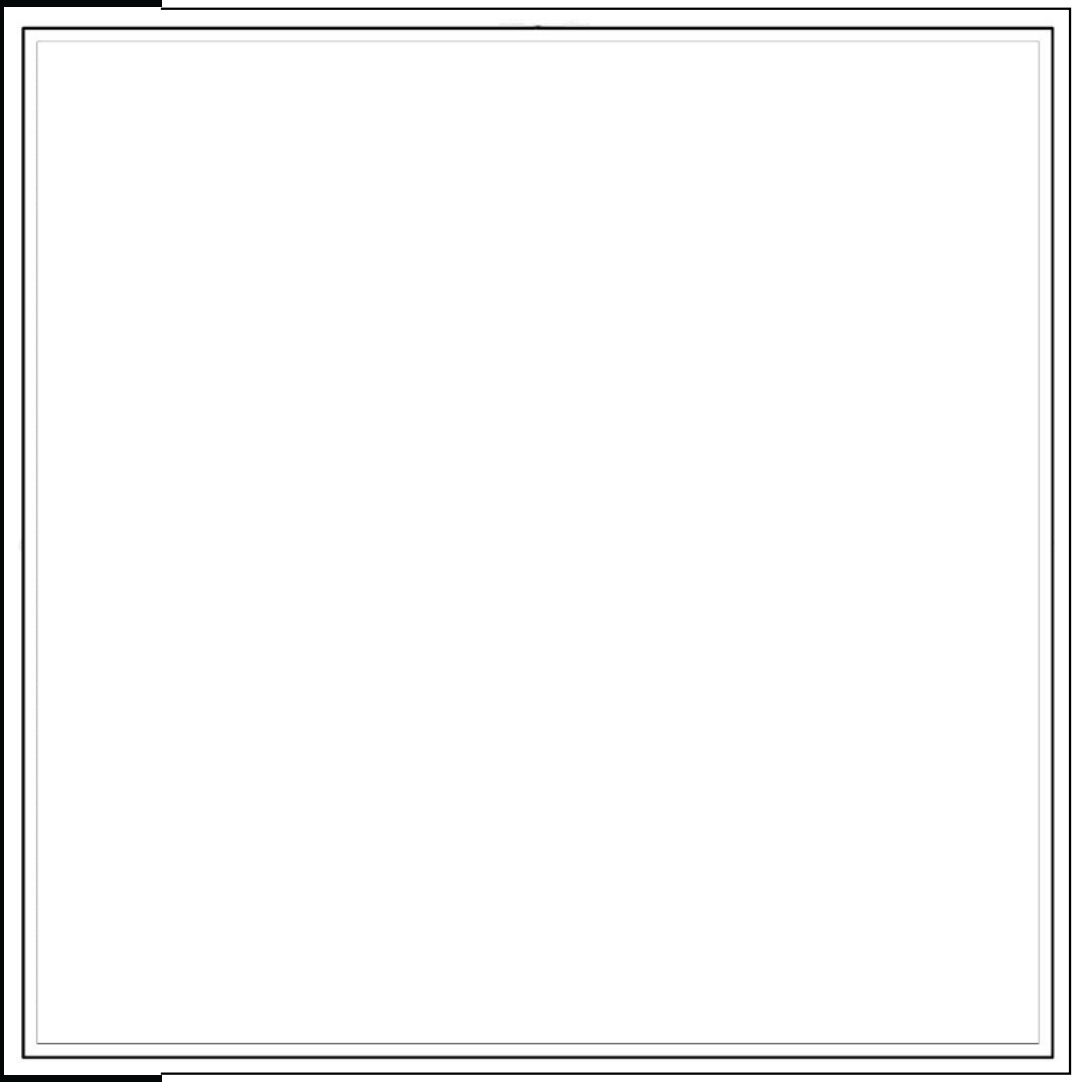
Notating Not Knowing: The Oceanic Challenge To Format And Medium

RACHEL ARMSTRONG
SIMONE FERRACINA
CHRISTOS KAKALIS
ROLF HUGHES

RACHEL ARMSTRONG[1]
SIMONE FERRACINA[2]
ROLF HUGHES[1]
CHRISTOS KAKALIS[1]
[1] NEWCASTLE UNIVERSITY
[2] THE UNIVERSITY OF EDINBURGH

