



Walking through the 1947 floods at Deerhurst, Gloucestershire (contributed by Anne Parker).

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WETLANDS COLLECTIVE

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Thinking like a wetland

ABSTRACT

This article is an invitation to therapeutic deconstruction: a call to reconsider our assumptions about land, water and the relationship between the wet and the dry. It takes the form of a dialogue in which poetry (Gross) and visual art (Price) prompts, probes and challenges reflections offered by a natural resource economist (Staddon), a cultural ecologist (Dillon) and an anthropologist (Irvine). From our multiple perspectives, we explore the wetland as a site of common interest, and through different approaches to the thought experiment of what it might mean to 'think like a wetland' we seek to engage with the materiality of these places. We ask what it means to be a part of a wetland, not simply treating these habitats as resources to be managed, but as sites of dwelling that have agency in their own right.

KEYWORDS

wetlands
water
ecology
resources
landscape
environment



FIRST CANTO

Wetland, Thinking...

I... Well, I wouldn't say 'I', to begin with. If I think, I think I am a we.

Water is only one of the voices, though the most volatile, the most apt to come at you with threat, or gift, or glitter. Earth is the quieter partner. It inheres.

And plants, the children of this (shifting, this uneasy) marriage made... if not in heaven, in the actions of the moon? They're what holds us together, all the way from marram grass in sand dunes to the sphagnum moss that feeds on, and feeds itself into, the body of the bog.

No one governs the 'we' in 'wetlands'. OK, maybe the moon, but is she really looking, does she really care?

We're family, then, born into webs of connection? Root hairs, rhizomes, obligations. Channels worn, entrenchments. The awful relations whom we rub along with after all.

You don't know, do you, (ah, this human language) whether this 'we' is the kind including 'you'?

Or are we crowds of strangers, jostling in the customs hall, towards border control? The rich melange of voices. Tongues as many as grass. You have to bend down very close to hear.

You hope we're a pack, the sleek flow mapped by those black and white canny dogs lolloping home. Those dogs grown to be part of your pack, your purpose, only closer to the ground and to the sheep. You can do business with that.



We're not so different from you, maybe — you singular, who call yourself a personality. You too let your memories, your meanings, bank and veer and flow to cohere with their neighbours, following their wingtips, the whole flock of you lightening, darkening, scarfing and furling in flight.



What do we want of you? You, who've elected yourself first cousin to the old ones, tide and moon...and yet, so childlike, touching really, the way you gaze into us, wanting to see words like 'want', like 'think, like 'I'. Reflections of your own face in our standing water.



But we level with you, all the same.



You can do this by taste. This blank page of surface water, where the beasts graze, is it salt or sweet? You could take a sample bottle of it for analysis. Or chance it, to know us that close. Our languages, there, on the tip of your tongue.



Philip Gross

INTRODUCTION

In the context of the enormous impact humans are making on the planet's biology and geology, and the mark we are leaving in planetary history through shifts in land use and the effects of anthropogenic climate change, John Nolt (2011) has suggested that we must learn to think in terms of 'non-anthropocentric ethics', which evaluate the outcomes of our actions not simply in terms of their impacts upon humans, but in terms of the outcome on a wider living world of which humans are only one small part. This impulse to overcome anthropocentric readings of nature has deep roots; Jonathan Bate (2000) has traced it through the romantic poetry of William Wordsworth and John Clare, through which 'the land sings', and it has led to the advocacy of a 'deep ecology' (to use the term coined by Arne Naess), which entails the 'Rejection of the man-in-environment image in favour of the relational, total-field image' (Naess 1973: 95).

Our starting point here is that overcoming anthropocentrism is easier said than done. Though our dependence upon the land and the flora and fauna who share the land with us is surely undoubted, all too often humans experience themselves outside of their habitats, and water management in particular can come to imply a human sovereign agent in control of and directing the wet to do his or her bidding. This article is therefore an exercise in working out how to think beyond anthropocentrism and how to think beyond the idea that we are agents outside of water. In taking wetlands as our shared field of exploration, we are trying to learn how to shift the focus to the materiality of the habitat itself, asking one another what it means to think from within the wetland rather than outside of it.

This process of experimentation began at a seminar in Bristol in November 2010 and continued through periodic encounters through 2011 up to a walk along the Sharpness Canal on a mild day in mid-December 2011. This article emerges from these shared experiences, and tries to recreate the sense of encounter by placing reflections on research in dialogue with the poetry of Philip Gross and the artwork of Valerie Price. This article is divided into three cantos, each of which approach the challenge of 'thinking like a wetland' from a different, but related, angle.

This first canto interrogates the distinction between wet and dry. Gross' words, coming from the perspective of the wetland, invite us to see the reflections of ourselves in the water, and challenge us to consider how we characterize the wetland and our connections to it. It is, as Chad Staddon goes on to suggest, an invitation to therapeutic deconstruction, a call to question the way in which we have classified wet and land.



AN INVITATION TO THERAPEUTIC DECONSTRUCTION – OUR MOTIVATIONS FOR PARTICIPATING IN THIS PROJECT

It is difficult to conceive of a substance more central to human existence and to the human imagination than water. Water is crucial for our individual and social survival, and our cultures around the world and through the ages have developed a complex and exalted conception of this simple but versatile molecule. And yet, as the economist Adam Smith pointed out in *The Wealth of Nations* ([1776] 1970), there is the enduring paradox that while water, which is vital for life, is often considered valueless – a free good – diamonds, which are biophysically useless, are highly valued. Strange priorities indeed! Even Abraham Maslow, whose famous ‘hierarchy of needs’ is well known throughout the social sciences, ranked the need for water only third, after food and air (see Staddon 2010).

