easy to see these characteristics in the contemporary terrorist. Following the events of September 11 the USA began detaining, treating and trialling 'certain non-citizens,' individuals taken from 'rogue' states, outside American territory at Guantanamo Bay. These 'illegal enemy combatants' were not allowed the legal protections of criminals nor the rights established for prisoners of war by the Geneva conventions. They were considered to be the enemy of all. Deputy assistant attorney general to George W. Bush, John Choon Yoo, asked of an outraged public: 'Why is it so hard for people to understand that there is a category of behaviour not covered by the legal system? What were pirates?'

But in our increasingly technologised and 'global' world, Heller-Roazen points to a radical transformation in the concept of piracy, which can no longer be external to the laws of nations nor paradoxically external to human society. In a 'global' world there can be no exterior. The horizon the pirates hide behind is liberated from geography and instead must be internalised: we are all potential pirates. Terrorists commit acts in the air or on land and can now be apprehended within the borders of legitimate nations.

Software pirates are increasingly subject to internationally agreed national laws. And as nations go to war in order that they may establish a peaceful global constitution in 'rogue states,' Heller-Roazen argues that we necessarily also enter a state of perpetual war where any globally peaceful society must be in constant conflict with the transgressive and piratical potential in all individuals, institutions or nations. Unlike historic wars, this 'perpetual war in the name of a peace that cannot be' will never be won. Pirates may come to be the defining figure of our time.

*This article is a summary of an argument made by Daniel Heller-Roazen in The Enemy of All: Piracy and the Law of Nations, with some additional tangents and speculations*

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Elaine Carlisle,  
Apartment C,  
12 July 1994

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*by* FITTS & HOLDERNESS

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# Clepsydra

by DALE FINCHAM

The finest workers in stone are not copper or steel tools, but the gentle touches of air and water working at their leisure with a liberal allowance of time.

– Henry David Thoreau  
in *A Weekend on the Concord  
and Merrimack Rivers*

## PART 1 VESSELS OF STORIES AND TIME

Water is Time. A time defined by the regulated flow of liquid into or out from a vessel where the amount is then measured. Yet it is also a time that is perpetually in flux as part of a wider system of natural processes.

As I walk through the dimly lit labyrinth under the forecourt of Somerset House in London, I'm immersed in the sound of dripping water from ceilings onto the damp concrete floor of the Museum of Water. Grotto spaces house groups of glass bottles within their musty interiors, which are generously layered with water and mould.

The walls are lined with shelves housing containers of every possible description: discarded plastic bottles; glass jars and bottles in a variety of shapes and sizes; even a small tray full of watercolour paint. Each artifact was publicly donated and holds its own stories. These water relics are both removed from their original context and yet are extensions of the people who collected them – mentally, bodily or otherwise. As a result, a library of liquid memory and stories gradually reveals itself:

- water from Wellington Harbour in New Zealand
- bottled urine and saliva
- stool sample with rice water
- water from the Thames
- water from a garden hose
- holy water
- tears from a break-up
- a model of a water molecule made by primary school students
- dirty, black anonymous water.

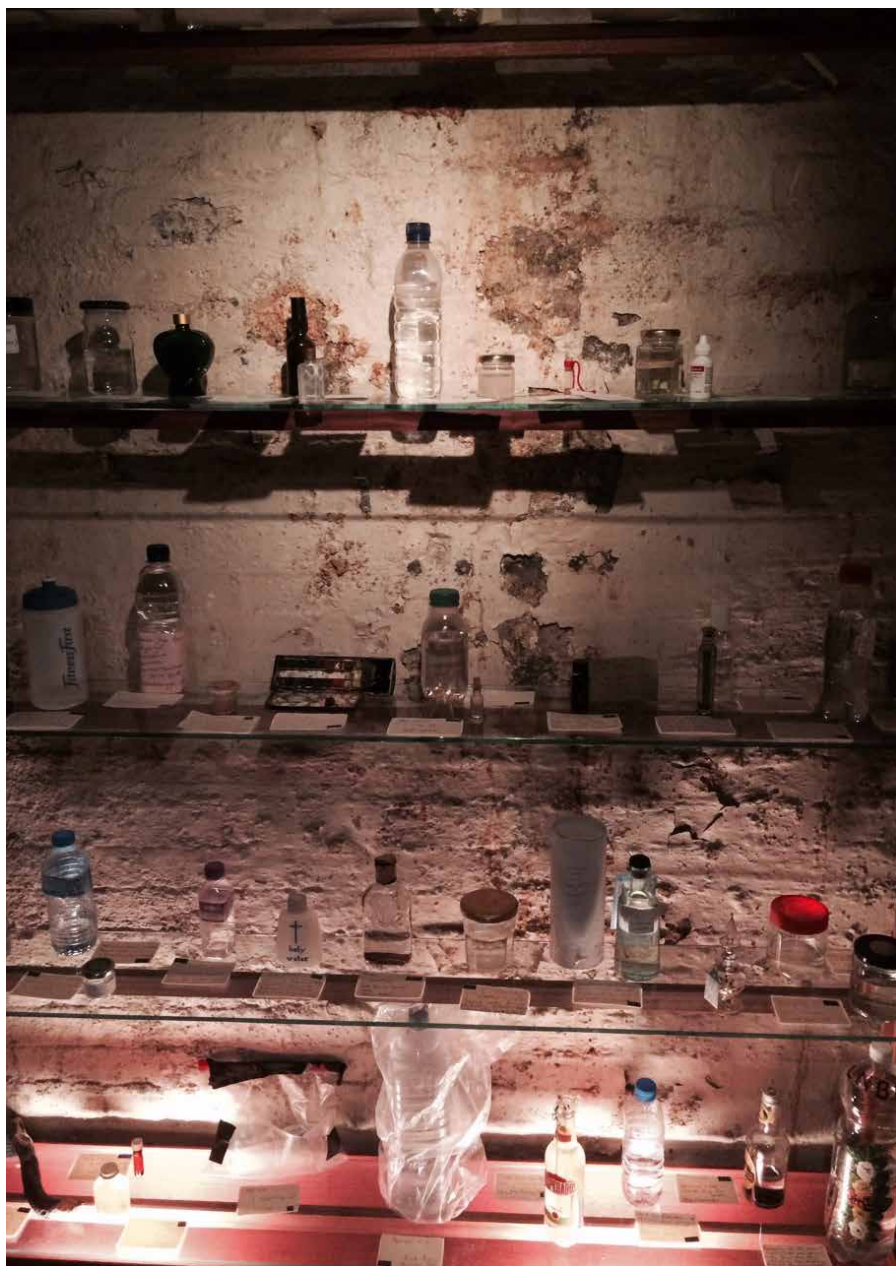


Figure 1: The Museum of Water collection.





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Scientists Dr Robert and Libby Mulvaney collected and donated samples of water from an Antarctic ice sheet at Fletcher Promenade 647 metres down. It is estimated the water is 129,000 years old – every centimetre of depth represents about 20 years.

Much like how messages in a bottle were archetypal in their form of communication to others (through hope and chance of their delivery), these bottles represent a similar form of communication – albeit in this case water is the message (instead of acting as the mode of delivery). Each object represents the very nature of the stories, as much as the written descriptions accompanying them, through their physical appearance – from slightly battered plastic bottles and clinically precise containers for scientific analysis to the colour of the water itself.

Here, water is time – a repository for memory through the stories told – rather than a measurement of it. Yet this water also keeps time: individuals' tales and the vessels that carry them, replete with nuances, serve as a collection of points in time.

By containing water within our own relics, we create a sense of personalised

attachment to it, which others can then relate to through their own stories and subsequent experience of time. Water here is subjective: everyone has a definition of what water is or represents. It is multivalent by nature. These personal relationships with water are definite instances within a larger continuum.

#### PART 2 RIVERS, CITIES AND TIME

As an almost unnatural and seething body of liquid, the Thames reveals human and industrial waste within the gaping maw of its tidal swells and surges.

Regents Canal is a mass of dull green viscous liquid. It is a container of floating bottles and Aesculapian snakes. Signets and canal boats line its edge as it slithers and churns at high tide. Like the tides themselves, people ebb and flow against the canal promenade.

JG Ballard's apocalyptic story 'The Drowned World' illustrates London as a wasteland of tropical lagoons changed irrevocably due to massive geophysical changes in the earth's climate – water as harbinger of human death and disaster. The story reveals the ultimate collision between water and time by contextualising water in terms of both global time cycles and the

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ruined artifice of London itself – a city beyond recognition, replaced by dream-like layers of watery landscape and accelerated evolution.

At present, London itself is not only made up of accretive layers of built substantial matter, but also the insubstantial layers of liquid – such as underground rivers and canals like the River Fleet, which have woven across the city over time. The rivers reveal ageing infrastructure at low tide: disused dry docks, boat ramps and tunnel mouths of subterranean streams. The waterways of London represent an ever-changing landscape of human debris, constantly sculpted and carved away by water.

In this sense, the entire system of global waterways (rivers, streams and deltas alike) can also be seen as a vessel of time. Much like the artifacts from the Museum of Water that tell stories about individual moments in time, the great global water container known as mother earth encapsulates the stories and memories of entire civilisations. It is this scale relationship between earth's waterways and water clocks I shall bring to bear.

As humans, we can't instinctively appreciate or even perceive the natural

cycle of time for rivers, where processes such as raincloud formation, precipitation and erosion happen on a much larger and more dynamic scale. The relationship between water and time in this context is more of a continuum – part of the natural cycle. Yet rivers and their cycles are also repositories of domestic and industrial consumption. Over time, rivers have become containers of human artifacts and processes, and thus direct extensions of us in the worst possible fashion.

