Deep Mapping the River: a Palimpsest

I was the waters and I wept.

How can we find you in the midst of concrete and plastic?

Even your mouth has been wiped off with a brutal hand to be sketched to the side, in its place a runway.

Scooped, dredged, filled, bloated; a drain.

Industrial legacies, the bastard children of the Anthropocene.

But you are not only here.

Not only where you have been named and sketched.

You, whose old name is forgotten, written over in a heavy hand by script loving boat people, who love to broadcast their words but have forgotten how to listen.

You, you flow out, go deep into the earth, reach backwards, draw from around you.

You are all at once now, then and tomorrow.

We are calling out, tracing your lines, not so people may hear, but so they listen.

Urban rivers often clearly mark the primary topography of urban/natural boundaries. These liminal regions, where natural and urban environments converge, act as borderlines and retain stories that have been shaped and scarred by an anthropocentric idea of urbanization that is at odds with the underlying natural ecology. The river, although altered, is, in essence, a near immutable object, enduring as a constant landmark within place and through time, now and in the future. The story of the river reflected through layers of human and ecological history is a palimpsest – yet without the erasure – which allows glimpses of past mantles that the land has inscribed on its skin.

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Structurally, this piece adopts a “fictocritical” form of essay, which consciously blurs or erases discursive protocols and functions as a type of textual performance.

1 Spoken word performance by the author created as part of Where the River Rises: A River of Words. Bankstown Arts Centre, Sydney Australia (see Rachael Swain, “Marregeku,” in Radio Beyond Radio).

2 Fictocriticism, also likened to Hypertext, is predominantly an Australian and Canadian experimental academic writing genre that employs creative writing to fashion personal performative pieces that question the authority of discursive protocols. It has been linked to Feminism and experimental writings of the 1970s and 1980s by Helene Cixous, Luce Irigaray, and others. It is a useful vehicle for writing “deep mapping.”

3 See the works in the bibliography by Schlunke and Brewster; Gibbs; Brewster; Kerr; and Prosser.
I aim at creating a reflection of the methodological, eco- and sociopolitical functions of ‘deep mapping’. This approach, on which I shall further elaborate in this essay, functions as a tool for crafting the concept of a layered, accumulative structuring of knowledge. Each section, although related to the overall topic, does not follow a linear, continuous form and is not necessarily contingent on the preceding or following sections. The stories, quotes, description, and analysis in each section serve as waypoints of navigation considered randomly, without a set route, but possessing discernible layers in a single spatiotemporal realm, forming a written palimpsest.

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Before textual inscriptions, particularly in an Australian context, there were spoken maps. These were the first journeys written of the land, writing the land, calling and singing it forth into being through movement and life. Trading in a spatiotemporality of place, this kind of mapping is arguably more adaptive in its truth claims than more conventional forms of cartography. Traditionally, maps have held a position of privilege and power, both as symbols of orientation and ownership and as projections of objectivity. Cartographic borders cast over the land a leaden weight of crossing lines and formations, often bending life around its zonings and warping the fabric of reality to conform to its own metadata. Maps project a mental image onto our spatial imaginations and dictate our access to spaces in the real world. One must only look to how state borders and the narratives of their formation, for example, are legitimized on maps, where they create physical borderlines and regulations of access and control. Private, public, or commercial spaces and their zonings or designations produce a similar effect. More recently, questions have arisen about “the relation between object and subject in image making and their epistemic structures.”