These days, water is becoming a much more common optic. With recent experiences of flood and drought, even in the United Kingdom people are increasingly looking at problems in terms of what might be called their underlying constitutive hydrology. Most of today’s challenges – food security, urban growth, international development, etc. – have some link to water. At a deeper ontological level, water appears to resolve itself into a binary – ‘wet/dry’. Achieving the optimal combination of wet and dry is one of the holy grails of modern life, as highlighted by public debate since the floods of June–July 2007, the drought of 2011–2012 and the very wet 2012 (second wettest year since records began!). Drought and flood are what happens when we get the proportions wrong between wet and dry. But surely part of getting the proportions wrong is about our narrowing zone of tolerance for wet and dry experiences? Indeed, as both Irvine and Staddon observe in their contributions to this article, it is odd that the dry should dominate our thinking when it is really the wet that is constitutive of our very corporeal beings, let alone what the historian Karl A. Wittfogel (1956) referred to as our ‘hydraulic societies’.

Therefore, we invite readers on a journey of therapeutic deconstruction – that is to say we seek to destabilize, productively and creatively, our all-too-normalized background certainty that we actually know what we are talking about when we talk as specialists about, say, water abstraction management or water chemistry. Between us, the authors have lots of degrees and professional accreditations, all of which ‘licence’ us to comment on different aspects of water management practice. Or, to put it another way, professionalization in our respective trades has involved creating a sort of ‘catchment’ of practices, techniques, collegialities, accreditations, etc. predicated on the founding notion that these are the obvious and only way to learn what is necessary about the hydro-social world. But what if all of the above are also part of a process of reifying a set of *social or political* constructions? What if we ‘licensed professionals’ have, unwittingly, made ourselves blind to other realities, other significations, other possibilities?

What we think we are engaged in here, in this jointly authored article that is itself a contribution to a larger collection of interdisciplinary explorations, is a process of therapeutic deconstruction of an essential, and essentializing, idea – wet-land. What do we know about wet-land? How is the term deployed in different sorts or arenas of discourse and what sorts of foreclosure may be attendant on, if you will forgive the pun, mainstream discourse about wet-lands or wetlands? To approach these questions, we believe that we need to share openly the progress, and lack of progress, each of us has made in his or her respective métier and to take a brave step into the unknown, since one cannot easily predict what interdisciplinary encounter could bring.

We are therefore working on the margins of our own disciplinary understandings, just as we are walking the margins between wet and dry, or as Gross puts it:

these two
worlds walking, look
and word and look and word and
silence, me and you

Chad Staddon

Connections are the essence of this project. For me, the very nature of collaborative projects is that it is an exchange. A two-way traffic flows between not only the people involved but between disciplines, languages and media. Philip's creative work has been fed by collaborations with several art forms and his research investigates that space created 'in-and-between'. We went to explore the Newport Wetlands and later worked together in the studio, to create original artwork responding to both that



Beyond the margin is me

walk and the field trip along the Sharpness canal with Richard, Patrick and Chad. The poetry Philip created from those meetings offers itself as a fluid medium between disciplines, between the immediate and the reflective and between the creative and the analytic states of mind. My contribution adapts, and creates an overall design for the disparate voices, to connect their several discourses in a coherent and organic whole.

Valerie Coffin Price



SECOND CANTO

watch
for a speck, a spore, a sign,
for the grace of migration,
for a thin
far cry
that puts us
in our place

the crumbs
of us shaken

flapped into the wind,
into further conversations

COMPENSATION LAND

EVERY LAND

THE LANDFALL

This second canto considers our relationship with wetlands: humans at the margin of, or beyond the margin of, water, to draw on Gross's imagery. If we are to consider, for example, the historical example of the water meadows along the chalkland valleys of Wessex between the seventeenth and nineteenth centuries (Betley 1977; Bowie 1987), we see the importance of deliberate seasonal wetting by 'drowners' of the land for pasture: a process that required intense coordination of human activity and a localized sense of the relationship between humans, land and water. Patrick Dillon, drawing upon this historical insight, considers the different forms of wetland management that emerge from varying understandings of that relationship. Richard Irvine then turns to the specific example of a drained landscape, the East Anglian Fenlands, to consider whether the conditions for such coordination with the wet still exist.

'THINKING AND BEHAVING LIKE WETLAND': A CULTURAL ECOLOGICAL FRAMEWORK

At the first seminar of the Researching Environmental Change Network, Staddon suggested that in managing water cycles we should 'think and behave like wetland'. This is an intriguing suggestion. The challenge of engaging with the metaphor of thinking and behaving *like* wetland requires us to look again at how we think and behave *towards* wetland. This is where metaphor meets model, possibility meets prescription. We can frame and explore these tensions *as a cultural ecology*. Cultural ecology is itself a model, of the totality of interactions and transactions between people and their environments. The modelling can be undertaken at different scales, from the global to the very local. It also offers an insight into the ways in which people engage with the environment.

In a cultural ecology, organizational, managerial and legislative behaviours *towards* wetland are typically highly generalized ways of doing things. Whereas they may reflect good practice in terms of policy, they are not necessarily compatible with the particularity of the localities to which they are applied. To think and behave *like* a wetland is to deal with the subtlety, idiosyncrasy and patina of locality, to recognize the creative, immediate possibilities of 'lived experience', to deal with situations as they arise. Lived experience involves attention to local detail, to historically contingent and customary ways of engaging with the environment, and in so doing provides opportunities to introduce fluidity and adaptability into management.

Wetland as a system is characterized by both stasis and change. On a daily basis, it accommodates a myriad of physical and biological changes but remains recognizably wetland unless the forces of change are so great that they override the mechanisms that maintain the status quo. Agents of change are ever present in wetland as part of its internal dynamics. In systems language, the agents of change cause 'perturbations'. Most perturbations are transient; they do not lead to profound changes in the system but rather are accommodated through negative feedback, the mechanisms through which a system maintains a steady state. The daily disturbances to wetland typically are accommodated so that the overall character of the wetland is maintained. The system is adaptive, both structurally and in terms of the behaviour of the species of which it is composed.