Notating Not Knowing: The Oceanic Challenge to Format and Medium



Notating Not Knowing: The Oceanic Challenge to Format and Medium

RACHEL ARMSTRONG
SIMONE FERRACINA
CHRISTOS KAKALIS
ROLF HUGHES

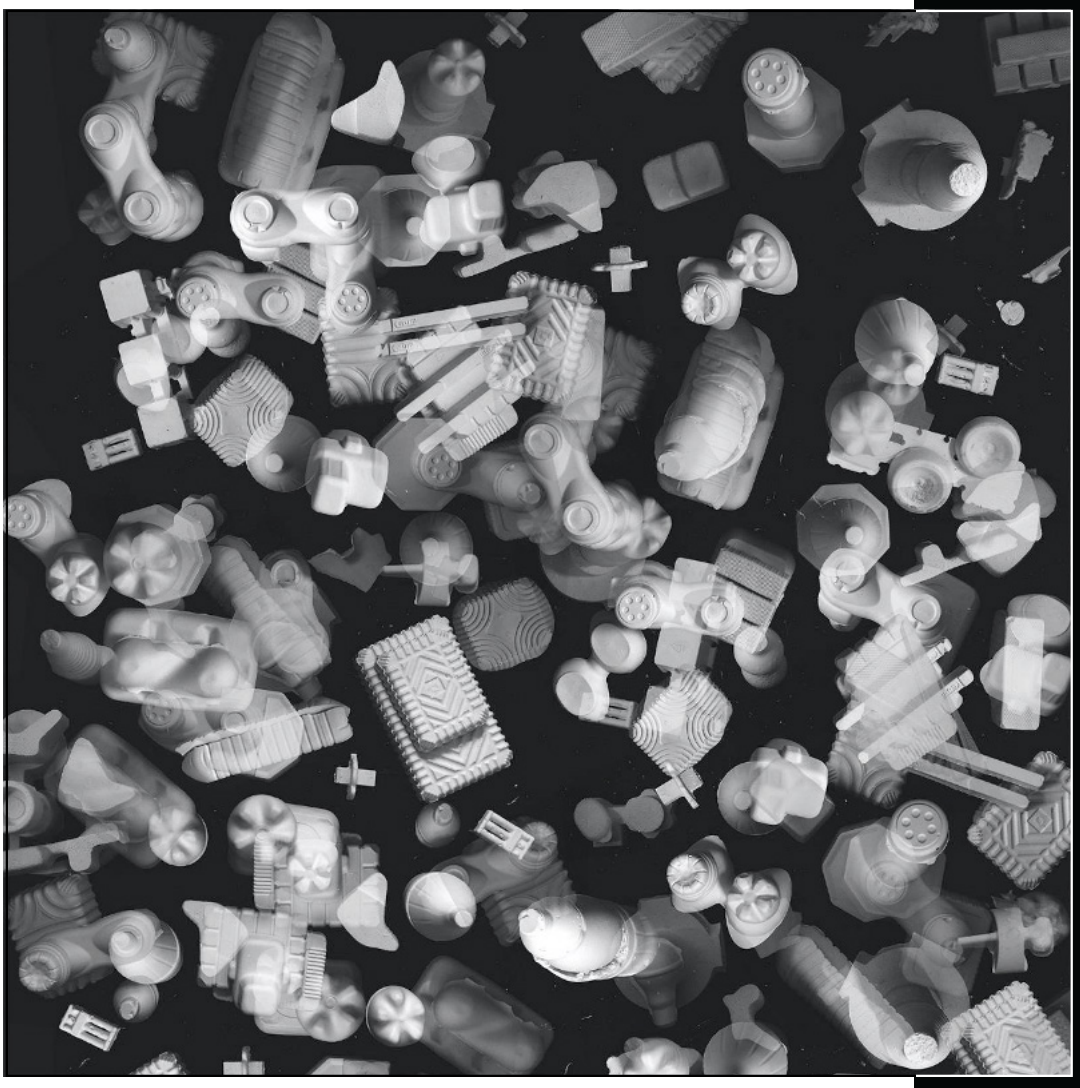


Figure 1: *Strange Notations: From tabula rasa to rasura tabulae*, Simone Ferracina.