Cultural geographer Francis Hutchinson warns:

Our sense of place, our sense of direction both spatially and temporally, our sense of the sacred or the secular, our sense of utopia and dystopia have often found expression in our mappings. Often ignored, however, have been how culture-bound and historically conditioned are our representations of what is real and what is potentially real. Other ways of knowing or representing the world may be edited out culturally and our own interpretive frames over-generalised and universalised in their truth claims.⁷

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⁴ See John Brian Harley, “Deconstructing the Map” and Francis Hutchinson, “Mapping and Imagined Futures: Beyond Colonising Cartography.”
⁵ I use the term cartography and mapping interchangeably here in the sense that they involve an active process of charting associations.
⁶ Irit Rogoff, Terra Infirma: Geography’s Visual Culture, 94
⁷ Francis Hutchinson, “Mapping and Imagined Futures: Beyond Colonising Cartography,” 3.
Correspondingly, Irit Rogoff defines cartography as a mode of writing that functions only through structures of knowledge signification that use recognizable cultural codes. It is, in effect, a generative practice that substantiates both location and identity. To be able to read a ‘map,’ one must have access to the codes. These codes function as signifiers that relay a certain vision of place and are, as Rogoff explains, inherently cultural.

James Corner similarly notes the cultural practice of mapping. In his discussion of the agency of mapping, Corner describes it as “a fantastic cultural project, creating and building the world as much as measuring and describing it.” When used for creative practice, he writes, mapping goes beyond authoritarian, reductive, or coercive mappings and “its most productive effects are ... a finding that is also a founding; its agency lies in neither reproduction nor imposition but rather in uncovering realities previously unseen or unimagined, even across seemingly exhausted grounds.”

Corner wrote this on the cusp of the development of geo located and global positioning systems and technologies, which have opened up a whole field of Graphic Interface Systems – GIS and locative media. Although it is beyond the scope of this essay, the socio-political implications, the existence of maps as cultural objects, and the adoption of mapping techniques together facilitate a vibrant space for aesthetic interpretation, which through artistic engagement interrogate the more traditional hegemonic positioning of mapping. Effectively, such creative practices call into question both the authoritative voice of maps and seek to represent the phenomenal in a non-reductionist way.

Cartographic metaphors are popular in post-structural semiotics, but they have been questioned by Karen Barad, for example, as too “representationalist”; mapping, nevertheless, functions as a useful tool. Corner points to their capacity to explore contested or underrepresented cultural and topographical geographies, thus challenging existing hegemonic understandings of space. I would add, in line with feminist critiques of mapping, that in addition to “uncovering previously unseen or unimagined realities,” creative mapping is a performative act of undoing that questions preexisting hegemonic or normative structures. It accomplishes this by charting subjective associations, connecting existent realities, and rendering them visible or even audible. Recognizing the act of mapping as a fundamentally

8 Rogoff, Terra Infirma, 49.
10 Ibid.
11 For further discussion on locative media, see the works in the bibliography by Zeffiro; Balit; Sui; Hemment; Wilken; de Souza e Silva and Frith; Grond, Olmos, and Cooperstock, among others.
13 James Corner, “Mappings,” 213.
14 Judith Butler, Undoing Gender.
interpretive framework thus facilitates the space for creative re-interpretation. Artistic privilege, which traditionally generates expressions of subjectivities, thus allows for the creative use of mapping’s potential to transmit a more democratically, socially, and ecologically localized imaginary.

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Dreamtime is not past, present, or future, but a *continuum* – a stream of knowledge closely binding all Aboriginal people with the land and each other.

(Madelon Rosenfeld, “Forum: Dreamtime”)

The Cooks River, home of the footprint of Goolay’yari, is a secondary river in the Sydney basin in New South Wales, Australia. Many indigenous people live in the area and have strong ties and a sense of custodianship over the rivers and ‘Country’ on which urban Sydney rests. The presence of more than 40,000 registered indigenous sites in the Sydney basin alone tells a story of a rich history of Indigenous Australian habitation. An ongoing connection to Country is upheld today within a wider network of elders and Aboriginal communities, both local and from Country that is more distant. Once frequented by both Gadigal and D’harawal Aboriginal tribes of the Eora nation, it was home to the Gweyagal, Gameyagal, and Wanngal clans and many of the family bands that used the river. Sadly, in the early days of European invasion and settlement, many of these original tribes people fell victim to disease and dispossession, but some knowledge still circulates. In 2007, local Aboriginal elder Francis Bodkin of the Bitter water tribe of the D’harawal language group shared the pelican Dreaming with Marrickville Council as an act of reconciliation. The story shared with Marrickville Council is also known as the River of Goolay’yari the pelican.