In managing wetland, humans deliberately interfere with the feedback mechanisms within the system to achieve particular ends. Once change (disturbance) has been enacted, the perturbations they cause are permanent (but not necessarily irreversible), and we say that the system has moved through positive feedback to a new mode of operation, a new steady state. The character of the wetland may be changed considerably: physiographic features may be transformed along with associated changes in plant and animal communities. Its adaptability is now compromised: its structure is a manifestation of human intervention.

In cultural ecological terms, the organizational, managerial and legislative structures that govern the way we think and behave arise out of the way we make sense of experience through the processes of abstraction and modelling. This is a relational way of making meaning and leads to objective thinking and formalized ways of doing things. It can be represented by the symbol:



... where the three arrows in a star shape represent transactions between people and their environment bounded by a context, depicted by the inner circle surrounding the arrows. In the case of wetland, the context represents managerial policies – we think and act within set frameworks.

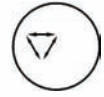
the world-
wide web-foot wing-
spread twitter of connections...

GrEY on GrEY

punctuation
for a text still
being written
and resembling silence

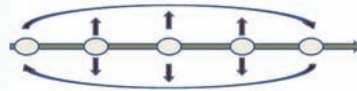
(but only
to us)

But there is another way of approaching our relationship with wetland. People for whom wetland is a regular, day-to-day part of their lives, those who make their living from wetland, or those who live in close proximity to it, live out their experience 'in the moment'. They deal with things as they happen; actions are undertaken out of necessity and may or may not be compatible with the policy framework. In cultural ecological terms, this intimate interaction is 'co-constitutional'. It can be represented by the symbol:



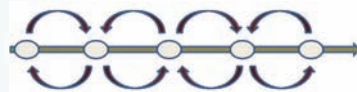
Here the three arrows represent transactions between people and their environment out of which context emerges rather than being predefined. This is lived experience; we are trying things out as they happen, improvising, literally enacting situations and establishing a context as we go along.

Modern wetland management is largely relational and based on objectively formulated policies that reflect our scientific understanding of the system. Typically, a management plan for a given river system is derived from national and regional policies for agriculture and land use, water management, water treatment, amenities, etc. A range of environmental data are collected at local monitoring stations that contribute to the fine-tuning of the plan, but the river and its catchment is managed as an entire system. This is management as thinking and behaving *towards* wetland and may be generalized as a form of macro-management with local inputs:



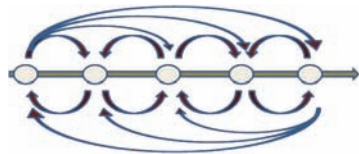
... where the central arrow is the river system, the ovals with up and down arrows are local monitoring stations and the two larger horizontal arrows represent management of the system as a whole.

However, in the past, different systems of management prevailed (Kerridge 1953; Atwood 1964). For example, the susceptibility of river valleys to flooding was exploited to good effect by farmers in the English chalklands. Water flow over meadows in the winter months was artificially controlled to keep the frost off the grass and lay down river sediments and their associated nutrients. The 'water meadows' at the heart of this system were a clever variation of ridge and furrow with adaptations for the carriage and dissemination of water. Water was diverted from the main stream of the river through a series of hatches and weirs along feeder channels on top of shallow ridges and then allowed to flow evenly over the sides of the ridges and across the grass to be collected in lower-level channels and returned via a series of drains to the main stream. Responsibility for operating and maintaining the system lay with craftsmen known as 'drowners' or 'floaters', typically one drowner per manor or parish. Drowners regulated the river flow and in so doing maintained the productivity of the meadows and protected their parishes from flooding. To be able to do this effectively, the drowner had to be aware of what was happening upstream, and to recognize how his actions would affect the next manor downstream. This was a form of localized micro-management. Much of what the drowner did was co-constitutional, i.e. he looked after his own patch largely by making in the moment decisions, in concert with the changes happening around him. He coordinated with the actions of his counterparts immediately up and down stream but had no sense of the management of the overall system. It can be symbolized thus, where the ovals and associated arrows now represent a drowner managing the water meadows in his manor or village:

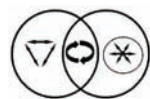


Micro-management is good at the local level but poor at dealing with cumulative effects; macro-management attempts to optimize the whole taking account of multiple inputs but is poor at dealing with local variability. But can we have both?

One important effect of the AHRC-funded network ‘Learning to Live with Water’ was that it brought together perspectives from professionals engaged in wetland management, people who have spent their lives living with wetland and making a living from it, and many others who have found multiple and creative ways of expressing their own engagement with wetland. The groundswell of opinion was that we have to find new ways of engaging with environmental change, which bring together, on the one hand, policy and managerial interventions derived from specialist knowledge and a concern for the bigger picture and the longer term, and, on the other, living traditions and improvisations arising from local knowledge and dealing with things as they happen. In other words, bringing together macro and micro forms of management thus:



We might call this adaptive cultural ecological management. It integrates scientific management with local knowledge, thinking and behaving *towards* wetland with thinking and behaving *like* wetland. It recognizes that people engage with the environment in formalized ways (relationally) and idiosyncratically (co-constitutionally). The cultural ecological symbolization is:



The intersection of the two circles gives an almond shape known as a *mandorla*, the space in which policy meets pragmatism, science meets tradition, prescription meets possibility. Re-enacting and representing traditions, engaging with issues through art and performance, recognizing of the interdependence between culture and ecology, each brings us towards a better understanding of connectedness. In this way, cultural ecological management of wetland, ‘managing in the mandorla’, is an ambitious but not an unattainable goal.