RACHEL ARMSTRONG
SIMONE FERRACINA
CHRISTOS KAKALIS
ROLF HUGHES

Strange Notations: from tabula rasa to rasura tabulae

Simone Ferracina

> All media are active metaphors in their power to translate experience into new forms
>
> *Marshall McLuhan*[1]

Formats enforce – and operate within – normative relational ecologies and precise functional orientations. Whereas 'form' can, in Aristotelian terms, be understood in isolation – as mere actualised matter – 'format' (from the Latin *formatus*, shaped) is, in the wider connotation used here, the result of an active chain of operations that *in-form* matter towards a specific set of relationships and contexts of use. In other words: whereas form designates individual substances, a *format* describes them in relation to one another. In this sense, standardisation consists in the selection and technical deployment of preferred – often more efficient or effective – communication channels between substances (objects and people). For example, the A4 sheet of paper is defined by the standard ISO/DIN proportions (aspect ratio of the square root of two) that afford it productive machinic interactions (the physical correspondence of printer tray and sheet of paper as the basic requisite for printing). Similarly, the shape and size of a styrofoam packing box follows that of the item it contains and insulates; a queen-sized bed affords the lying of two human bodies next to one another, as well as an ecology of mattresses, duvets, pillows and sheets; a chair is designed for sitting on; the external thread of a metal bolt matches the internal thread of a nut, etc. Formats across scales unlock relational affordances while simultaneously forcing objects into obligatory, often instrumental, interactions. Form(at) follows function, and the resulting monocultures reject, conceal and foreclose all manner of *other* – non-teleological, bottom-up, spontaneous, queer – encounter. This should not be taken as a naïve denial of the fact that such encounters occur or have value – that, as Reyner Banham beautifully points out, a chair is sometimes used as door stop, step ladder, work bench, stand, clothes hanger, and even as bongo drums; and indeed some objects may be designed to be more susceptible than others to unscripted uses – but it should remind us that the formatting intentions behind the material economy of chairs (manufacture, marketing, acquisition, disposal) inevitably hinge upon their primary function: being objects for sitting on.[2]

[1] Marshall McLuhan, Understanding Media: The Extensions of Man (Cambridge: MIT Press, 1994 [1964]), 57.
[2] See Reyner Banham, "Chairs as Art," New Society (April 20, 1967). Quoted in Nigel Whiteley, *Reyner Banham: Historian of the Immediate Future* (London: MIT Press, 2002), 568.

RACHEL ARMSTRONG
SIMONE FERRACINA
CHRISTOS KAKALIS
ROLF HUGHES

Effectively, most violations to functional scripts (in the sense of the broken hammer famously described by Martin Heidegger, but also in a wider spectrum of valuing and de-valuing industrial and cultural practices and orthodoxies) and non-conformance to the interior laws of prescribed standards (Le Corbusier's Modulor versus André the Giant) result in rejection and eviction – in the production of waste. The devaluation of objects – their obsolescence – is not unlocked in a theatre of generic and universal worth, or in the playful context of secondary uses, but in response to deficiencies within a primary functional ecology, in the same way that the definition of dirt, for Mary Douglas, is always interwoven with (and co-produced by) a specific context.[3] When the chair breaks and coffee is spilled on the sheet of paper, that is, or when the electrical cable no longer fits into the jack, they are discarded regardless of the secondary uses that might have been previously supported or tolerated, which either no longer apply or fail to claim sufficient relevance. In this sense, the functional value of an object is not necessarily determined by its intrinsic qualities (rigidity, porosity, weight, texture, etc.) but by external factors; by its equipmental fitness (in the Heideggerian sense of belonging to an ecology of interconnected tools) and degree of co-adherence. While formatting/design enables objects to productively talk to one another (to form alliances), it also installs the principles whereby they will be muted, and become obsolete. The single-use polyethylene bottle is a case in point: once it exhausts the capacity to transport mineral water from the factory to the consumer, and can no longer retrieve a 'proper' (formatted, designed) working sequence, it loses all value – regardless of whether it has undergone any actual physical change.