One feels there is an important scale and time relationship to be gleaned from the curious personal stories collated within the Museum of Water. From a micro scale, the personalised artifacts of water could begin to inform the macro scale of how we perceive our rivers and waterways. If we could possibly see our rivers as a part of global history's wider narrative over time, then perhaps we can encapsulate them within the artifact of our own story-telling conscience, in order to have a similar level of personal attachment – instead of filling them with the artifacts of our over-consumption

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*Many thanks to all the staff at the Museum of Water, Somerset House, London.*

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# Museum of Water

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ROZZY MIDDLETON *interviews*  
AMY SHARROCKS

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**From 6–29 June 2014 The Museum of Water was housed in London’s Somerset House. Rozzy Middleton spoke with artist, curator, water collector and overall water enthusiast Amy Sharrocks about the project.**

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**Rozzy Middleton (RM):** So, obviously, tell me about how the project started.

**Amy Sharrocks (AS):** I’ve been making works about water for about ten years. The first was *drift* where I invited people to drift off from the edge of a pool during the twilight hours of summer. Each person would settle back in the boat with me for 15 minutes and just... let go. Our thoughts meandered with the motion of the water, as we noticed the night coming down. It was allowing people to share what is usually a solitary daydream experience.

This project gave me the sense that I am most happy as an artist when the viewer is making the experience as much as I am.

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It may be rigorously researched on my part, but it’s not a scripted activity – but a shared experience. I set up the situation for the viewer to inhabit. They have the chance to shape it as much as I do. I am interested in the architecture of a moment, and my offer is one of co-creation.

So following *drift* came *SWIM* where I organised for 50 people to cross London’s via its waterways. I put a line on a map from Tooting Bec Lido (a public swimming pool in South London) to the North London ponds in Hampstead Heath, stopping at ten pools, three lidos and two lakes. In a world where we have less and less water and in London where we have become so used to using swimming pools and not the natural waterways, this was a way of re-connecting and making a splash about our natural resources.

**RM:** In fact after *SWIM*, you started to swim in the Thames. Tell me more about this.

**AS:** My natural swimming had always involved lakes. But swimming in lakes is completely different to river swimming. You generally get in and out in the same spot in a lake, but in rivers you swim down and get out a different place. You

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get in somewhere and you have no idea what's around the next bend. You then get out somewhere completely different. It's a conceptual leap. So far I have only swum 17 km of the Thames, so I am only beginning to get to know the river.

**RM:** What is the water condition of the Thames?

**AS:** Much better than it has been for years. Of course it varies on where you are in the river. But on a beautiful hot day, the water is gorgeous and it's an extraordinary experience.

**RM:** What about David Walliams famously failed swim?

**AS:** It was a lovely idea to swim the whole river but he hadn't built up a resistance to the water, as many people have. He had never gone for a big Thames swim and so he got sick and gave Thames swimming bad publicity for the wrong reasons. The Thames regular swimmers – who swim all the time and never get sick – are all furious with him!

**RM:** So tell me more about Museum of Water.

**AS:** I have been collecting water for over a year. I started off on a corner in Soho. Do you know who John Snow is?

**RM:** The newsreader or Game of Thrones character?

**AS:** [Laughing] Great references! But I actually mean John Snow the physician and scientist who ended the cholera epidemic in London. Tens of thousands of people had been dying, everybody thought it was due to a noxious airborne miasma. But Snow mapped all the deaths by walking through Soho and discovered that it was water-based. He had the poisonous water pump shut down and the epidemic stopped.

My collection of water started as a part of the bi-centennial celebrations of John Snow, pretty much on the steps of that pump. The timeline from 1813–2013 allowed us to look at the changes in our use of and access to water, our management and our feeling for it.

Through talking with people in Soho this collection has grown. I love how Snow's wanderings and careful mapping

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have been echoed by each new person's journey for their water, and that the tracing of this disease has led to new findings of the extraordinary things water can carry.

This work is enabling. It is the only piece I know where people do most of the work before meeting the artist. The museum invites each person to make their own choice of water and bottle. I am only there for the last two stages of the gathering: the sharing of the history of each choice, and the accessing into the museum.

**RM:** The artist as facilitator...?

**AS:** Yes. I know what I know and all my research and planning will only get me to a certain place. To get somewhere different you need someone else to take that leap with you to end up in a different place – that conceptual leap I was speaking about, like the river swimming.

I'd been making my own water collections for a period – Thames and Walbrook River, amongst other places. But I am interested in collaboration. I am interested in what other people have to say, and what other people bring to the art experience.

I had no idea how people would respond. It's the simplest idea in the world – bring me your water – but the reaction has been extraordinary. It has been staggering, the huge effort people have gone too.

**RM:** What are some examples?

**AS:** One woman went on a lone trek in the rain and wind across Snowdonia to go back to a lake to get water from a specific pool because she had any amazing experience there. In Swansea, a couple gave me a bottle of water from a beach where the groom had proposed two years prior. They bought a bottle with a huge heart on it, went to the beach together and put sand, shells, driftwood and a cockleshell with both halves still together into the bottle.

A lady has given me her watercolour set – with integral water bottle – after 30 years of travelling across the world. With it she told me stories of thunderstorms in Botswana, which crackled like fireworks around the clouds. She said they would pull out chairs, grab a beer and watch from hundreds of miles away.

**RM:** So how did the exhibition at Somerset House come about?

**AS:** Why Somerset – Mark Ball [Artistic Director at LIFT] loved the piece. He's really interested in theatre and the spectacular, and asked me how I might explore my small(ish) itinerant museum on a grander scale.

I immediately suggested Somerset House, this enormous palace of a building in London, which was once the naval headquarters, the Inland Revenue AND the registry of births and deaths in one building at the same time. An incredible fusion. The museum is in the Deadhouse, where the walls literally drip with water.



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It is the below stairs of the building, where the servants worked and the coal stores are kept – the place that fuels the life of the building.

Somerset House were very keen to explore their water history and have been very supportive of my ideas – letting me leak the River Thames back into the building, after it had been pushed back to make space for the Embankment many years ago. It has been a pleasure playing with the theatre of this site and the reality of the bottles. The building has joined in on the performance of the piece, and I have had a lot of fun ‘enhancing’ the natural dripping with a little sound symphony of added drips...

**RM:** So what is the plan after Somerset House?

**AS:** For the next year, I will continue touring the museum around Europe and even America and Australia and then I’ll look for a permanent home for it. I’ll stop gathering new water and instead show the finished collection and how it changes over time – the bottles, the contents and what each visitor adds to the understanding and story of each bottle. My job is to look after the bottles and remember how people talk about their water – so that I can pass on their phrasing and experience.

**RM:** Is it hard to transport?

**AS:** My role has changed from artist to janitor to packhorse! It depends how large the installation is each time and with over

450 bottles now in the collection, it’s quite unwieldy, so that it’s not always possible to transport in its entirety.

**RM** Would you consider having other people create their own museums of water?

**AS:** I had never considered it, but I have now been invited to America and Australia, Mexico... which poses problems. Now it’s more and more difficult to cross boundaries with water – blimey the water I’ve lost to customs!

So that becomes more and more pertinent. A funny thing happens with the water, a re-valuing. As soon as it is bottled, that water becomes entirely separate from the body of water it came from, and entirely precious – people wouldn’t swap it for the world. How could I risk my unique, priceless, irreplaceable bottles to airfreight?

I thought that my role was to collect all the water, but now I think I would prefer to set people up carefully to make their own collections. An Australian or African collection would look entirely different to the British collection. They may all contain bottles from all over the world, but I think it would be more interesting to each have our own, rather than a global conglomeration. I would like to work with people in their own countries, to learn more about their water histories, but also enable them to collect, and to collaborate to see where they might site their museums. I want to learn too.

# We live quietly

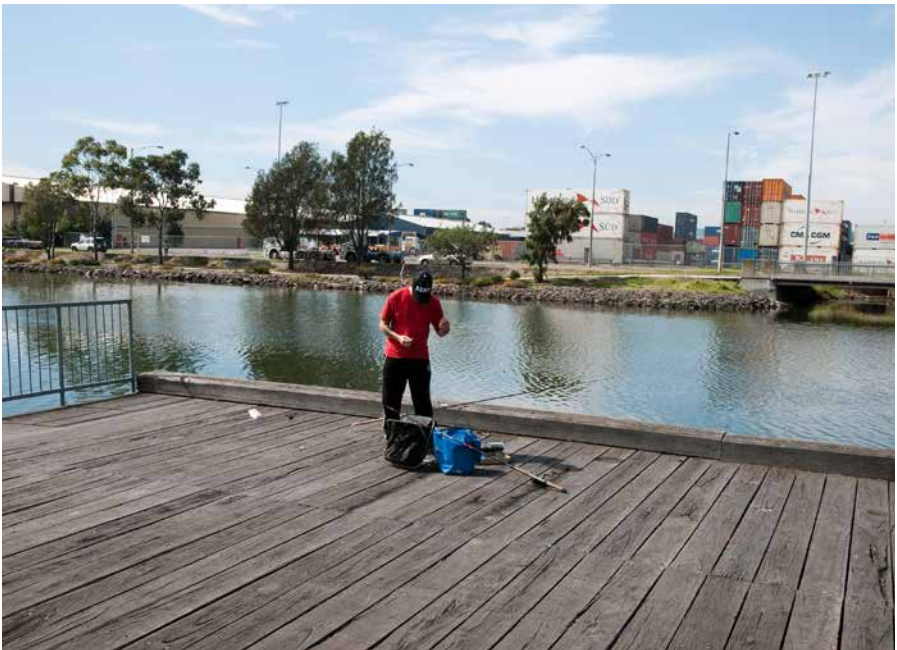
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by CHRISTINE MCFETRIDGE

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**Christine's current project, *We live quietly*, considers gentrification and orientation in Footscray. Her photos are specifically informed by the relationship of the area to the Maribyrnong River – whether this body of water is used for recreation, is fenced off, appreciated or polluted.**

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# Architecture in a city of taps

by MARIKA NEUSTUPNY

Wet areas in public space, buildings and households are sites of social interaction. Rivers, canals, aqueducts, lakes and ponds play an important role in marking social gathering places in the city. Locale-based water points appear throughout cities: display and drinking fountains, public baths, swimming pools, public toilet blocks, nineteenth-century horse troughs and so on. These items and their situations, often set up in an earlier age, continue to provide reason and opportunity for people to connect.