Patrick Dillon

Beyond the margin is more
of the margin, more intensely,
the heartland of itself,
all the edges in-gathered

(mud, salt, frayed waves, stumps
of jetties, signatures of oil or steam,
the water's fine discriminations,
gloss, satin or matt,
and the birds,
where to pick in the mud,
where not)

all habit-
ations shifting now
all borders porous,
every land
a landfall



these two
worlds walking, look
and word and look and word and
silence, me and you

Is it so alien for us to think like a wetland? What does it mean to engage with – no, more than that, *to be part of* – the materiality of land and water?

In our different ways, this is the awareness we search for. We are invited to listen to the many voices of wet and land, with their different timbres – and we wonder, when we add our own voices, whether the voices converge, mandorla like, or stand apart. And then there are the voices of those people who inhabit the wetlands, who live within and are part of the relationships described by Dillon; those for whom ‘wetness is not a substance, but a quality, the condition of life’, to borrow from Patrick Sutherland and Adam Nicolson’s description of life in the Somerset Levels (Sutherland and Nicolson 1986: 6). Their account of the coastal plain is rich with the voices of those who live near, and expect, the water; those who draw their resources from it – peat, willow, eels – as well as those who drain the land in the hope of managing it and rendering it more productive. My own work, among those who live in the East Anglian Fenlands, also seeks out these voices, listening within a landscape defined by management and control of water.

At times, the search seems like a journey into fantasy. I enter the Prickwillow Drainage Museum near Ely, Cambridgeshire, home to a 25-tonne diesel pumping engine built in 1924, when it replaced an earlier steam engine – now a redundant relic (superseded by an electrical pump), but once a powerful force for dragging water out of the land and pushing it into the River Lark. This is a site of a battle against the wet; surely no place for thinking like a wetland? And yet visitors to this place (one of several East Anglia museums that hosted the 2010–2011 touring exhibition ‘Fenland Stories’) were invited to step inside a circle of woven willow screens and come face to face with the ‘whispering willow’ – the trunk of a tree with a television screen mounted in its belly. The willow whispered stories about inhabiting the wet, claymation re-imaginings (created by local community groups) of what life in a wetland must have been like. Some of these ‘Fenland Stories’ tell us of families who relied on the fen for subsistence, catching eels and shooting wildfowl, moving through the boggy ground on stilts. Others speak of the brave (or foolhardy) souls who venture out into the marsh at night amidst the boggarts and bogles – malevolent creatures inhabiting the wet.

One of the tales of the Whispering Willow is a recurrent story in contemporary re-imaginings of the wet: the tale of Tiddy Mun. This legend was first collected by M. C. Balfour in North Lincolnshire (1891: 149–56). Tiddy Mun ‘dwelt in tha watter-holes down deep i’ tha green still water’. You could hear his voice across the wetland, calling out through the mist like the call of a lapwing: ‘pee-wit’. As long as the wet ground in which he lived was left alone, he existed in peace with the people of the fens:

Tiddy Mun, wi-out a name
White heed, walkin’ lame;
While tha watter teems tha fen
Tiddy Mun’ll harm nane

When the water level rose up and threatened to drive the fen-people out of their homes, they would call out to Tiddy Mun for help at the first new moon: ‘Tiddy Mun, wi’out a name, tha watters thruff’; and they would hear his call back: ‘pee-wit’ and know that the flooding would pass.

All changed when the wetlands were drained. A systematic programme of drainage was advanced in the seventeenth century when a group known as the ‘Adventurers’, led by the Earl of Bedford and assisted by the Dutch Engineer Cornelius Vermuyden, obtained contracts from King Charles I to drain the land and make it suitable for agriculture, and to retain property rights in that which they had drained. The wetland was deemed waste, to be made productive through work (for accounts of the drainage of the land, see Darby 1940; Godwin 1978). According to the tale collected by Balfour, this angered Tiddy Mun, and when the Dutch engineers carrying out the drainage began to disappear the fen people remarked: ‘it’s ill comes of crossing Tiddy Mun’. But soon his anger turned on the fen people themselves. Children sickened in their mothers arms, cattle and pigs grew ill, lambs wasted away, new milk curdled and houses began to collapse. In desperation, the people gathered together to try and beg Tiddy Mun to lift the curse, and to show him that they would return the water to his wetland if only they could. So each member of the community poured a pail of water into the dyke, calling out: ‘Tiddy Mun, wi-out a name, here’s water for thee. Take thy spell undone’. They gathered and waited and waited until they heard the familiar call from over the wet: ‘pee-wit’.

The tale of Tiddy Mun has resonance as a story that narrates the sense of change and loss when the fenlands were drained, and this to some extent explains its use in East Anglia Fenland museums. But what is most striking about the tale to me is that it is a personification of the fen. It is a tale that gives agency to the fen through this supernatural inhabitant; it is about people angering the fen, and trying to placate it. It is as though the wetland thinks and feels, and those who live in the midst of the wetland must think and feel with it, or suffer the consequences. When I hear the tale today, I am left to wonder whether we still possess the minds for such empathy.

The historian Joan Thirsk characterized the inhabitants of the Fenlands up to the nineteenth century as 'mostly ordinary farmers, possessing two special qualities only: a hardy constitution rendered immune from the dampness of the climate by generations of living in the fens, and a persistence in watching and guarding against the encroachments of sea and river flood' (1957: 6). I would suggest that such qualities, ordinary as they may seem, lie at the heart of the empathy I am talking about. They are elements of an embodied capacity to adapt and think as part of a wetland system. How does a capacity to be part of a system – to think like a wetland, not against a wetland – manifest itself? The 'persistence in watching' to which Thirsk alludes is an important element: a collective awareness of the rising water levels and

the possibilities of banks bursting is a crucial element in living with the wet; a community needs to be able to watch and respond. Relays of men kept watch on the banks containing the waterways, so that word could quickly be sent out if one of the banks was to break. During the extreme floods of 1947 and 1953, these teams of 'bank-watchers' played an essential role in minimizing the loss of life and livelihood by alerting the communities. But a capacity to live with the wet also manifests itself in flexibility; fields allowed to flood and freeze over so that skating championships could be held (a practice that remains to this day, provided there is sufficient water to flow into the fields, and the temperature drops sufficiently).