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15 This recently recovered name comes from traditional knowledge passed down through the family of Francis Bodkin, A Bitter Water Woman of the D’harawal People, and shared with Marrickville Council in 2007. The name signifies pelican in her particular language group; signs for ‘Cooks River’ that line the route of the river now feature a logo of a pelican.

16 The English term ‘Country’ is used by Aboriginal people and Torres Straight Islanders to describe both family origins and the particular designations and regions that constitute Australia. Country denotes a complex relation to place that includes culture, nature, and land, and to which everything is linked not only geographically but also in terms of community, cultural practices, knowledges, songs, art, and all people: past, present, and future. The indigenous people of this land have custodial responsibilities to care for their Country, to ensure that it continues in proper order and provides physical sustenance and spiritual nourishment. These custodial relationships may determine who can speak for a particular Country. Everything within the landscape is considered ‘Country.’

17 See the works by Lesley Muir; Joan Lawrence et al.; and Paul Irish listed in the bibliography.

18 Heather Goodall and Allison Cadzcow’s book, *Rivers and Resilience: Aboriginal People on the Georges River*, gives an excellent account of this. Flowing into Botany Bay the east coast site of first contact with European colonial invaders, the Georges River is the larger sister of the Cooks River.
In the early days of the Dreamtime,  
The Pelican was once a man who abandoned his family, thus placing them in great danger. As punishment, he was banned from the Land of the Beginning. 
As he stepped across the river, he left his footprint. 
When he stepped onto the northern side of the river, he became a man, Baiame, and began to create the landscape north and west of the Land of the Beginning. There are many stories of the great deeds that Baiame has done in the landscape that he created, but none tell of him ever returning to the Land of the Beginning. 
Perhaps, one day, he may use the Island of the Pelican to return to his Beginning as we all must do.

The Cooks River today flows through some of the most culturally diverse populations and highly urbanized places in Australia. Misappropriated, overlooked, and largely turned into a drain through channeling and mismanagement, the Cooks River is now undergoing a slow restoration. This is the result of the activity of a number of dedicated local community groups and their hard-won collaboration with various local councils and with the state owned utility Sydney Water. Significantly, records indicate that it was one of the first sites of European contact on the east coast of Australia and the first river that Captain James Cook explored. Called “a fine freshwater stream” by Cook a meagre two centuries ago, it is now one of the most polluted urban river systems in Australia ("Streets to Rivers Project – Stage 1 | NSW Environment & Heritage"). While unglamorous and unlovely, and without the romance of some of its larger, better known sisters, people still love it and want to belong to it: “We are all Cooks River People” is printed on the shirts of those who work voluntarily cleaning the rubbish from among the mangroves, planting on its foreshore and lobbying for its wellbeing.

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1. Deep maps will be BIG – the issue of resolution and detail is addressed by size.  
2. Deep maps will be SLOW – they will naturally move at a speed of landform or weather.  
3. Deep maps will be SUMPTUOUS – they will embrace a range of different media or registers in a sophisticated and multilayered orchestration.  
4. Deep maps will be achieved only by the articulation of a variety of media – they will be genuinely multimedia, not as an aesthetic gesture or affectation, but as a practical necessity.  
5. Deep maps will have at least three basic elements – a graphic work (large, horizontal or vertical), a time-based media component (film, video, performance), and a database or archival system that remains open and unfinished.  
6. Deep maps will require the engagement of both the insider and outsider.  
7. Deep maps will bring together the amateur and the professional, the artist and the scientist, the official and the unofficial, the national and the local.

19 Depression era initiatives saw the concreting of a considerable part of the riverbanks.  
20 Lesley Muir, “Marrickville Heritage: Tranquil Waters – Cooks River.”
8. Deep maps might only be possible and perhaps imaginable now – the digital processes at the heart of most modern media practices are allowing, for the first time, the easy combination of different orders of material – a new creative space.