Media, in the McLuhanian sense of the term, promote a looser and more plastic set of possibilities, beyond the design and naming of perfectly fitting and predictable machine cogs. Rather than referring to a mere communication channel or technological extension of human faculties, the term 'medium' denotes a space for non-scripted action, an unleashing of potentialities that is as spatially situated/constrained as it is open-ended. The light bulb, for instance, creates the environment in which a wide range of actions and interactions become possible, conquering the darkness of night.[4] And while a medium always depends on localised – implicit or explicit, simple or

[3] See Mary Douglas, *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* (New York: Pantheon, 1966).
[4] See McLuhan, *Understanding Media: The Extensions of Man*.

RACHEL ARMSTRONG
SIMONE FERRACINA
CHRISTOS KAKALIS
ROLF HUGHES

complex, designed or emergent – infrastructures, it also invites liquid encounters: the development and unfolding of unexpected and transitory *teloi*. Guided by McLuhan's celebrated formula 'the medium is the message,' we might ascribe the difference between formats and media to the presence or lack of associated messages, or to their degree of readability. And while the two terms can be imbricating and even coextensive (is a light bulb, or a sheet of paper, not both?), the former potentialises by exclusion and the latter by inclusion/annexation. This different approach reflects two possible interpretations of *tabula rasa* as a figure of potentiality.

Giorgio Agamben traces the philosophical origin of *tabula rasa* back to Aristotle's *De Anima,* in which the intellect (*nous*) is likened to a writing tablet (*grammateion*) "on which nothing is actually written."[5] The passage into actuality (*energeia*) of potentiality (*dynamis*) is represented by the act of writing, by engraving text (content, form) on the blank (contentless, formless) surface of the *grammateion*. Yet how can a rigid implement such as a tablet represent, even metaphorically, the indeterminacy of potential thought? Agamben seemingly condones this apparent contradiction:

> The difficulty that Aristotle seeks to avoid through the image of the writing tablet is that of the pure potentiality of thought and how it is possible to conceive of its passage to actuality. For, if thought in itself had a determinate form, if it were always already something (as a writing tablet is a thing), it would necessarily appear in the intelligible object and thus hinder intellection.[6]

In other words, Aristotle employs the image of a "determinate form" (a format: the tablet) to illustrate an undetermined being (a medium: the intellect) that is, by definition, formless. Both the *tabula rasa* and the *tabula scripta* are however already actual, and exist as things. Agamben excuses this disjunction because the philosopher "takes care" to clarify that mind "has no other nature than that of being potential, and before thinking it is absolutely nothing."[7] After all, the tablet-thing is for Aristotle merely a vehicle for blankness. It is the nakedness of the tablet, the fact that nothing is written on it, that allows it to mirror the nothingness of mind. However, precisely in the fracture that seems

[5] Giorgio Agamben and Daniel Heller-Roazen, *Potentialities: Collected Essays in Philosophy* (Stanford, California: Stanford University Press, 1999), 244.
[6] Ibid., 245.
[7] Aristotle, "De Anima," in *Aristotle in Twenty-Three Volumes* (Cambridge, Mass: Harvard University Press, 1986). Quoted in Agamben and Heller-Roazen, *Potentialities: Collected Essays in Philosophy*, 245.

to expose the incompatibility of potentiality (nothing) with actualised form (something), we might find a key to undermine the trope of "creation from scratch" and to redefine and repurpose *tabula rasa*. Our starting point is an observation by Alexander of Aphrodisias, who suggested that Aristotle should have spoken of *epitedeiotes*, the thin layer of wax covering a writing tablet, rather than of *grammateion*, the tablet itself.[8] This apparently modest shift in focus, from *tabula rasa* to *rasura tabulae*, resolves the contradiction by replacing the rigidity of the wood with the suppleness of the wax, which, like mind, is malleable and can't therefore be fixed into definitive, stable forms. But more importantly, it substitutes the blankness of the tablet with the plasticity of the writing surface, a formatted lack of content with a medium. It no longer matters whether the tablet is inscribed, whether the wax has been recently melted and smoothed clean or engraved with words. The wax is shapeless insofar as its shape can change: radical contingency, not blankness, is the medium of pure potentiality.