Prior to the construction of concrete roads during World War II, much of the Fen was difficult to access, and consequently the use of waterways to navigate around the region created a certain attitude to social life that is well expressed in the name of a pub on the banks of the River Cam (still existing, albeit rebuilt after the old pub burned down) – the 'Five Miles From Anywhere – No Hurry' Inn at Upware. The name encapsulated the idea that the landscape generates a particular pace of movement. While such a pace of movement may have made it difficult, for example, to reach nearby villages to attend church, such problems could be solved in enterprising ways: in 1897, the Vicar of Holme Parish had a floating church built to reach the parts that other churches cannot reach. This 'Fenland Ark' navigated the waterways of the parish, providing services in difficult to access places; 70 people were baptized on board (Bennett 1983).

Many forms of subtle adaptation are well described in Sybil Marshall's *Fenland Chronicle* (1967), in which her parents recall their late nineteenth and early twentieth century lives in the Fens in vivid detail. We see, for example, that the damp conditions meant that many houses were infested with crickets, which led to some people keeping hedgehogs as pets, so that they would eat the crickets. Floors in houses were bricked or paved, but not bound, to enable easy relaying and to enable drainage if water

was to come into the house. Blocks would be kept handy to raise beds above the level of the water should the houses become flooded, leading Marshall's father to tell the following story:

I 'eard a tale about a chap as I knowed what used to get a fair amount o' beer down him whenever he had the chance. One night when the water were just a-coming up 'e'd bin out and 'ad a good-ish allowance, and found as 'e'd got to get out again to get rid o' some of the beer. But by that time the water had ris' so that it stood about nine inches all over the flood all around the bed, so 'e just rolled over to the side o' the bed and done what 'e wanted.' His wife is indignant, but he tells her: 'What's a little drop more matter? It'll all goo out wi' the rest'.

(Marshall 1967: 51)

Looking beyond the fens, here once again is a connection with Sutherland and Nicolson's account of *Life in the Somerset Levels*. Their interviews throughout the book speak of the effects of living near water, but there are differences in tone of how one responds to the wet. They interview Harold Hembrow, who lives by the River Parrett:

I don't take no notice of it. It's no good to. A lot of the houses along here have all been altered since. The next one along said they paid £350, was it, to stop the damp. I told him straight ... Whatever you do, you will not stop it, I said ... So he drilled another lot of holes to inject another lot of stuff in. It won't ever work ... All houses, I reckon, next to this river, should be damp.

(Sutherland and Nicolson 1986: 1)

I offer these stories because they provide glimpses of a social life lived in negotiation with the wet. But does the possibility of such a negotiation still exist? I began these reflections in a pumping station, so I will return to a pumping station to conclude. It is here we see the enormous energy expended so that we can exclude the wet. If water is seen as a menace to be battled against, it is here that we see what appears to be the final victory (until, of course, the next flood). The plaque on one pumping station (the Hundred Foot engine of the Littleport and Downham District, built in 1830) commemorates this apparent victory:

These Fens have oft times been by Water drown'd
Science a remedy in Water found
The powers of Steam, she said, shall be employ'd
And the destroyer by itself destroy'd

Water is harnessed to defeat itself. What, then, has become of Tiddy Mun, that personification of the wetland? In 2011, a new pumping station was built at Wiggenhall St Germans, capable of handling 100 tonnes of water per second. As you reach the first of the great pumps at Wiggenhall St Germans, you see a plaque bearing the name of the engine, given to it by a local schoolchild. Pump No. 1 is named Tiddy Mun. Tiddy Mun dwells in the Fenland still – but he has been pressed into service for the denial of the wet.

Richard Irvine

THIRD CANTO

This final canto is concerned with the embodied experience of water: moving through water and dwelling in a watery world. We end with reflections on the particular experience of a walk along the Gloucester and Sharpness Canal.

SQUELCHING ALONG THOUGHTFULLY

The thing I like best about travelling through wet environments is the pure haptic pleasure of feeling the wetness of things. The feeling of rain smacking against my raincoat, especially when it is suddenly whipped up by a gust of wind. The sharp tang that comes from air super-saturated with water. The squelchy sound (and feel) that comes each time I put my old rubber boots onto – or sometimes into – the sodden ground. Even when I eventually return indoors, the wetness lingers, for a time, as a scent, a feeling, and in the treads of my boots and the folds of my clothes!

If my children are with me, then it is all the more pleasurable for they revel in wetness in ways I have long-since forgotten about. Invariably, they want – no, *need* – to jump gleefully into each puddle we encounter and like to trail their little hands through the tall wet grass and then lick their fingers. If there are any streams on our route, then ‘pooh sticks’ is of course obligatory (hint: alder twigs with leaf sails often yield useful results). Inevitably, once the laborious and time-consuming process of toggling them up for a walk in the wet is complete, one (or both) will need to use the loo – managing wetness of a different kind!

And if my dog ‘Bungey’ (because he jumps about as if on springs!) is with us, then the experience is different again. He loves to roll on wet ground until he is a sodden, black-haired mass. He drinks in the water that catches in the tall grass and, if there is a pond nearby, may well jump in for a swim. Imprudently, he also chases geese and swans and I am sure that, one day, he will learn the folly of that. I have tried to tell him, but he won’t listen!

Of course another way of travelling through the wet is to swim, as Bungey does with great abandon and at every opportunity, and as my children would do more often, if I let them (though my reasons are always good and prudent of course). The English naturalist Roger Deakin (1999) encouraged us to swim whenever we could, to take what he called the ‘frog’s-eye view’ of the world as a corrective to the ‘terrany’ of our arrogant terrestrial bipedalism. This too then would form some part of ‘thinking like a wetland’ even if the ‘swimming’ is really only wading with my hip-waders on taking measurements, like a proper scientist! Or maybe fishing?