Inside private boundaries too, cooking and cleaning can be shared pursuits, and bathing can involve interaction and negotiation between occupants. Everyday public and private use of water has an in-built potential for thinking about relationships between people. And the city is full of taps – there are several in every urban district, indeed several in every household, which are each used several times a day, everyday. This situation provokes me to think how a congenial architecture might be made around the use of water. How can the architectural design of

spaces surrounding water activities work to encourage both household and community neighbourliness?

Neighbourliness connotes a type of positive relationship which can exist between neighbours, household members, or people within a given community or city at large. It is a relationship based on proximity, and allows for both privacy and togetherness, whether at home or in the public sphere. In terms of physical urban models, the capacity for neighbourliness is not simply defined by a fence, the type of housing or the fact of being in a public place. Rather it is the spatial configuration of links between people that can influence the ease or difficulty of maintaining a kind of considerate friendliness.

Emily Cockayne writes that ‘Sensitive architecture allows occupants to regulate their privacy – sometimes cultivating relations with people living nearby and at other times allowing retreat architecture of neighbourliness would allow us to watch our neighbours, but only out the corner of one eye’ (20–21).

A study of how certain contexts encourage neighbourly arrangements can help designers to confidently propose new ideas for each discrete project. My work has led

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me to look at specific local histories in two cities where I have spent time: Melbourne and Tokyo. In Melbourne, the repetitive and tight scale of the nineteenth-century colonial subdivision with its attached or semi-detached dwellings provide for a pattern of linear demarcation of water pipework along side boundaries. The original township parcels of land surveyed for sale were quarter acre allotments, either 20 metres wide by 50 metres deep or 25 metres wide by 40 metres deep. Yet, as discussed by Bertram and Halik, these were further subdivided in commercial interest so that the standard terrace house plot is essentially one room wide, or a room and a corridor wide (three to seven metres). The back-to-back housing typology resulted in washing and cooking happening in the backyard – within earshot of either side– and the capacity for laneway access between properties. The laneways were effectively a kind of sewer, as they were the open-air used-water disposal channels during the day, as well as the paths taken by the nightsoil collectors. Later the drainage and sewerage pipework was laid along these routes. So supply water entered each narrow plot from the front and wastewater exited from the rear – a ‘straight-out type’ of water

infrastructure. This basic layout still forms the backbone to the inner city suburbs of Melbourne today (see figs 1–3).

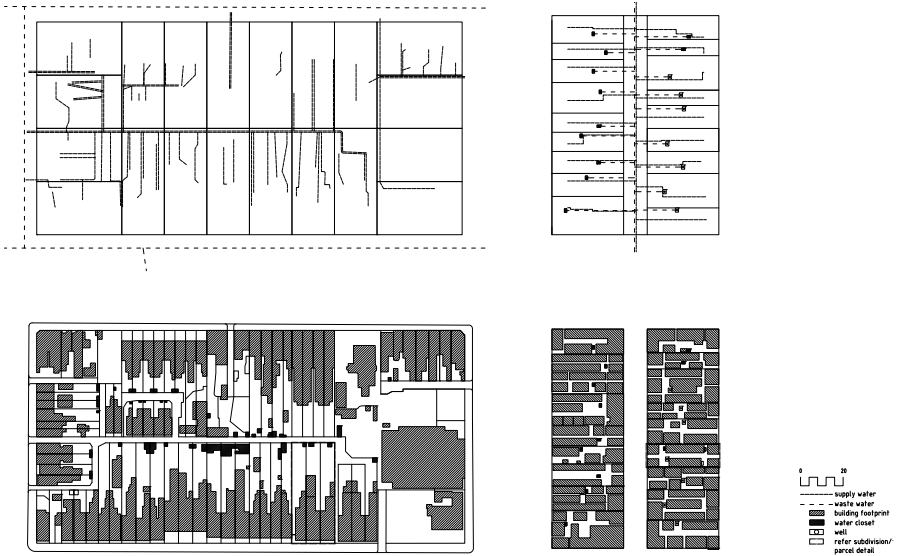
In the case of Tokyo in the Edo period (1603–1868), the pattern of water reticulation into private lots is a ‘back-out type’, where supply and drainage enter from and exit through the same central path of pipeways. This system suits the small Edo period social unit, and the focus on firefighting in the re-planning of large portions of street layouts following the great fire of Meireki (1657). For example, in the Tsukiji area, the ruling shogunate partitioned blocks into fire-fighting sectors, with central gated streets containing water infrastructure below and multiple wells dedicated to firefighting if necessary. Azby Brown (126–136) has researched the relationship between the urban blocks or sectors and the Nagaya tenement complexes contained within them. Although these sectors were not exclusive, outsiders were not expected to enter.

Each tenement parcel was shared by several households gathering round an open well and making a mini-community within the depth of the block of land (fig. 4). The parcel was already under the

surveillance of an immediate gatehouse as well as the fire-fighting watchtower for the sector, so a sense of security allowed each household to be small and relatively open. The kitchens were directly facing the entry pathways, with sliding shoji screens and shutters making access to the covered waste drain easy. Water supply entered the site from a private well; in the case of the drawn example (on page 62), fifteen households used this point (a kind of ‘tap’) to collect water for the kitchen or for laundry in the common area. It was the same group of people, plus perhaps others in the sector, who would be the usual visitors to the local bathhouse. The bathhouse is still a well-frequented institution in contemporary Tokyo, and although the wells and their specific culture no longer exist, the scale of the

urban subdivisions is still linked to their use and availability.

Whether concerned with backyard hollering in Melbourne, hanging clothes around the shared wells in Edo-Tokyo, group laundry on the Ganges River or street-based washing day in 1930s London, urban communities have consistently found ways to utilise available facilities cooperatively. However, in the affluent modern world, the literal sharing of services would be politically and socially difficult to reinstate. Current lifestyles are becoming increasingly spatially self-contained: kitchens may overlook elaborate private living and dining spaces, but rarely engage with entries or look sideways to neighbouring properties; laundries may be completely internalised, with even the drying component carried out by



CARLTON, MELBOURNE 1896  
BLOCK ALLOTMENTS & INFRASTRUCTURE DIAGRAM  
'IN FROM FRONT, OUT FROM BACK'

TSUKIJI, TOKYO C. 1750 (EDO PERIOD)  
SECTOR ALLOTMENTS & INFRASTRUCTURE DIAGRAM  
'IN & OUT FROM FRONT'

Figure 1: Carlton, Melbourne and Tsukiji, Tokyo: block/sector allotments and corresponding infrastructure diagrams.

machine. Bathrooms and ensuites are proliferating, with a private bathroom frequently being provided for every inhabitant and guest in larger homes.

The trend towards the individualisation of water-use spaces correlates with Elizabeth Shove's discussion in her book *Comfort, Cleanliness and Convenience* of the interaction between technology and the use of water. Put simply, the present-day use of water with time saving devices such as programmable dishwashers and washing machines is helping us to be able to customise our schedules, and concurrently fracturing our time into smaller and smaller pieces. In order to be able to keep up with the twenty-first century lifestyle, it is convenient to apportion activities into separate timeslots and locations. Although we cannot return to the historical conditions

bringing about shared water use, we can re-think the separating out and tighter defining of activities, to work towards proliferating neighbourliness.

One way to address the increasing individualisation of space and fracturing of time is for architects to re-examine the contemporary physical construct of cities and project plots within them in terms of the embedded potential for neighbourliness provided by water use. Differing cultural priorities and their concurrently developed infrastructural layouts mean that every city, and each site within, has its own local character and prospects for social engagement: Melbourne's narrow plots with 'straight-out type' of supply-waste reticulation encourages casual sideways interactions and Edo-Tokyo's dense plots with 'back-out type' water infrastructure fosters inward

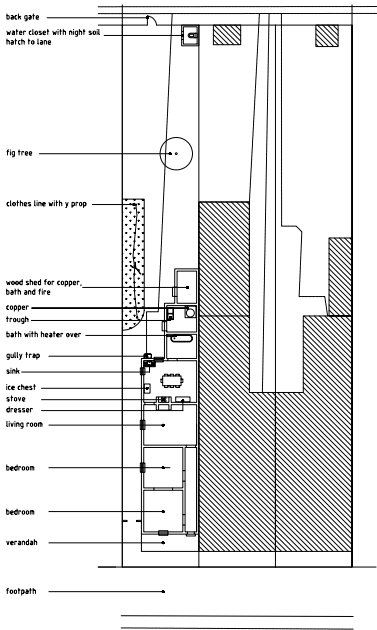


Figure 2: Carlton parcel subdivision, 1896.



Figure 3: Carlton boundary tap.

facing interactions. However, common to both the Melbourne and Tokyo historical examples is the strategy of kitchen, laundry and bathroom at the intersection of inside and outside areas, as you can see on the opposing page. In Tokyo, this happened in the group areas and front of households, while in Melbourne it happened at the casual rear. The social gathering spaces of eighteenth-century Edo-Tokyo can't be brought directly to projects in contemporary Melbourne, but some principles of spatial relation can be investigated in a Melbourne context, such as how the kitchen faces both inside and outside at the edge of the building.