This shift from *tabula rasa* to *rasura tabulae* suggests that formats can be re-oriented towards previously unforeseen functions, *de facto* becoming media. The *Formwork* project, represented by the image at the beginning of this section, performs such transformations by using formatted discards like food packaging and e-waste as moulds for plaster and concrete casts. An ever-increasing architectural *abécédaire* emerges from this on-going practice, whereby plastic containers and disposable objects become manufacturing tools associated with a novel construction alphabet – a bottom-up notational system for spatial choreography and the recombination of parts. Yet this is not just upcycling in the narrow sense of a value increase or of a dodged devaluation that reboots (reformats) materials into new, albeit equally strict, functional roles. Rather, the resulting bricks, while carrying the indexical memory of previous equipmental ecologies, remain radically open to interpretation and subject to impromptu association, appropriation and manipulation.

[8] Agamben and Heller-Roazen, *Potentialities: Collected Essays in Philosophy*, 245.

Figure 2: *Liquid Life*, Rachel Armstrong.

Liquid Life
Rachel Armstrong[9]

Western design conventions view reality as a machine. The transition from raw matter to formatted materials – specifically in the embodiment of ideas – almost inevitably requires translation through the *bête machine*. Based on the ancient principles of atomism, this worldview proposes that fundamental objects comprise the whole of reality, and dissociates strange and super-natural events from the material real. The machine converts all 'real' encounters into the logic of mathematics enacted through 'brute,' de-animated bodies, which require external agencies to empower them. The machine metaphor applies across all scales and materials from cells to bodies, apparatuses, ecosystems and the cosmos. This worldview has been modernised and refined through industrial systems and their associated methods of making. Everything we make and describe in contemporary design practice is filtered – in one way or another – through the constructive logic of machines.

The success of the machine metaphor is that it embodies its own philosophy and therefore its structures refine and reinforce the concept of machine through its myriad expressions, enabling mechanical systems to address all kinds of contexts. The ease of demonstrating a mechanical worldview through experimental methods should not be underestimated, as it can be designed to perform useful work. While it has brought many advances in the modern understanding of the natural world – it does not perfectly speak for the extraordinary phenomenon of life, which is by nature in a state of constant transition that is sensitive to its contexts. If the capacity of formats to become media is to be unleashed, the machine metaphor must be de-centred from its stranglehold on reality.

Of course, since ancient times there have been other models for understanding the world ranging from the divine and mythological, to the flowing realms proposed by Heraclitus. Diderot argued against the mathematical mechanist conception of matter and Ludwig von Bertalanffy championed the application of 'systems' science and cybernetics.[10] However, the weakness of these frameworks is that their arguments are not embodied but symbolised through

[9] Notation by Simone Ferracina, movie footage from Bütschli experiments by Rachel Armstrong, 2017. These Bütschli notations by Simone Ferracina are produced by layering the events within an emerging system and begin to discuss the incalculable creativity of liquid life.

[10] See Isabelle Stengers, "God's Heart and the Stuff of Life," *Pli* 9(2000): 86–118; Ludwig von Bertalanffy, *Modern Theories of Development: An Introduction to Theoretical Biology* (Oxford: Oxford University Press, 1933).

their associated apparatuses. The more concrete proposals, such as Bertalanffy's extended vocabulary for encounters and their operations through notions of information, control, feedback and communication, offer more complexity than classical machines. In practice, the founding ideas are constructed through modifications of inert-bodied machines, where action within the system is transduced back into its operations to maintain a steady state such as in Ross Ashby's 'homeostat,' which was imagined as an 'artificial brain.'[11] The emphasis on relationships between objects as the driver of change actually reinforces, rather than decenters, the fundamental atomism within mechanical systems. Without an ontological shift, cybernetics strengthens the idea that the difference between nonlife and life is merely a matter of structural and organisational complexity.

It is not. Machines and cells are very separate ontological agents. Life is probabilistic, while machines are deterministic systems. Life is observed within far from equilibrium systems while machines operate within a world at relative equilibrium. Life is deeply correlated with its surroundings while machines are not sensitive to their environmental contexts. Drawing on these differences, a counterpoint metaphor and model to the machine metaphor is used to develop an alternative discourse for life that is more than a theoretical proposal but operates through actual structures that were first described by Ilya Prigogine as 'dissipative systems,' which possess their own energy and agency.[12] The unique ability of dissipative systems to interact with their environment is not conferred by an external agency, but arises from their ontology being produced by 'charged' fields of matter/energy. These dynamic structures can be demonstrated using the chemical Bütschli system as a visualisation tool. This apparatus generates strikingly lifelike droplets that are capable of movement, sensitivity and population-scale behaviours, which arise out of the intersection of olive oil and concentrated alkali.[13] They leave soapy trails and structures behind them, which can be read as a polysemic liquid language and interpreted, or 'scryed' by observers, as a range of recognisable events.