Why I bring all this up is because it seems to point to a fundamental paradox of our twenty-first century lives. We, who are constituted of something like 60–70 per cent wetness in our corporeal selves, seem to spend so much of our time trying to escape from the wet. The first nine months of our existences are spent immersed in liquid and it is as though the moment of our births into the world marks the beginning of a lifelong crusade against the wet within which we were made. I like to think that the reason why some babies are ‘late’ being born is because they are disinclined to give up the liquid world for one entirely (to them) unknown and certainly unproven.



We have built entire urban civilizations around the denial of the wet. 'Dwelling', as Martin Heidegger ([1951] 1971) had it, is so much wrapped up with 'building' that we tend to forget about all the choices our ancestors made about the appropriate ways to build and to dwell long before we got here. Heidegger also reminds us that the etymology of the word 'dwell' brings with it also a sense of 'preserving', 'cherishing' and 'protecting'. But protecting what exactly? Heidegger would say ourselves, our loved ones and, though we are usually not aware of it, our relationships with the non-human things proximate to our physical dwellings. Wetness, for example, is part of our dwelling: our buildings seek to keep the wet out of our interior spaces, except where pipes bring wet to where we deem it useful, and then take it away again, sometimes with a load of ordure, for removal. Similarly, our roofs are specifically designed to be impervious and the local building regulations specify not just coverings, but also pitch and guttering standards so that the wet can be conveyed away efficiently. Until recently, the wet from single dwellings would be combined with the wet from other dwellings and fugitive run-off from the landscape itself and the resulting conglomerate would be regulated as 'wastewater'. This then would be treated industrially at complex and expensive wastewater treatment plants.

Wastewater nowadays is usually treated with a combination of mechanical (screening or settling out of heavier-than water pollutants), chemical (especially for killing bacterial and viruses) and biological methods (e.g. anaerobic digestion). Pretty complex stuff and a wetland too in its own right, especially if it combines into its operations what are now called 'constructed wetlands' – specifically designed to mimic the water holding and filtering characteristics of 'natural' wetlands.

I have hinted that building regulations for water management in dwellings are changing. The key change is that builders, and dwellers, are being encouraged to retain as much of 'their' wetness as possible. The most obvious example of this is the proliferation of 50- and 80-litre rain barrels in the domestic gardens up and down the country. Indeed, the government is so keen on us holding our own water that often enough you can get the rain barrel completely free of charge. Upscaling this simple idea, it is possible to have houses built, or retrofitted, to recycle 'grey waters' (that is to say waters that have been used for washing) through toilets, so that we move away from using drinking water for human waste removal. And at the neighbourhood scale, sustainable drainage schemes (SuDS) allow for the collection together of surcharges of wet in landscape features that are at once functional and aesthetically pleasing.

So after a century or two of trying to banish the wet from our way of dwelling, our attitudes seem to be changing again. The UK government released a policy paper in summer 2011 entitled 'Making Space for Nature', and it seems that water is included in their definition of 'nature', albeit in a largely functionalist way. I feel that what we may be groping around for is a return to wetness, which sees it as Heidegger would urge us to see it: as the dialectical corollary of dryness. Or, to put it in a less abstruse way: we should learn to live more flexibly with the wet, managing both its useful and its hazardous qualities. This will of course mean giving up our long-cherished ideals of technical mastery of water – as Philip points out, the wet always 'fluidly eludes us'.

Chad Staddon



CULTURES OF WATER

Given its biophysical centrality, it is hardly surprising that water exercised an early and a strong hold on sociocultural development (see Staddon 2010 for a sustained account of the sociocultural centrality of water, and for further details of the texts referred to in this section). The ancient pre-Socratic (seventh to sixth centuries BC) division of the cosmos into 'air, water, fire, earth' has an important logic inasmuch as it is based in immediate human experience. But of these four, it was water that exercised the strongest hold not only on the economic organization of early societies and physical location of their principal settlements, but also on their (our) collective imaginations. The pre-Socratic philosopher Thales of Miletus (624–546BC) believed that water was itself the most fundamental reality and founded his natural philosophy upon this principle – 'Water constituted the principle of all things'. This is usually taken as an ontological claim (about what the world fundamentally is), but I think that Thales and the Milesians were also referring to a way of thinking whereby propositions flow and intermingle whilst simultaneously maintaining their constitutive identities. Or, as Philip puts it in one of his poems: 'all habitations shifting now, all borders porous'.

Such a watery ontology was not at all unique to the early Greeks. For example, the Roman orator Seneca (died 39AD) declaimed that 'where a spring or river flows, there should we build altars and offer sacrifices'. Right up to the decline of the Empire in the fourth century AD, Roman villa designs often incorporated votive water features, usually fountains, springs or wells, such as the one at Chedworth in Gloucestershire, England (Webster 1983). By the time of the high Roman Empire though it seems that whilst water may have still retained its noumenal status, scientific discourse no longer flowed like water. After Aristotle, scientific discourse appears to have made a sort of 'landfall' (again playing with one of Philip's metaphors) and turned its back on the intermingling web of connections central to the phenomenal world.

In Confucian thought, it is very important to orient oneself and one's home very specifically towards watercourses in order to benefit from its life-giving energies (the collection of principles that govern this are known as 'feng shui'). Lao Tzu (dead c. 550bc) commented that 'There is nothing softer and weaker than water, And yet there is nothing better for attacking hard and strong things. For this reason there is no substitute for it'. In Hindu tradition, for more than 3000 years the Ganesha Festival has involved the ritual immersion of effigies of the elephant god Ganesh (first son of Shiva and Parvati) in water, and the throwing of clay figures into lakes and rivers with the incantation 'what begins with water ends with water'. Indeed,



the practice has become so ubiquitous in India that many religious organizations have begun urging the immersion of non-polluting idols made of paper coloured with vegetable dyes rather than the traditional plaster of Paris ones.