9. Deep maps will not seek the authority and objectivity of conventional cartography. They will be politicized, passionate, and partisan. They will involve negotiation and contestation over who and what is represented and how. They will give rise to debate about the documentation and portrayal of people and places.

10. Deep maps will be unstable, fragile, and temporary. They will be a conversation and not a statement.

“Deep Mapping Manifesto,” Clifford McLucas

“Deep mapping” is both a concept and a practice. It can be used as a descriptor of a specific type of creative work and a distinct set of aesthetic practices or as a set of practices that are employed methodologically and philosophically. It can, more generally, be defined as involving concentrated topographical exploration that aims at presenting diverse sources – such as histories, ecologies, poetics, memoirs, and so forth – as of equal significance; it is thus a productive tool often used to amplify the voices of marginalized stakeholders, both socially and ecologically.

The term “deep mapping” first arose in relation to a specific type of eco-literature that ventured an intense exploration of place, a type of “vertical travel writing.” In the late 1990s and early 2000s, however, a number of interdisciplinary practitioners located primarily in the UK and continental US applied the term to a specific set of aesthetic practices to describe long form creative works, including performance and a type of theater archaeology. More recently, deep mapping has been ascribed to certain types of digital geographic information systems (GIS) in relation to spatial humanities. In all these contexts, deep mapping refers both to a guide for practice and to a way of describing particular projects that use cartographic methods in order to evoke a “deep” (as opposed to shallow, one-sided, or perfunctory) investigation of place. The esthetic act of deep mapping as a practice, or set of practices, is a method of creating a record of space, place, or time that commits to an investment in authorizing multivocal understandings.

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21 Clifford McLucas tragically died in 2002 from a brain tumor. These tenets are found on a personal website set up by his friends and colleagues as a digital momento mori. They are still used as a basis for creative productions such as the large scale physical theater performances of the Broome-based company Marregeku.

22 For more discussion on connections of Deep Mapping and Flat Ontologies, see Springett, “Going Deeper or Flatter: Connecting Deep Mapping, Flat Ontologies and the Democratizing of Knowledge.

23 Ibid.

24 See the works by Christopher Gregory-Guider, Alison Calder, and Randall Roorda listed in the bibliography.


26 David J. Bodenhamer, John Corrigan, and Trevor M. Harris, “Deep Mapping and the Spatial Humanities.”

27 Springett, “Going Deeper or Flatter.”
“I started recording rivers back in the ’60s, again when I was in England, because I was interested in trying to discover why they are so magnetic to us, why people love to go to river banks, what their ears are reaching for as well as their eyes, and what our bodies respond to in rivers.”

Annea Lockwood (From an interview by F. Oteri 2004)

Australian academic theorist and arts practitioner Paul Carter speaks about how the process of “material thinking” – the practice of art-as-research: a form of imaginative and intellectual enquiry – enables us to think differently about our human situation, by displaying its inevitable complexity in a tangible but non-reductive form. In short, it is a way of re-presenting culture through art. Carter does this through blending histories with science and poetics to champion the notion that the exploration of the local can speak to broader global issues and, in doing so, demonstrates the instrumental role works of art can play in the ethical project of becoming, both collectively and individually.

American artist Mary Miss’s “FLOW: Can You See the River?” was a project intimately linked to amplifying the voice of an urban river. As with Carter’s work, this undertaking features local concerns while interlocking with broader issues of sustainability. It was a citywide public art project that ran from 2008 to 2011, created as part of a wider initiative called City as Living Laboratory: Sustainability Made Tangible Through the Arts. The project appeared along a six-mile stretch of the White River, which runs through the center of the city of Indianapolis. Mirror markers and oversized red map pins identify important features of the White River catchments (watersheds), including wetlands, floodplains, combined sewer outfalls, and pollution. These points are also accessible online and through an oversized map printed on the floor of the Indianapolis Museum of Art foyer. Each location has a phone number and a code, which, upon calling, provides information about the site. The project includes an app that traces raindrops to aqua-caches from any location in the city and charts their path to the river with the catchphrase: “Every Property is a River Front Property.” In addition, web cams spread out over the length of the river from the top of the catchment or watershed to its mouth in the Gulf of Mexico focus on diverse sites or nodes of river origins, history, and ecology. The project’s varied technologies reveal how everyday activities are connected to the history, ecology, origin, and even potential of the water system.