An elaboration of some examples of recent architectural designs in Melbourne follows. Given the linear and boundary hugging quality of Melbourne's infrastructural set out, they all consider the way that people can make spatial links

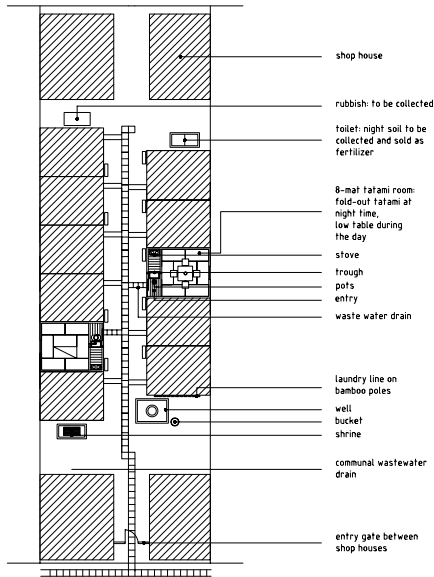


Figure 4: Tsukiji tenement parcel c.1750.

to each other along the edges of property boundaries and intersection between inside and outside whilst engaging in water based activities. They try to broaden the fixed ideas of current status quo in spatial arrangements by trying out ideas abstracted from successful neighbourly situations.

North Fitzroy House is a renovation project in a tight inner city site, strongly dictated by the typical pattern of services running along the length of one side of the property. The existing situation was a remnant of the nineteenth century's practical approach to water services – the kitchen sat on the back end of the house, without expansive visual or circulatory links to the rear yard. This project squeezes the kitchen along the traditional external access path on the boundary. The compacting of the services produces an elongated bench where the family can gather and work together and has the kitchen reaching the back façade of the space, maintaining a direct link between the activity of cooking and the garden. Depending on the fence type and the height and scale of neighbouring activity, the sideways link to the garden could become a place for neighbourly interaction.

Heidelberg House is also a renovation to a site with clear allocation of services down the length of one side. In this case, the plot size matches the ideal of the 'Australian Dream', being the pre-subdivided size of nominally 20 by 50 metres. At the time of design commission, the kitchen had been embedded into the middle of the western edge of the house. This project repositions the kitchen to face the back garden, over a new deck and external stair, thus establishing a sideways relationship to the dining room. It becomes both an eddy and a knuckle

to the practical activity of the house. The rooms for bathing have handbasins taken out of them and placed in the wide passage of the adjacent 'wet area' (fig. 6). In the busy morning rush, the family can jostle toothbrushes whilst jumping in and out of showers and finishing some toast. The kitchen sink position has far ranging views over adjacent parkland as well as an overview to the barbeque, vegie patch and 'hills hoist' drying line. The laundry has been relocated to a semi external sub-floor area at the base of the external stairs from the deck. Like nineteenth century robust inner Melbourne, it makes an intimate relationship to the garden.

Box Hill Gardens Amenities Buildings consist of a public toilet block and shade building in one of Melbourne's middle suburban parks. The toilet building replaces and relocates a disused tennis clubhouse building. The aim of the new

complex is to provide for multipurpose use of the adjacent court surfaces – so both buildings are on the rim of the courts, looking at each other, into the centre, towards the street and out towards the rest of the park. The toilet building can act on a day-to-day level as both grounds amenity and hit-up sports wall, but also at particular moments can be changing rooms for events or water provision for festivals. The hand-washing trough is communal, in a similar way to the Heidelberg House handbasins, although in this case it is a covered external situation. Bringing this portion of toileting to be outside and shared across sexes brings friends, family and strangers together. It also positively connects beyond itself by looking towards the slopes of the park and surveying the children's playground in the middle distance. Meanwhile the length of the



Figure 5: Tsukiji/ Edo period well.



rear wall to the toilets carries all the servicing pipes along the protectively detailed brick wall. The other side of the solid wall is left smooth and robust, becoming a popular hit up practice wall (fig. 7). Rather than service runs resulting in blank and unwelcoming expanses of wall, as is so commonly a problem in public park facilities, this 'back' acts as a definite 'front' to the sporting activity.

These contemporary design projects attempt to consider how water is used as a way to reconcile current differences between privacy/security/individualisation and casual neighbourliness. They attempt to do 'both-and': permit both current social situations and include strategies of historical variations; let specific local culture mature and integrate abstracted versions of ideas from other cultures.

Architecturally, this involves particular consideration of edges and boundaries – whether this be between rooms or properties. Creating direct lines of sound and movement between wet spaces, and different views to connect them, encourage contact. The simple acts of standing at the kitchen sink and hanging out the laundry then have the potential to nurture social relationships – at a range of scales.

Through considered use of water, architects can help to answer the question: how can we design buildings which consider neighbourliness when there is no longer any need or desire for actually sharing infrastructure, when privacy and security are highly prized and when the development of technology rides alongside a cultural push towards highly scheduled lifestyles? Even today



Figure 6: Heidelberg House, NMBW Architecture Studio, 2012: Hand basins in shared wet area.



Figure 7: Box Hill Gardens, NMBW Architecture Studio and Aspect Studios, 2013: Hit-up wall and shared handbasins.

the practical use of water can still prompt casual interactions between people both within and beyond property boundaries, if the arrangement and materiality of the physical situation can accommodate it. Each project produced that actively reflects on this question will contribute towards a city of careful relations. Because all around us is a city full of water points, each with the inherent potential for people to gather together.

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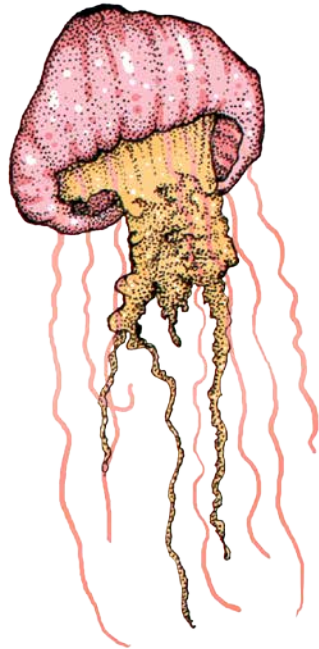
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**From a drop of water a logician could infer the possibility of an Atlantic  
or a Niagara without having seen or heard of one or the other.**

– Arthur Conan Doyle, *A Study in Scarlett*

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**For whatever we lose (like a you or a me)  
it's always ourselves we find in the sea**

– e.e. Cummings

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**The breaking of a wave cannot explain the whole sea**

– Vladimir Nabokov

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# Freeranger of the issue: Sultan Iltutmish

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The great fourteenth-century Sufi saint, Nizamuddin Auliya, said of the sultan Iltutmish that ‘more than his wars or his conquests, it is with the water supply that he has built for the people of Delhi that he has won his place in heaven’ (Dasgupta 158).

Iltutmish ruled from 1211 and was the second to rule under the Mamluk or Slave Dynasty, one of the five unrelated dynasties that made up the Delhi sultanate, which lasted until the Mughal Dynasty. In spite of his politics and wars, he was one of the earliest in a long line of Delhi rulers to recognise water as a common. Dasgupta writes in his book *Capital* that ‘those dynasties all came from the plains, and though they had different visions of religion and government, they had the same vision of water’ (426).

Through the use of gravity, monsoons, the natural characteristics of the land, and religious and spiritual associations with water (which at this time ensured its preservation), he and those that followed him developed a sophisticated system that made water available to many.

Iltutmish built tanks and stepwells to cope with the seasonal fluctuations in water

availability. While tanks captured monsoon rains, which would gradually sink down and replenish the water table, stepwells rendered the water accessible even when the water receded in dry season. Pilgrims and Delhiites would just have to move further down the vertiginous steps to reach the water’s edge or navigate subterranean passages and galleries, which also provided relief from the heat, to access the wells.

The stepwells and tanks also became places of social interaction and due to immediate interactions with water enabled by these structures, it became further incorporated into the culture. With this came democratic implications: all users had to care for the well or tank and all had access to it. They could see where the water came from, were involved in its maintenance and, as recorded by Dasgupta, could therefore understand water’s cyclical nature and appreciate this as a system – it was empowering and key to water preservation. This is a vastly different approach to the colonial centralised system of pipes and taps, which removed the public from direct access to the water supply, rendering them reliant on the British for this.