A different socio-religious tradition, Islam, also celebrates water. The Qu'ran designates water that falls from the heavens as a sign of divine Grace and water is itself understood as the Spirit of God (Qu'ran II, 9), a divine essence in which to bathe before praying. And the Qu'ran is quite strict also not just about the proper keeping of wells, but also about the obligation of well-owners to provide any surplus water to those less well off – a very important form of community charity in the dry places of the Middle East and North Africa. A famous 'hadith', or commentary on the life of the Prophet, relates the story of how Muhammed exhorted Uthman (one of his immediate successors) to buy a well and turn it over to the community, an example followed by Muslims around the world and up to the present day.

Something else needs to be said too: our attempt at 'therapeutic deconstruction' has a geography as well as a history. Note that the episodes described throughout this contribution take place in radically different *places* as well as different *times*. Geography matters here, and not just as the passive stage on which more active generative forces unfold themselves. For example, at roughly the same time that English fenlanders were seeking to appease Tiddy Mun in the face of 'progress', dwellers-in-the-wet in places like the Landes and the Camargue of southern France also sought accommodations between (capitalist) modernity and local traditions.

We could go on for a long time indeed enumerating the place of water in ancient views of the world, but surely the point is made: water is central to both human life and culture and flows through our social and cultural fabric as a generative force, something both mundane and sublime. As Primo Levi writes in *The Periodic Table*: 'Water is ever close to mankind, or rather to life, by the bonds of age-old familiarity and ever-present necessity so that its uniqueness is concealed under the guise of the habitual' ([1975] 1995: 171).

As a 'static' substance, it is central to our biophysical survival whilst as a dynamic resource, a resource that moves, it is associated with change, transformation and even death.

Chad Staddon



Postscript: metaphor and model. A walk along the Gloucester and Sharpness Canal from Shepherd's Patch to Purton, 21 December 2011.

The co-constitutional element of the mandorla is a way of symbolizing or modelling the metaphor of 'thinking and behaving like wetland'. But the very act of modelling the metaphor turns it into something relational. Working in the mandorla in a way that mirrors the adaptive cultural ecological management of wetland requires constant interplay between the co-constitutional and the relational, between metaphor and model. Walking along the towpath of the canal stimulates further discussion.

- A story recalled, told by an elderly resident of Fairford, Gloucestershire a few years ago, of the large numbers of sheep driven across the Cotswolds from the hills of Wales to market in London. The last of the big drives passed through in her childhood just before the Great War. She told that when the Welsh drovers arrived at their destination, north of Highgate, the sheep were penned and 'city drovers' took over moving them to Smithfield Market. The Welshmen were paid off, and headed for the city to spend some of their earnings before returning home via cargo boats from Tilbury to Swansea. The dogs meanwhile were sent back unaccompanied, retracing their tracks across country, stopping to eat a mash of meal and beer put out for them at local inns and paid for by the drovers on their outward journey.
- Flocks of starlings, assembling at dusk, a *murmuration*. The following extract is from *Wired Science*: Flocking starlings are one of nature's most extraordinary sights: Just a few hundred birds moving as one is enough to convey a sense of suspended reality ... What makes possible the uncanny coordination of these murmurations, as starling flocks are so beautifully known? Until recently, it was hard to say. Scientists had to wait for the tools of high-powered video analysis and computational modeling. And when these were finally applied to starlings they revealed patterns known less from biology than cutting-edge physics. Starling flocks, it turns out, are best described with equations of 'critical transitions' – systems that are poised to tip, to be almost instantly and completely transformed, like metals becoming magnetized or liquid turning to gas. Each starling in a flock is connected to every other. When a flock turns in unison, it's a phase transition. At the individual level, the rules guiding this are relatively simple. When a neighbor moves, so do you. Depending on the flock's size and speed and its members' flight physiologies, the large-scale pattern changes. What's complicated, or at least unknown, is how criticality is created and maintained. It's easy for a starling to turn when its neighbor turns – but what physiological mechanisms allow it to happen almost simultaneously in two birds separated by hundreds of feet and hundreds of other birds? That remains to be discovered, and the implications extend beyond birds.

(Keim 2011)

In these examples, the 'pack' (the movements of the sheep and the dogs) is purposeful, managed and relational (even down to the dogs travelling home, food for their journey having been organized in advance, and the very nature of the pack, ensuring purposeful movement towards the goal). The 'flock' by contrast is emergent and co-constitutional – its shape never predictable from one moment to the next. But is there not a bit of serendipity in the pack, and a bit of organization in the flock?

Patrick Dillon

We tread along the margins of the salt marsh at Slimbridge Warth. The sights and sounds of birdlife make us conscious that we are in the presence of managed wetland of the Wildfowl and Wetlands Centre, established following the purchase of land by Sir Peter Scott in 1946 – a very particular claim of the need for wet, not just for humans but for other species too. But we are also in the presence of a longer-term history of the reclamation of salt marsh from fourteenth century onwards (see Allen 1986); the land between us and the Severn estuary, which bears the marks of ridge and furrow agriculture and within which sea banks can still be traced, is land taken back from the wet (though

Allen notes that the stratigraphic evidence suggests much of this land was subsequently breached by the Severn in the late nineteenth century and thickly covered by a tidal silt). We are moving along the edge of a space of negotiation, one in which the margins between wet and dry are being constantly redrawn.

We walk until we arrive at the Purton ship graveyard where some 81 abandoned hulks, intentionally beached in the early twentieth century, form a barrier preventing the river from eroding the canal embankment. Having reached this point of apparent fixity against the shifting water margin, we turn around and head back.