Moreover, changing the external environment of the field, for example by adding alcohol to the olive oil, can influence events. Altering the chemical composition of the liquid body can also produce

[11] British Library, "The Thinking Machine: W Ross Ashy and the Homeostat," accessed 7 June, 2017, http://blogs.bl.uk/science/2016/04/the-thinking-machine.html.
[12] Ilya Prigogine, *The End of Certainty: Time, Chaos and the New Laws of Nature* (New York: The Free Press, 1997), 3.
[13] See Rachel Armstrong, *Vibrant Architecture: Matter as a Codesigner of Living Structures* (Berlin: Degruyter Open, 2015).

various precipitations – adding soluble salts like a blue copper II sulphate solution, for example, transforms it into deposits of greenish copper carbonate. The strange yet somewhat familiar images, symbols and behaviours that arise from the Bütschli system and its 'loose' modes of technical control, draw upon the combinatorial and contingent properties of matter at far from equilibrium states, which cannot be embodied by mechanical systems as they are not finite. The variations within the system may be understood as chemical computations.[14] The Bütschli apparatus therefore offers a means of testing and producing materials and effects, which open up a space for new kinds of notation, and ultimately design processes, using liquid media that evade filtering through the *bête machine*'s logic – and provide access to the oceanic, a term that draws on the irreducibility, relative invisibility and hypercomplexity of the terrestrial seas comprising "an ideal spatial foundation... [that] is indisputably voluminous, stubbornly material, and unmistakably undergoing continual reformation."[15] Its ontology arises from the inherent creativity of agentised matter, and invites poetic readings to produce maps of events, rather than theories of concepts.[16] In other words, the oceanic resists formatting knowledges and enclosures to continually invent, foster and become new media.

[14] Rachel Armstrong, *Soft Living Architecture: An Alternative View of Bio-Informed Practice* (London: Bloomsbury, 2018), 40.
[15] Philip Steinberg and Kimberley Peters, "Wet Ontologies, Fluid Spaces: Giving Depth to Volume Through Oceanic Thinking," *Environment & Planning D. Society & Space* 33 (2015), 40.
[16] Matt Lee, Oceanic Ontology and Problematic Thought, (NOOK Book/ Barnes and Noble, 20 April 2016), http://www.barnesandnoble.com/w/oceanic-ontology-and-problemat-ic-thought-matt-lee/1105805765.