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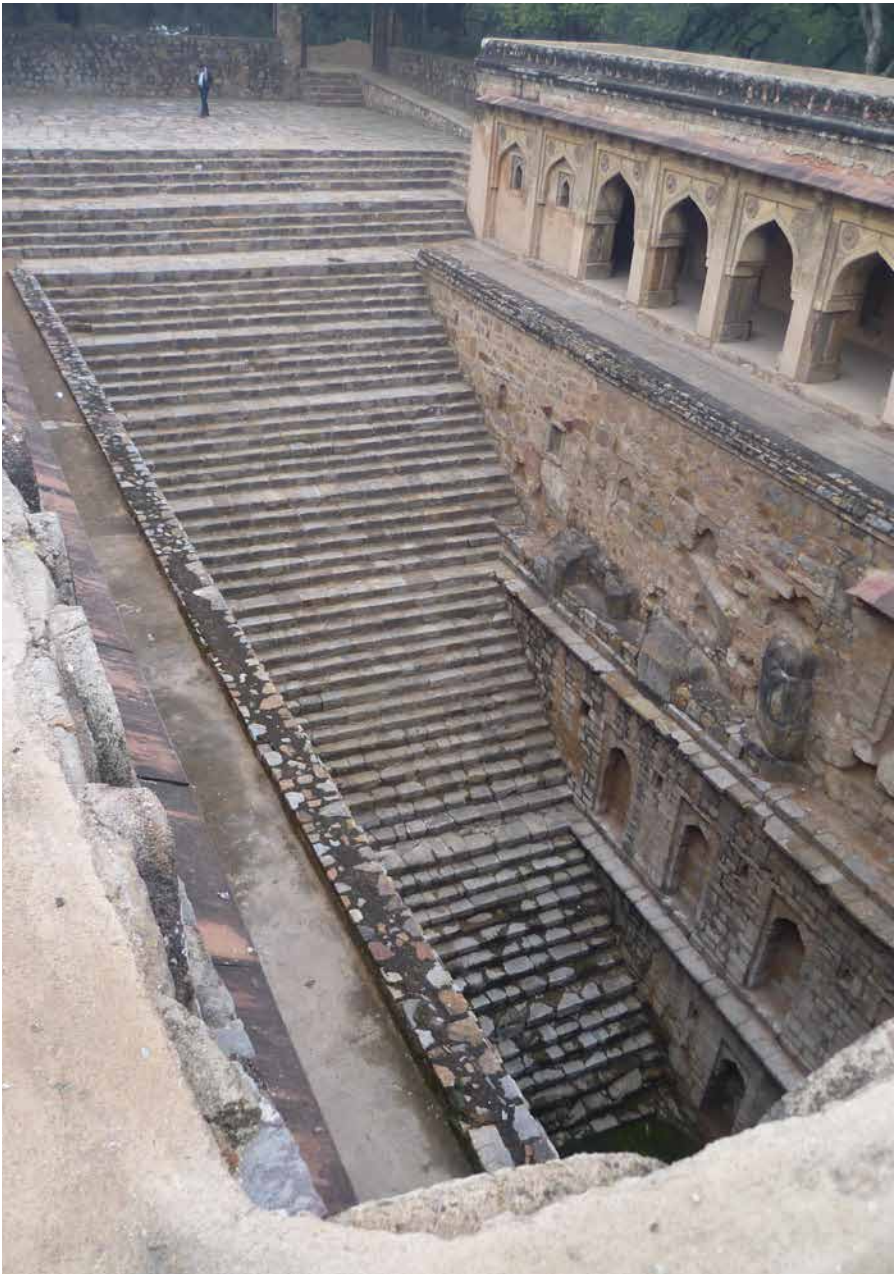


Figure 1: The ornate Rajon-ki-baoli, or masons' stepwell, was built during the Lodi Dynasty in 1516.

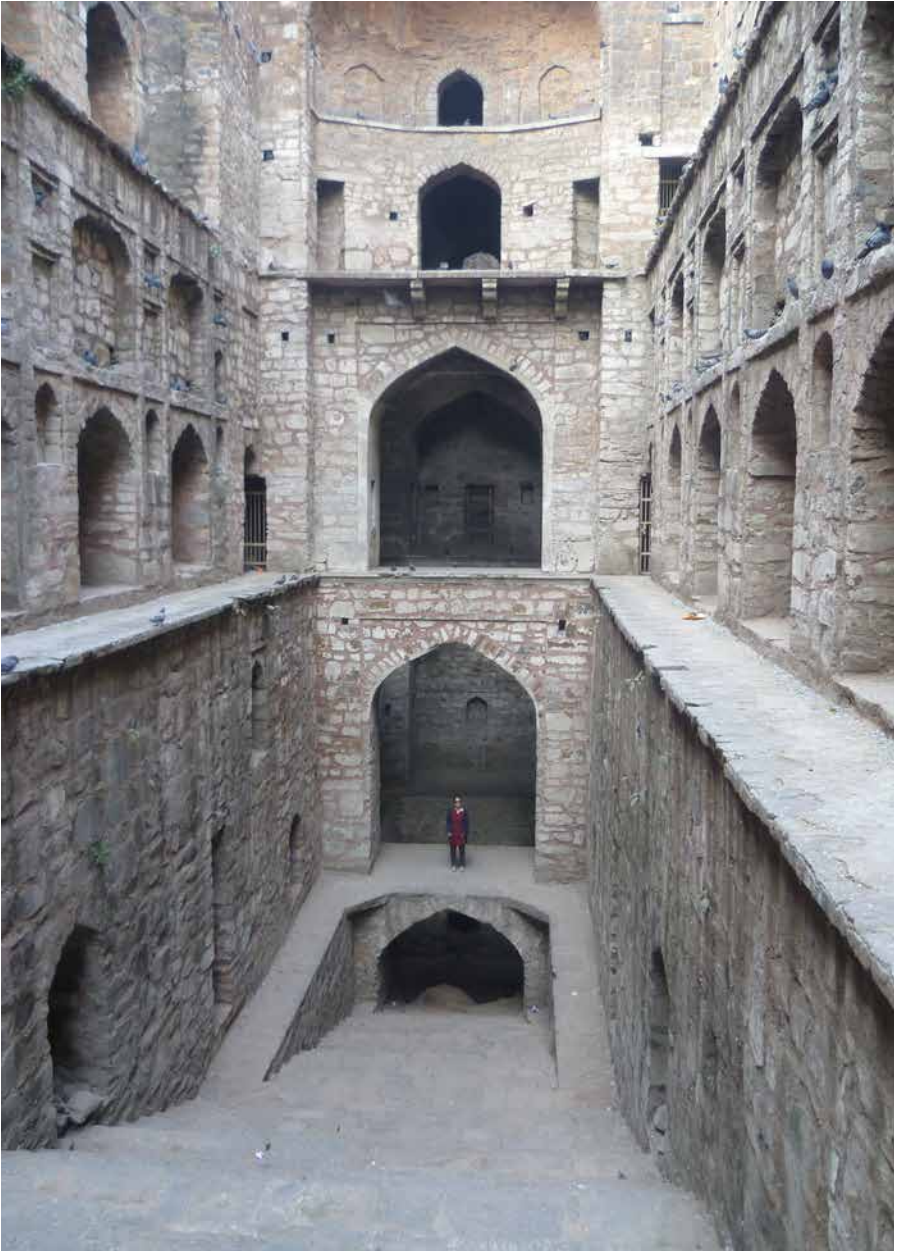


Figure 2: It is not known who built the Agrasen-ki-baoli, which sits in the CBD of Delhi – a stunning water monument amidst the high rises.



Figure 3: Ghandak-ki-baoli, built by Sultan Iltutmish in the thirteenth century, is one of the oldest stepwells to remain in Delhi.

In 1230, Iltutmish began one of his great water projects – the Hauz-e-Shamsi, a vast reservoir set to address the shortage of drinking water in Delhi at that time. According to legend, it was inspired by a religious vision where the Prophet appeared to him and indicated where Iltutmish should build the water tank. The following morning, he found a hoof imprint of the Prophet's horse on this same site and began construction. The reservoir covered close to five acres and served the waters needs of many.

One of the oldest stepwells that remains today in Delhi is the Ghandak-ki-baoli, which Iltutmish constructed for venerated Sufi saint Qutbuddin Bakhtiyar Kaki, who inspired him with his teachings. Named after its sulphur smell, the waters of Ghandak-ki-baoli supplied the area and were thought to have healing properties. The arcaded verandahs provided respite from Delhi heat.

Not only did these water monuments encourage stewardship over the water and offer a natural gathering place for

locals and travellers alike, they presented (and still do) the visitor with an aesthetic thrill. Their theatrical flights of plunging stone stairs invariably draw the eye downwards to the water line (or where it should have been), giving us an indication of how water was venerated; how it was a focal point in culture.

Though abandoned and the well dry, Ghandak-ki-baoli's five stories of pavilions, sturdy walls, arches and the series of ever-narrowing steps remain in a sloping stratification of time. This otherworldly space from another time still attracts today's Delhiites for picnics and card games – a gathering place but of a more private kind.

These monuments (tanks or baolis) are no longer used for the purpose that they were built for. The striking absence, or in some cases pollution, of water in the stepwells serves as a bleak reminder of Delhi's current water situation, which, according to Dasgupta, is one that is far removed from why so many dynasties built cities there – the abundance of its ground water. Today many live without a reliable source, for the limited supply of water is reliant on pumps (there are many power cuts), the diversion of water from other sources, economics and politics. A *Times of India* article reported that the Indian National Trust for Arts and Cultural Heritage had conducted a study that proposed harvesting groundwater to revive certain baolis where possible. This old but sophisticated technology has not been improved upon and could address some of Delhi's water needs. Iltutmish may just provide water to another generation.

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# Water and the common good

by JOSEPH CEDERWALL

Freshwater scarcity is a key reason why 3.5 billion people are projected to live in countries that cannot feed themselves by 2025. Earth's freshwater ecosystems are critically depleted and being used unsustainably... Extreme droughts, floods, melting glaciers and other water cycle-related effects of global warming are why there'll likely be 150 million global climate refugees within a decade. Diplomats warn that 21st century conflicts will be fought over water as they were for oil in the 20th.

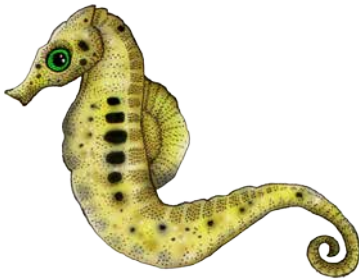
– S. Solomon in *Water is the New Oil*

Steven Solomon, author of *Water: an epic struggle for civilisation*, has warned that water is a root cause of nearly every threat to the world order and planetary environment today. Water plays a central role in life on earth – it is a vital element in the nutrition, sanitation productivity and spiritual wellbeing of humanity. Linton and Budds state that humans and water constantly make and remake each other in a process termed the 'hydrosocial cycle'. This cycle is currently

imbalanced and unsustainable to the detriment of both environment and people. Planetary water resources are on the verge of systemic collapse and in many places water is a source of human conflict and suffering rather than of growth and development as a species. There is, however, hope to be found in emergent solutions that reconceptualise water as a common good. The commons paradigm offers empowering solutions for collective resource management that have the potential to revolutionise our interaction with natural resources and restore the natural hydrosocial equilibrium of the planet.