Richard Irvine

Beyond

... the sea wall, haze begins
 at no point we can determine,
 distance ever more with us by not being there.

Beyond the margin is more
 of the margin, more intensely,

the heartland of itself, with all the edges
 (mud, salt, frayed
 waves, stumps of jetties,
 signatures of oil or steam, the water's
 fine discriminations, gloss,
 satin or matt, and the birds',
 where to pick in the mud, where not)
 in-gathered, like a mere
 flat map projection
 or the great grey linen tablecloth
 grandmother grabbed by the lugs
 of its corners, the crumbs
 of us shaken in, frisked to the doorstep,
 flapped into the wind,
 into further dimensions,
 distances we couldn't grasp of a world.

Beneath

... the great glum and always unravelling
 knot of weather,
 pressure, heat, precipitation,
 cloud without visible movement
 but a bush of steam arisen
 from its chimney leans

from the north - not wind
 exactly, more that grey itself
 might have an inclination

like us this morning; we walk
 to be warm, and to find ourselves
 somewhere, lifted clean

out of ourselves, as we watch
 for a speck, a spore, a sign,
 for the grace of migration,

for a thin far cry that puts us
 in our place, this temporary landfall,
 brief sweet water, and a little green.

from *The Margin*
 Philip Gross

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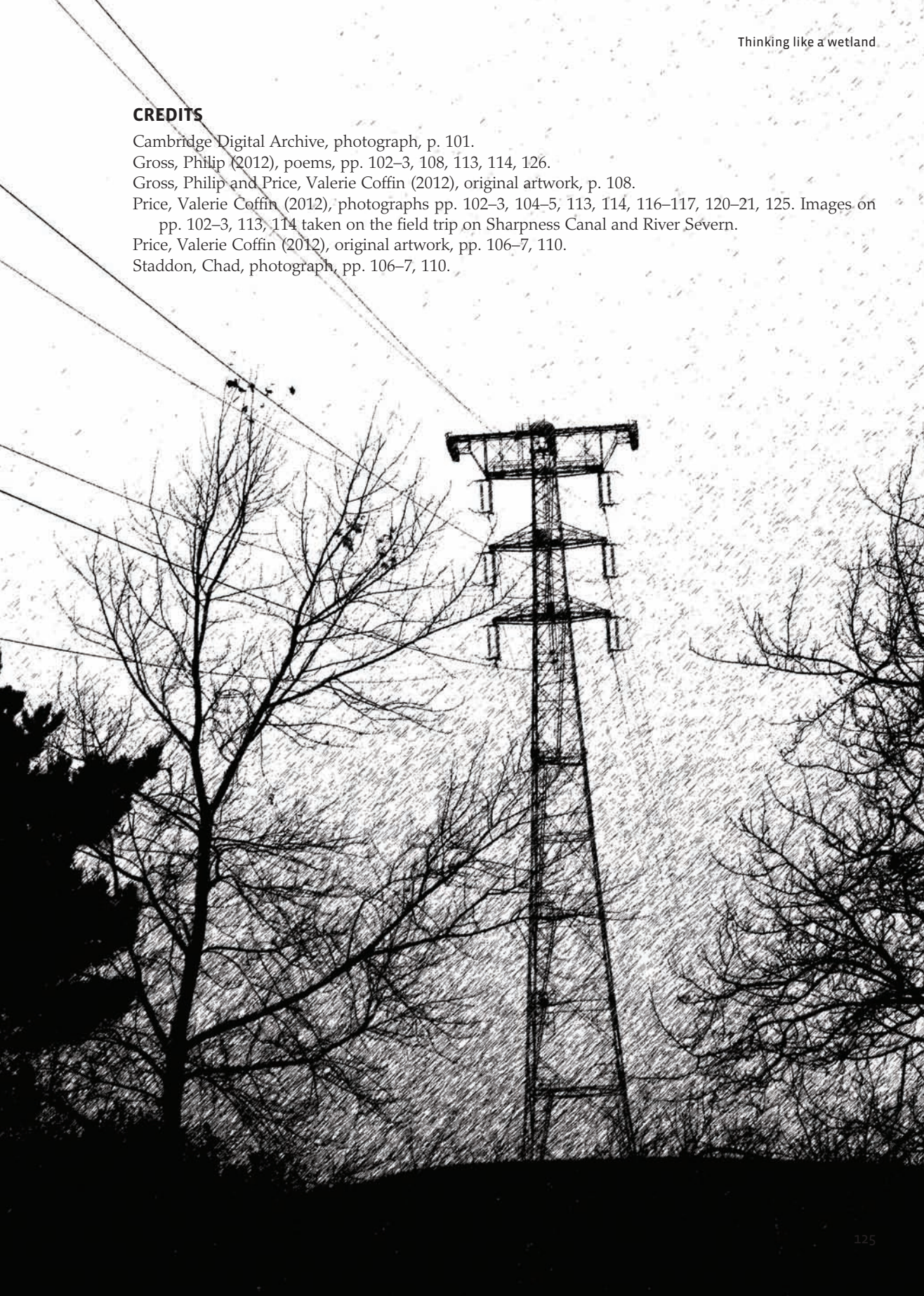
Gross, Philip (2012), poems, pp. 102–3, 108, 113, 114, 126.

Gross, Philip and Price, Valerie Coffin (2012), original artwork, p. 108.

Price, Valerie Coffin (2012), photographs pp. 102–3, 104–5, 113, 114, 116–117, 120–21, 125. Images on pp. 102–3, 113, 114 taken on the field trip on Sharpness Canal and River Severn.

Price, Valerie Coffin (2012), original artwork, pp. 106–7, 110.

Staddon, Chad, photograph, pp. 106–7, 110.



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it leaks, seeps, the porous edge of the flesh that fur-
- idly eludes us