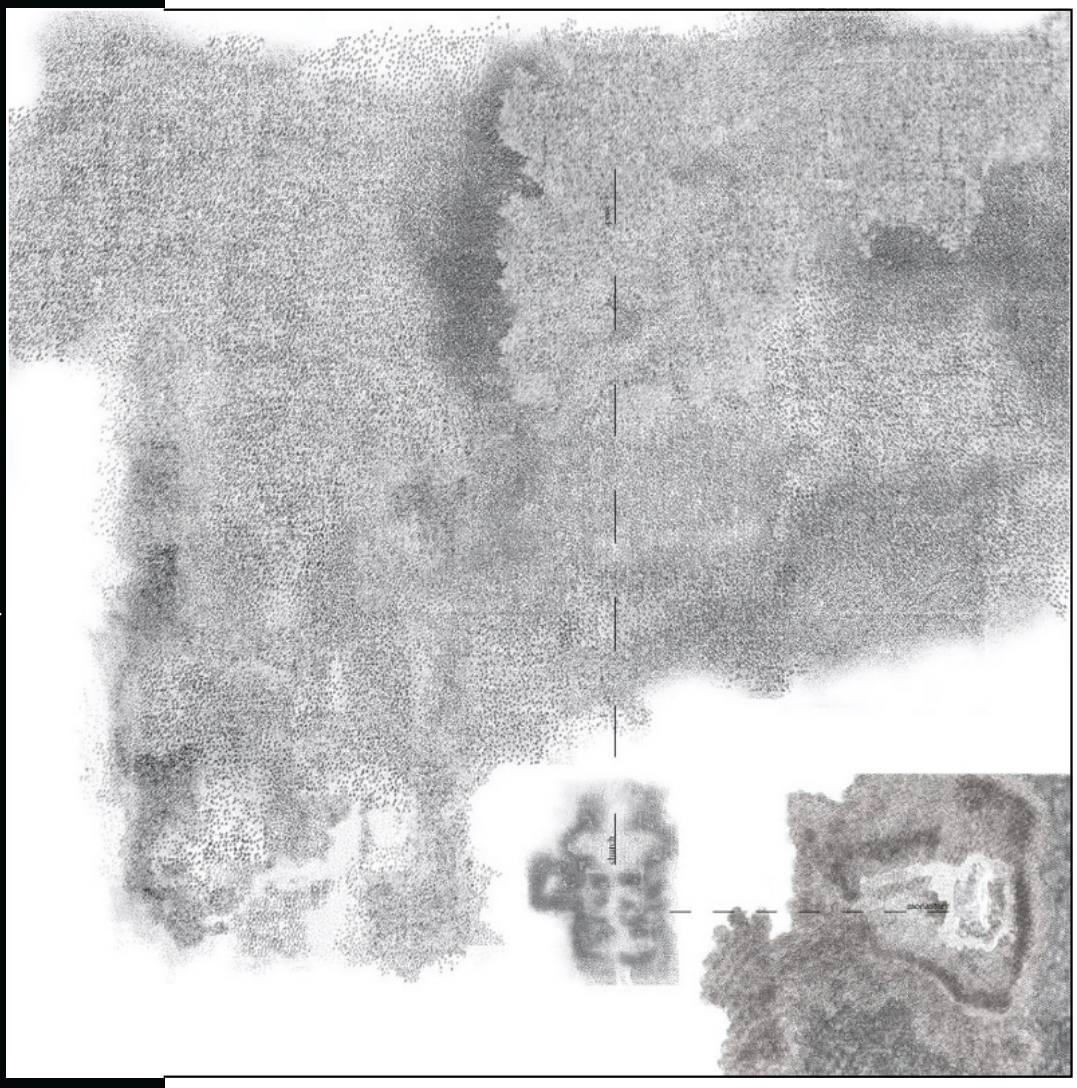


Figure 3:
Scoring-as-such.
Christos Kakalis.

Scoring-as-such
Christos Kakalis

Mapping liquid realities suggests an embodied topography in which humans and natural/built environment are interrelated in an organic whole that keeps changing. Etymologically, "topography" combines the Greek word for place (*topos*) with the one for writing (*grafein*), relating experience to the notion of inscription, and is traditionally connected to "the accurate and detailed description or delineation of locality."[17] A phenomenological understanding of place challenges this static understanding of space, bringing to our attention its eventual qualities; place becomes the event of its interacting components. In such a non-representational understanding of topography the psychic and physiological, the natural and the artificial, the hidden and the unhidden are unified in the corporeal agency of the subject. In this context, exploring aurality, Gernot Böhme argues that "atmosphere ... is the reality of the perceived as the sphere of its presence and the reality of the perceiver, insofar as in sensing the atmosphere s/he is bodily present in a certain way."[18] Ambience is fluid and vague and its attuning dynamics emerge in the tension between the perceiver and the perceived. As the philosopher Tonino Griffero suggests:

> One might wonder ... what the criteria of identity and identifiability of atmospheres are, ... whether they constitute a semantic or de dicto vagueness (the atmospheric description designates a given situation in a given way) or instead, as we like to think, a metaphysical or de re vagueness (the atmospheric description designates a vague entity in a precise way), analogous to that attributable to many other quasi-things, such as colours, shadows etc.[19]

Explored through the lens of aurality and atmosphere, mapping and notating opens to an oceanic experimentation of chance, indeterminacy, change and transformation. This tension is for geographer J. Wylie the most "accurate" definition of landscape: "Landscape isn't either objective or subjective; it's precisely an intertwining, a simultaneous gathering and unfurling, through which versions of self and world emerge."[20] Challenging established conventions of formatting, mapping the spatio-temporal realities in which we are