The emergence of advanced 'hydraulic civilisations', such as those in China in 3950 B.C. and the Indus Valley in 2500 B.C., was an important step in the development of humanity. This state hydraulic paradigm relied on centrally managed canal-irrigated agriculture requiring mass labour, technical specialisation and the storage of grains. It also spawned innovations such as urban life, writing systems, long-distance trade, transport and currency systems. This top-down command and control paradigm of human organisation importantly





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enabled the effective political control and manipulation of large populations by an elite group and continues to influence the way that the dominant global hegemony orders and exploits global water resources today.

It is now clear that the state hydraulic model has ultimately failed the test of sustainably managing and dividing global water resources. Water has been tapped, diverted, dammed and polluted to meet the industrial and luxury demands of rapidly growing consumer societies while the basic water needs of many people remain unmet. The UN Commission on Sustainable Development predicts that by 2025 nearly half of the world's population will live in countries experiencing water stress. Current legal and political systems do not prioritise the conservation and preservation of water for sustainable local community use. A detailed report by the International Forum on Globalisation (IFG) describes how political leaders and the World Bank collude with the private sector, using tools such as free trade agreements and conditional debt to prevent communities from maintaining water as a common good. This has led to a systematic stifling and dismantling of both emergent

and traditional commons-based water practices and systems around the world.

As the state retreats from its role in water stewardship, multinational food, armament and technology corporations are profiting grossly from the construction of mass water distribution infrastructure and the privatisation of local sewage and water services. Major players such as Suez (yes – they built the canal) and Vivendi are among the 100 largest corporations in the world and control interests in water resources and the provision of water services to 100 million people spread across five continents. These firms already own significant physical resources such as dams and waterways and intellectual property in crucial technologies such as water desalination. The next frontier for water profiteers is the mass commercial transportation of water from water-rich to water-poor countries. The IFG reports that 'To address England's growing water crisis, political and corporate leaders are calling for large-scale exports of water from Scotland, by tanker and pipeline'. This is a politically loaded proposal in the context of Scotland's ongoing quest for devolved authority and self-determination

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over its national resources.

The systemic inequalities and growth imperatives of the current global order create and escalate conflicts over dwindling water resources, particularly in water fragile regions such as the Middle East and Africa. Israel's ongoing occupation of the Palestinian Territories ensures its strategic control over all available water sources and ability to prevent Palestinians from developing new ones. Amnesty International reports that the wealthy industrialised nation of Israel uses more than 80 per cent of the water from the only underground water source in the region, denying Palestinian inhabitants the means to meet their water needs. Meanwhile, Solomon questions how long Egypt can maintain its hegemony over the waters of the Nile in the face of the widespread malnutrition and poverty of a rapidly growing African population upriver.

An old Turkish proverb states: 'When one man drinks while another can only watch, Doomsday follows.'

The water management systems that modern capitalism imposes have resulted in water inefficient cities, industries and agriculture and a trend towards privatisation and commodification of water resources and services. This failure to implement a functional template for human interaction with water is limiting our potential development as a

civilisation and threatening the planet's health. This problem will not be solved by the same type of thinking that created it; a critical re-examination of our current paradigm is urgently needed.

#### COMMONS-BASED SOLUTIONS

The water-centric lens made it dramatically clear that in every era control and manipulation of water has been a central fulcrum of power and wealth and a precondition of prosperous civilization. Time and again water breakthroughs... were associated with epic turning points of civilization and a recalibrating world order among great powers.

– S. Solomon in *Water is the New Oil*

Solomon lists the irrigated agricultural revolution of Mesopotamia, China's grand canal, Rome's aqueducts, the steam powered industrial revolution and the giant dam building projects of the twentieth century as key water innovations. Expanding on this theory, if (and this is a big if) we can implement a new breakthrough in our approach to water as a united global community, we could catalyse an 'epic turning point' on a scale never before seen. Rather than technical breakthroughs, this revolution requires a philosophical shift to a commons paradigm. The current global water crisis essentially stems from our failure to treat water as a common good. Remedying this could 'recalibrate the

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world order', not just between states but between citizens and their rulers.

There is historical precedent for such a paradigm shift towards a commons view of water in the uniting of the water-poor Middle East region through the implementation of the Islamic legal code sharia (literally translated as 'path to water'). Solomon regards the sharia edict that guaranteed free access to water as instrumental to the period of relative peace and prosperity, which enabled an Islamic golden age of flourishing arts, learning and expansion. This water philosophy was transplanted to the West through the 'aquecia' system of commons agricultural water management developed in Islamic Spain and still successfully applied today in arid regions such as North America.

A decentralised industrial revolution is already challenging the false efficiencies of our dominant water management and political power structures, utilising successful past practices as well as new ones. The growing commons sector aims to restore decentralised management of common water resources by devolving decision-making to the local level and enabling collective stewardship. Jeremy Rifkin has recently proposed that this ascendant economic paradigm is transforming the global economy and by 2050 will have surpassed capitalism as the primary arbiter of economic life. In this

new system, local skills and knowledge will combine with best practice in commoning and global capital to establish a high-tech, decentralised network of sustainable 'water sensitive' built environments, industries and agriculture. Below are some of the key innovations involved in imagining this new water system.

#### COMMUNITY CONTROL AND DECENTRALISED MANAGEMENT

A wide variety of decentralised models are emerging as communities around the world reclaim control over water resources from state and private hands. The legendary Bolivian Water Wars are perhaps the most radical example in this sphere. This struggle began when multinational Bechtel and a compliant government privatised the water infrastructure of Cochabamba in the Andes region. A powerful campaign coordinated by a coalition of citizens' organisations led to the overthrow of the national government and the return of the infrastructure to public control. This victory led to the creation of a community managed water utility made up of nested neighbourhood level water committees and provides a good model for distributed, non-hierarchical urban water management.

#### CUSTOMARY AND COLLECTIVE USE

Indigenous and tribal cultures have traditionally recognised the inherent

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value of water. Most possess complex systems for negotiating rights that prioritise the collective interest in maintaining water resources for current and future generations over the rights of individuals or corporations. In Latin America, there has been a resurgence of indigenous environmental management practices including recognition of collective water rights and customary uses of water sources. Ecuador (2008) and Bolivia (2009) have even enshrined indigenous environmental philosophy in national law by adopting the concept of ‘the rights of nature’.

In August 2014, the concept of a legal status for water was given further authority by a treaty settlement between the New Zealand Government and Māori tribes around the Whanganui River. This pact recognises the river as a living being that has legal rights and provides for a co-management arrangement between Māori and Crown representatives. The agreement is a positive development as it confirms the relevance of customary and usage rights of Māori and confirms the water resource as a public or common good by emphasising collective rights and stewardship. The commons movement seeks to expand such approaches beyond the indigenous realm by encouraging all citizens to demand the right to take an active role in collective stewardship of resources.

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## BIOREGIONALISM AND WATER COOPERATION

There are many examples of groups taking on water governance based around natural ecological contours such as river basins, rather than human imposed boundaries of local or national governments. This ‘watershed-based’ management approach is gaining traction worldwide and enhances the possibilities of more integrated and efficient water planning and stewardship. It also allows for more effective cooperation between diverse user groups and thus offers potential in de-escalating conflicts between bordering states and urban and rural communities. Research conducted by the Strategic Foresight Group into 148 countries and 205 shared river basins has demonstrated that no two nations engaged in active water cooperation have gone to war.

## INNOVATIVE LEGAL STRUCTURES

Such legal innovations as Common Assets Trusts aim to legally recognise water as a common resource held in trust for future generations with usage to be determined by the public. Such ideas currently being trialled in the USA attempt to assign a true cost for water use and pollution, and to progressively cap and charge water allocation for mass and commercial users while retaining free access to residential and recreational users.

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## CONCLUSION

The key innovation of the commons movement in relation to water is restoring local resource control through devolution of decision making to lower scales of governance such as the watershed, municipality or even community level. Such a 'new water system' could enable widespread access to adequate water to meet human needs and restore the input of citizens into decisions about the use of local resources. Reforming our water systems in this decentralised way offers potential to disrupt the most damaging aspects of our current global order and may prove to be an important turning point on the road to environmental stability, justice and peace.

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# Liquid information

by WORTHY WATER TEAM

In 2010 a small group of people consisting of a designer (Barnaby Bennett), a biologist (Michael Dann), a puppeteer (Gina Moss) and a graphic designer (Sebastian Serra) jointly won a competition run by the Design Research Institute and RMIT in Melbourne. The project proposed that the use of information design (infographics) to communicate issues of water management and theft on the Murray Darling Basin in Australia could help the public understand these complex problems and perhaps engage them more effectively in political discussions around these issues.

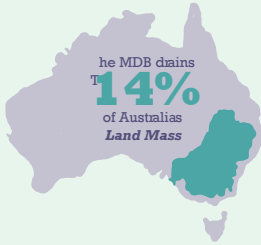
While Australia may be resource rich in coal and uranium, it is water poor. Climate change and pressures from increased human-use have devastating effects on the Australian environment. Water use in the Murray-Darling Basin (MDB) accounts for more than half (52 per cent) of Australia's total water consumption (Australian Bureau of Statistics).

Water in the Australian economic system has become a high value commodity – subject to fierce competition between agricultural users, farmers and defenders of the devastated environment.

Its management in the MDB is complex: the basin spreads across five states; hydrological cycles are notoriously difficult to understand and predict. Considering that in 2005-2006, the gross value of agricultural production in the MDB was worth \$15 billion (39 per cent of the total Australian agricultural commodity value according to the Australian Bureau of Statistics), it is clear that environmental management of this region is of critical importance to all Australians.

Embarking on this project, we initially set out to collect data on the volumes of water stolen in the MDB, the costs associated with this type of crime and the occurrence rates of these crimes. We intended to create infographics to communicate this data effectively and put water crime into context with other types of crime in Australia. However, it became clear that this type of data is either not gathered or is not released into the public realm. The lack of information made it difficult to communicate these issues effectively with the public, ultimately thwarting the goal of the project. This ironically proved the degree of the problem that we were attempting to address.