Miss’s large-scale work engages in a performative cartographic exercise across multiple platforms. It engages with history and ecology and employs discursive creative mechanisms not only to engage with the river site but also to facilitate new ways of thinking about it. By asking people to “see” the river, Miss is calling attention...
to local and specific environmental issues that are often overlooked by a convenient blindness (or deafness). The artwork stimulates both visitors and locals to not only viscerally experience the river’s functions but also to see how their behavior has direct ramifications for the river. This dual function effectively amplifies the voice of the river and situates it in everyday political ecologies.

The process of deep mapping can also be discerned in the work of sound artist and composer Annea Lockwood, who created a number of extended “sound maps” of vast river systems, including the Hudson (1981), the Housatonic (2010), and the Danube (2004). Each of these projects involved collecting sounds and stories through extensive recording, listening, and developing aural tracings, which she then used to create large multichannel installations. Lockwood interwove these field recordings with reflections and memories of those whose lives are linked to the river, shaping the collected information to create both maps and sonic journeys.

Lockwood’s work on the Danube (2004) included field recordings from over eighty sites, from the Schwarzwald (Black forest) in Germany to the Black Sea delta and spanned three years. She recounts, “I recorded at the surface and underwater, capturing a wide array of water, human, and other sounds from the river environment.” She continues, “… [m]ixed into these are the voices of people I talked with: fishermen, artists, a river pilot, a shipping agent, a delta guide.” The resulting piece includes a 5.1 surround sound, three-hour long audio component, a running time display, and a wall map that displays the sites, times, and dates of the recordings (that were created in collaboration with cartographer Baker Vail and designer Susan Huyser). The arrangement of the speakers in a circular array immerses the listener in the sounds of the river. A booklet with a transcription of the interviews (including a translation into English) as well as stones collected at various sites from the riverbed form an integral part of the installation. Lockwood explains that handling them “gives people direct tactile contact with the river’s geological nature.”

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I began creating a Palimpsest of the Cooks River – or deep map – in Sydney in 2013. I began slowly reviewing its geography and history and seeking out and engaging with scientists, locals, community groups, and other stakeholders. I sought to develop an

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30 I use the word “tracings” because that is how Lockwood (“LANDSCAPE STORIES: 65/2013,” Annea Lockwood) describes it. Her method literally involved following the river from the source with a very detailed topographical map, marking each recording site methodically. I understand that in a Deleuzian sense “tracing” directly opposes the practice of “mapping,” as it is tied to a pre-existing plane. Mapping is more active in seeing what new connections can be made rather than charting and therefore creating a static diagram with a prescribed route.


32 Ibid., 44.
engagement of material thinking-through the catchment and riparian zones of the river with interrelated but diverse creative practices. By “material thinking,” I have in mind the development of knowledge around a site that evolves solely through performative acts. By employing techniques of deep mapping and exploring sonically, tactiley, digitally, and visually anything I could find related to the river, I sought to disrupt the hierarchical tendencies of traditional cartography in a performative act of undoing.\(^\text{33}\)

Within this framework, I am inquiring as to what liminal zones of definition—such as those that are both an urban and a natural resource, borderlines of cultural differentiation and definitions—can tell us about land, place, and meaning. For example, if the river could speak, what would it say? If we begin to read the semiotics of the land, how can this information be transmitted? What of the human echoes that saturate place? How do they create an intimate world between meaning of place, the embodied experience of it, and its own subjectivity? Through slowly building the layers on a palimpsest, savoring, juxtaposing, and expanding on each individual story,

\(^{33}\) For more on this, see Springett “Going Deeper or Flatter.”
I began creating a Palimpsest of the Cooks River — or deep map — in Sydney in 2013. I began slowly reviewing its geography and history and seeking out and engaging with direct tactile contact with the river’s geological nature. 