# Agriculture & the Murray Darling Basin

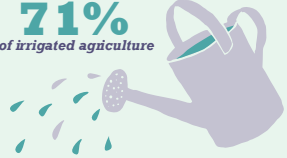


The MDB creates

**39%** of Australia's *Agricultural income*



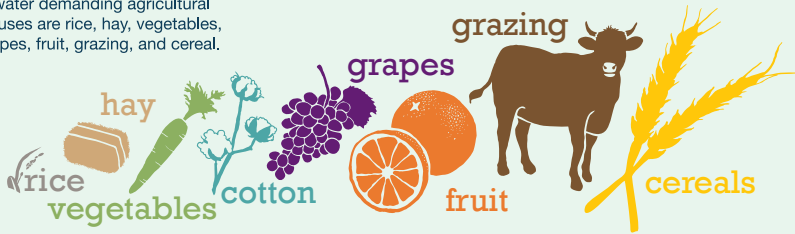
The MDB counts for **71%** of irrigated agriculture



## How much money is made from agriculture on the MDB?

### What are agriculture's big money makers?

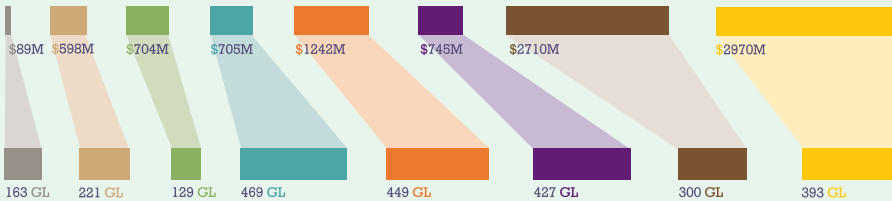
There is a large variety of agricultural crops and uses which rely on the MDB river. The most water demanding agricultural crops and uses are rice, hay, vegetables, cotton, grapes, fruit, grazing, and cereal.



**\$15 Billion**

Is Australia's Yearly *Agricultural Profit* from the MDB

### What are agriculture's big water users?





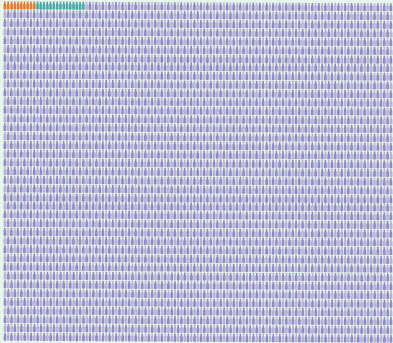
**Where does the rain go?**

All river water starts its cycle out as rain or snow fall, but only 1% of this rain and snow which actually makes it to being part of the free flowing river. So, where does the rest of the water go?

# How much of it is stolen?

Due to a lack of clear and official data, it is estimated that somewhere between 15 and 5,000 gigitalitres of water is stolen each year from the MDB. From that possible 5,000 gigitalitres stolen there has only been 9 arrests between 1997 and 2008.

9 Arrests 15 GL 5,000 GL



# How is river water stolen?

There are a number of ways that water is removed from the river without authorisation. Some of these are considered criminal acts, and others are considered unauthorised interception. In time it is expected that this behavior will become increasing criminalised.

**Criminal theft**



**Water metre tampering**  
Water metres either turned off or tampered with so readings are lower than water used.



**Water theft**  
Pumping water directly from a domestic or farm supply.



**Pumping from waterway**  
Pumping water directly from a waterway without permission.

**Unauthorised interception**



**Flood plain harvesting**  
The capture and storage of regular overland flows, eg. diversion of flood water into dams during rain fall



**Groundwater extraction**  
Pumping from underground bores for non-domestic and stock irrigation purposes without a permit

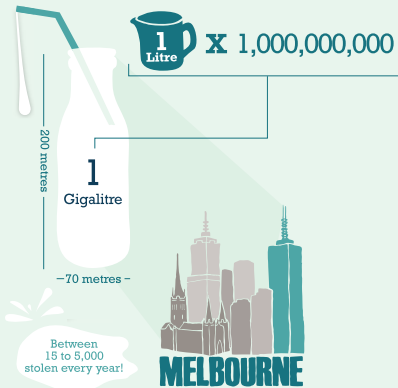


**Contravening an allocation**  
Taking water for purposes different to what it was allocated for.

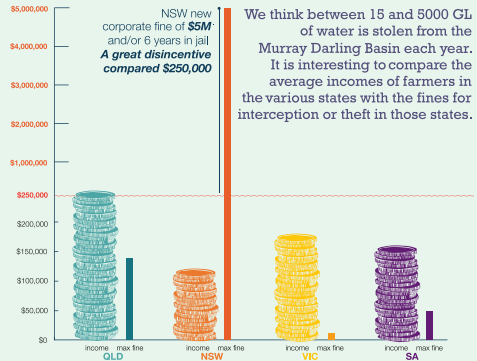


**Plantation forests**  
Plantations adjacent to a water system consume water which is unallocated and difficult to quantify

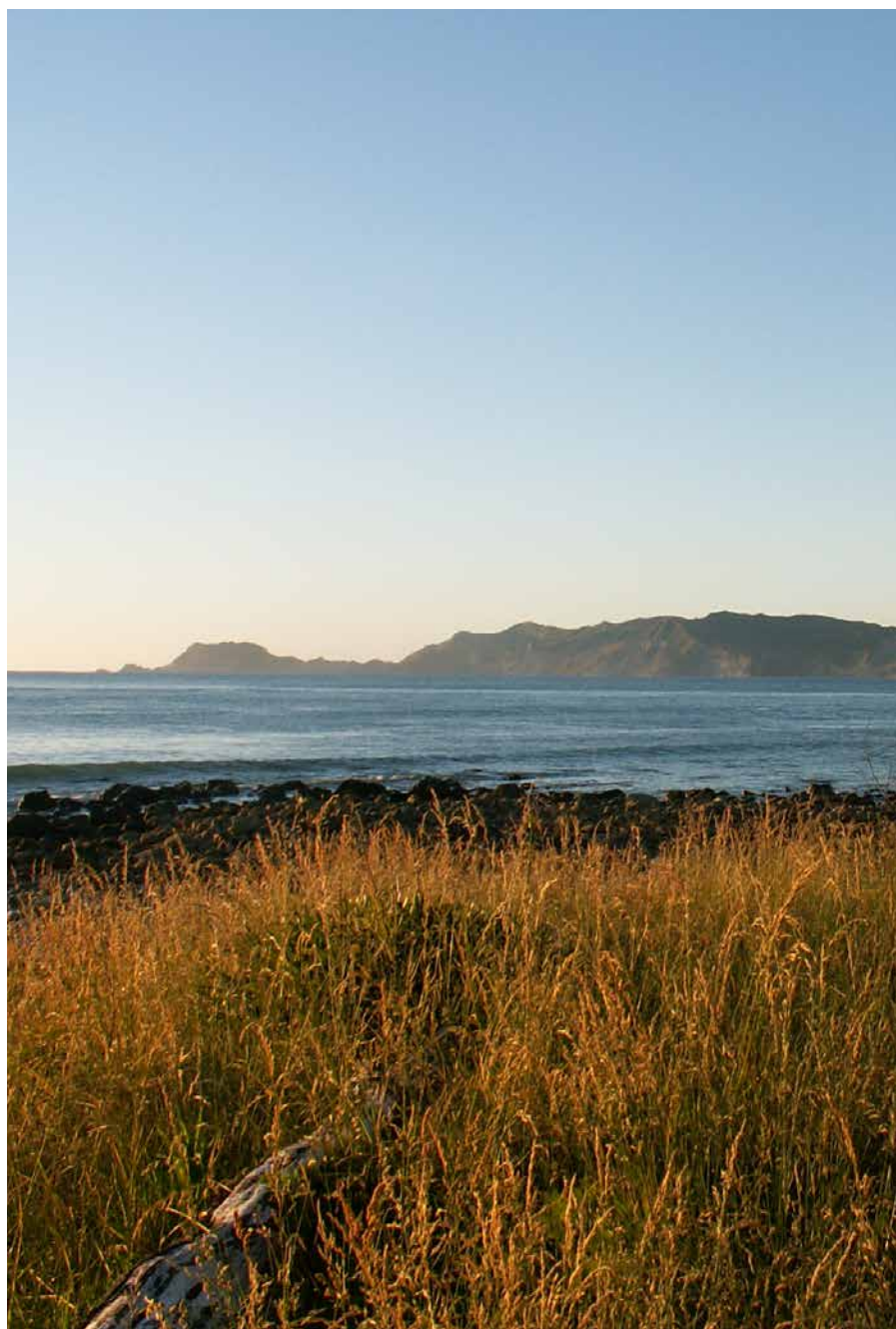
**What is a Gigitalitre?**



# Are incentives set to stop water theft?



In 2011 this project was carried on with the support of designer Shayna Quinn, and artist Alesh Macak. An animated version of the four posters that were created can be viewed here: <http://vimeo.com/42958438> by Alesh Macak.



# Cheap'n'Choice Award: The WaterWheel

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While it is tempting to give the Cheap'n'Choice award to the miracle of turning water into wine, the fact that even just having access to a reliable supply of water is an issue for 2.5 billion people across the globe makes one think again. Water collection involves long distances and it is heavy – so reinventing the wheel for effective water collection is worthy of the award.

Women and girls across Asia and Africa have to walk an average of 6 km per day to access water for their families, line up and then carry approximately 20 litres back home. The consequences of water collection move swiftly beyond health and physical strain, as the social implications cannot be ignored. About six hours a day are spent on water collection, leaving little time for other activities. This affects time spent with children, explains the

massive gender gap in school attendance and affects the ability of women to have economic input into a family.