Figure 2a. Annea Lockwood, *A Sound Map of the Danube*, 2005, 5.1 sound installation, 2 hrs. 47’. Photo courtesy of the artist.

this work seeks to promote a more socially and ecologically located understanding of the river, a place where even marginalized stakeholders are occasionally audible.

This ongoing project includes a number of sound-based installation works, community collaborations, radio podcasts, performances, and accompanying zines. Its aim is to explore the river’s real and imagined ecologies through listening to its cultural, political, and environmental stories, as well as incorporating records of its presence, both past and present.

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Where the River Rises: A River of Words was the first audio layer of the palimpsest. It came out of a residency at the Bankstown Arts Centre in Western Sydney, and entailed collaboration with ten spoken word poets from the Bankstown Poetry Slam. Geographically, Bankstown is situated at the head of the river – where it rises – before the waters dip back underground – and continues in its concrete corset, channeled to, at best, dated water management ideologies. The project included a mural created over the course of a week, live spoken word performances of the poetry made in response to the river, a stereophonic audio piece (which is mixed to move from left to right with the flow of the river), and an accompanying zine. It was initiated as a way of reaching different audiences and communities and potentially engaging them in new and alternative ways of thinking through place in order to bring them into political ecology.

In the Current is another installation work generated from the same project, which blends digital and analogue recordings. It features an interactive projection of the river that senses the presence and silhouette of the viewer and changes color accordingly. The longer a person stays in place, the more intense the change in color becomes, which is mirrored in the flowing water of the river projection. The change reflects the concept that one’s presence affects the river in both a physical and metaphorical sense. The same sensor also triggers vocal grabs of interviews conducted with a number of environmental scientists, locals, and community stakeholders, while the reel-to-reel tape recorder plays a loop of underwater recording. Water in primarily vintage glass bottles is collected from various points along the river, one for each kilometer.

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34 Collaborators came from a broad age group with diverse cultural and ethnic backgrounds, including Turkey, Iran, Australia, England, India, Pakistan, and the Philippines. They included a trainee chemist, a law student, a professional writer, a boxer, a curator, a tourist, an arts manager, an IT professional, and a youth worker. Some had not thought of the river beforehand; some volunteered because they felt connected to the Cooks River.

French theorist Isabelle Stengers proposes that this idea of alternative “cosmopolitical” proposals requires “no other verification than the way in which it is able to ‘slow down’ reasoning and create an opportunity to arouse a slightly different awareness of the problems and situation mobilising us.”36 The type of deep maps presented here, through their breadth and depth of scope and their focus on the spatiotemporal aspects of place is supposed to embody this type of measured, cumulative understanding.

The social and political implications of maps as cultural objects and the creative enactments they engender open up spaces for aesthetic interpretations and imaginings that significantly question the presentations of maps. Specifically, re-interpretations of the traditional practice of mapping and cartography facilitate a path to refashion the everyday usage of maps, including challenging the specific, privileged stories they tell, and questioning existing hegemonic power structures. At the same time, they explore and expose that which is considered real and present latent potentialities. Deep mapping as a term and a concept thus offers a language for describing alternative frameworks that can be used to confront processes of inclusion and exclusion, while also striving towards a more democratic, socially engaging, and environmentally present storytelling.

The river banks widen, and I feel pride when I look back, not with sorrow or regret at the river’s passing, but towards a tomorrow where I won’t forget that the river’s course is everlasting, and I know in my heart through strength of will that while the current departs, the river, still, it flows on.

(Bilal Hafda, 2014)
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