The World Health Organization (WHO) states that 50–100 litres of clean water per person per day are required to ensure the most basic needs are met. WHO also recommends that water should be physically accessible – within 1 km of the residence and collection should not exceed 30 minutes per day (to avoid social and economic impacts).

Obviously many political and economic factors need to align for this scale of change. In the meantime, addressing some of the immediate issues is a good start. The Cheap'n'choice award is for the Wello WaterWheel, which allows the user to store up to 50 litres in one trip and roll it home. Designed in consultation with Rajasthani villagers, the WaterWheel

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Figure 1: The WaterWheel from wellwater.org.

consists of tough, long lasting plastic that can endure any terrain. It improves collection, storage and transportation of this essential element and it is estimated to save women up to 35 hours a week.

While the concept itself is not new – wine and whisky barrels are the precursor; other versions were invented in South Africa in the 90s – the WaterWheel presents the cheapest version of this so far. The earlier versions sold at US\$70–100, far beyond affordability in the developing world. The WaterWheel costs \$20 (it still needs to be cheaper), but Wello seeks to drive down its pricing by offering advertising space on the drum itself.

The cheaper it gets, the choicer it will be.

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# Contributors

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**EMMA JOHNSON**

Emma works for Freerange Press and recently co-edited *Once in a Lifetime: City-building after Disaster in Christchurch*. She has travelled extensively and come to the conclusion that she prefers living on islands to continents.



**CHARLIE TREEFROG**

Charlie Treefrog graduated from the Whanganui School of Design in 2013 with Honours. She likes illustration, cartoons, plants, making gig posters, Mr T, beer and a tight kern. When she grows up she wants to be a Graphic Designer.

[www.charlietreefrog.com](http://www.charlietreefrog.com)

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**BECCA WALTHALL 和碧琦**

Becca is a Wellington-based graphic designer and illustrator. She was born under the sign of pisces, and is currently preoccupied with how to live a bi-cultural life.

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**LISA BRYAN-BROWN**

Lisa Bryan-Brown is a writer and curator from Brisbane, Australia. She has published essays on artists for galleries including Sullivan & Strumpf Fine Art, Spiro Grace Art Rooms, Griffith University Art Gallery, Inhouse ARI and FELTspace. She has curated exhibitions with LEVEL Ari, The Hold Artspace, Addition Gallery and POP Gallery.

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### JOSEPH CEDERWALL

Joseph is a lawyer, social entrepreneur and writer from Wellington. He is active in the digital democracy, commons and new economy movements and generally interested in disrupting the destructive patterns of our society. In 2013 he assisted to launch Te Awaroa, a distributed network aiming to solve systemic water problems in New Zealand.

### LYDIA CHAI

Lydia Chai is a Malaysian artist living in Auckland. She co-runs the art group Parlour, which organises events that aim to forge strong networks of support and camaraderie within the art community. In 2013 she spearheaded the Parlour Complaints Choir at the Auckland Arts Festival. She writes and makes music.

### DALE FINCHAM

Dale is an architect currently based in London. He has worked on a variety of projects located across New Zealand, Australia and the UK. He is particularly interested in the urban resilience of cities and the wider social and cultural conditions that influence architecture. He also contributed to Freerange's very first journal, *The Self and the City*.

### FITTS & HOLDERNESS

Fitts & Holderness is a collaborative duo currently working between the UK and NZ. Since 2001 they have been making immersive fictions and investigating unsolved disappearances and other mysteries. Fitts & Holderness have exhibited throughout independent spaces in New Zealand, Australia and the United Kingdom, with their modes of production varying to include video footage, photography, audio, objects and text.

[www.fittsandholderness.com](http://www.fittsandholderness.com)



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**ASHLEY HOLWELL, KATY MAUDLIN  
AND LAUREL DEVENIE**

Ashley, Katy and Laurel are part of Company of Giants, a theatre company focused on devising collaborative works with communities. Working over the past three years with a vibrant group of young theatre makers, they have created multiple works in Whangarei, Auckland and Hamilton.

**GARY LANGFORD**

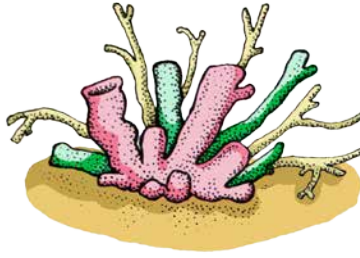
Gary is the author of 31 books, including ten novels, twelve books of poetry and four story collections. A CD of his poetry, *Gary Langford Reading From His Poems*, is available at [www.poetryarchives.org](http://www.poetryarchives.org). He is a writer and painter in Christchurch and Melbourne.

**DON LONG**

With Witi Ihimaera, D. S. Long edited *Into the World of Light and Te Ao Mārama*, which was shortlisted for a Montana Book of the Year Award. He has collaborated on several award-winning books and is currently an editor with South Pacific Press in Wellington. *Queg* is a work in progress.

**CHRISTINE MCFETRIDGE**

An emerging photo-media and bookmaker, writer and curator, Christine McFetridge uses imagery, language and collaboration with others in order to understand more about the everyday. Based in Melbourne, she is also engaged with Excerpt Magazine as Junior Editor, Edmund Pearce Gallery as Communications Manager and the Asia-Pacific Photobook Archive.



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### **ROZZY MIDDLETON**

Rozzy has contributed the interview with Museum of Water artist Amy Sharrocks. She spent time in New Orleans post-Katrina and was encouraged by the resilience and recovery displayed there in response to natural disaster.

### **MARIKA NEUSTUPNY**

Marika Neustupny is a director of NMBW Architecture Studio, teaches in Design and Design Research at the School of Architecture + Design at RMIT University and is a PhD candidate in the Department of Architecture at University of Queensland.

### **JESSE NEWMAN**

Jesse roasts coffee and teaches part-time on the Musical Arts programme at CPIT. He has lived near the sea all his life.

### **NICK SARGENT**

Born and raised in Christchurch, Nick Sargent is a graduate architect and architectural educator with eight years' experience working for architectural practices and universities in New Zealand, Australia and Asia.

### **WORTHY WATER TEAM**

The Melbourne based team that worked on this project consisted of Barnaby Bennett, Gina Moss, Michael Dann, Sebastian Sarria, Shayna Quinn and Alesh Macak. Thanks to the Design Research Institute at RMIT for the support.

# Image credits

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ILLUSTRATIONS THROUGHOUT  
Charlie Treefrog

PAGE 5

Image courtesy of Murdoch Stephens

‘This is a photo of my friend Joachim wading out of the Jordanian side of the Gulf of Aqaba in the Red Sea. While we might think that the clothed man in the foreground is contemplating Joachim, he is at least as likely contemplating Occupied Palestine and the Sinai Peninsula in the rear of the shot. This shot was exhibited at the Concerned Citizens Collective group show in support of Active Stills, an Israel/Palestine-based documentary photo collective.’

PAGES 8–9

Images courtesy of Emma Johnson

PAGE 11

Image courtesy of Olivia Webb

‘My interest lies in the patterns made by water. I like the playfulness of water with light. Continuous flow. Hydrodynamics.’

PAGE 12

Image courtesy of Barnaby Bennett

PAGE 13

Image courtesy of Rebecca Walthall

PAGE 21–23

Figs 1, 3, 5: Company of Giants

Fig. 2: Sarah Marshall Photography

Fig. 4: Simon Travaglia

PAGES 30–31

Image courtesy of Olivia Webb

PAGE 34

Image courtesy of Rebecca Walthall

‘Rain at sea. There’s something soothing about large quantities of water, perhaps as an echo from the womb.’

PAGE 35

Images courtesy of Jess Lunnon

‘The sea: a force of nature with its powerful strength exploding against the rocks or a playful (m)ocean gently rolling surfers to shore.’

PAGE 47

Fig. 1: Dale Fincham

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PAGE 58-65

Fig.1: Drawn by Marika Neustupny and Rachel Ang, sourced from MMBW, Suzanne Dance, Edo Tokyo Museum, Azby Brown

Fig.2: Drawn by Marika Neustupny and Rachel Ang, sourced from MMBW, Suzanne Dance

Fig. 3: Marika Neustupny

Fig. 4: Drawn by Marika Neustupny and Rachel Ang, sourced from Edo Tokyo Museum, Azby Brown

Fig. 5: [http://commons.wikimedia.org/wiki/File:Replica\\_of\\_an\\_edo\\_period\\_well.jpg](http://commons.wikimedia.org/wiki/File:Replica_of_an_edo_period_well.jpg) under Creative Commons licence CC BY S.A. 3.0

Figs 6 & 7: Peter Bennetts

PAGES 66-67

Image courtesy of Tania Leimbach

'A view of the Pacific and more especially the Coogee Women's Baths in Sydney. A haven for ladies of varying shape, size and colour. Can feel like stepping onto an ancient fertility site, loved by all and fiercely defended. One of my favourite places on the planet.'

PAGES 70-73

Figs 1 & 2: Emma Johnson

Fig. 3: Varun Shiv Kapur, Creative Commons licence CC BY 2.0

PAGE 83

Image courtesy of Barnaby Bennett

PAGE 85

Image of Wello WaterWheel from [wellowater.org](http://wellowater.org)

PAGE 92

Image courtesy of Emma Johnson



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## The Wet Issue

Sensuous and fluid yet powerful, raging and unforgiving – from Styx to bottled water, from great lake to babbling brook, from poetic vessel to trade route, water exists in a myriad of states and is characterised by its many forms and expressions, its imaginative potential and raw impact upon life on earth.

From pirates, maritime tales and water-matopeia through to philosophical musings and post-colonial artworks depicting post-climate change futures, this issue pays tribute to the most abundant substance on earth.