[17] Edward S. Casey, *Representing Place: Landscape Painting and Maps* (London: University of Minnesota Press, 2002), 153.
[18] Gernot Böhme, "Atmosphere as the Fundamental Concept of a New Aesthetics," *Thesis Eleven* 36, no. 1 (1993): 113–26.
[19] Tonino Griffero, *Atmospheres: Aesthetics of Emotional Spaces* (Surrey: Ashgate, 2014), 12.
[20] Peter Merriman et al., "Landscape, Mobility, Practice," *Social & Cultural Geography* 9, no. 2 (2008): 203.

involved is therefore a matter of grasping moments of this organic embodied topography that are difficultly captured through established representational constructs that are informed by instrumentality and long-held historical conventions.

The analogy between musical notation and mapping is useful in questioning the latter as the liminal zone between format and medium. Difficult to transpose, reality calls for a non-linear understanding of atmospheric translations that reminds us of the musical scores. Minimalist composers such as Arvo Pärt and John Cage, sought to achieve this through compositional methods (*tintinnabulli* and charter techniques respectively) or experimental notation, have sought to performatively express ambient events. Relating human attunement to sonic atmospheres, Gernot Böhme suggests two different ways of listening.[21] The first refers to the idea of "listening as such", the second addresses our "listening to" an acoustic event coming from a specific source (and hence more related to its tectonic and mathematically abstracted realisation). In "listening as such," the individual is invited to keep silent, opening up to the surroundings. The individual falls into "a listening which does not leap over ... sounds to the sources where they might stem from, listeners will sense ... sounds as modification of their own space of being. Human beings who listen in this way are dangerously open: they release themselves into the world and can therefore be struck by acoustic events."[22]

Following Böhme's argument, a *scoring as such* challenges the rules of cartographic formatting and traditional methods of site analysis, allowing for liquid qualities to be expressed through iterational and open-ended representational schemes/models. As in the case of the indeterminate interrelation of 22 drawings in Cage's *Fontana Mix* (1958), a *scoring as such* opens a field of 'transparency' in which different performers and listeners reinvent and remix a musical piece made up of the same sonic components. The paper, or the *drawing surface,* becomes the canvas upon which diverse pieces are scored according to chance operations. In this way, the map can become a kind of window. It allows its interpreter to unfocus his or her attention and read through the piece, equally accepting any datum, either intentionally expressed or unintentionally determined or experienced. This kind of

[21] Gernot Böhme, "Acoustic Atmospheres. A Contribution to the Study of Ecological Aesthetics," *Soundscape: The Journal of Acoustic Ecology* 1, no. 1 (2000): 18.
[22] Ibid.

mapping follows an "aleatoric" format that, according to architectural theoretician Yeoryia Manolopoulou, is always open to change.[23] It is a matter of openness to others that allows an aleatoric transposition to produce something new that remains unpredictable in a liquid and organic realisation of space through the passage of time. In this sense, mapping can be seen as a form of questioning, a hermeneutical approach that never leads to a clear answer but keeps generating questions. This can be found, for example, in the urban strolling techniques of the Situationist International in the late 1950s, a time during which John Cage was also experimenting with notions of emptiness, active chance and indeterminacy. Mapping is therefore an expression of the juxtaposition between the absence of space and the fullness of place. Wylie famously argues:

> I think space still speaks of emptiness, absence, interval. The stillness and silence of juxtaposition. Place by contrast, and even despite all the attempts to think it differently, relationally, globally, is always already too full, too full of itself and the others: a whole congregation; everybody present. But I think the landscape works precisely amidst and through both of them: presence/absence. Landscape sits precisely on this tipping-point, both joining and dividing. It tears things apart, and maybe even sometimes threads them together again.[24]

This kind of mapping cannot be framed in conventional formats, but should start and end at the co-emergence of the voicing or expressing of its data, which keeps changing through time – an oceanic voicing of moments that are happening, or have just happened. In a similar way, the image at the beginning of this section depicts a drawing's attempt to grasp a moment; an oceanic landscape of silence through a design methodology that is based on chance and stillness techniques informed by the aforementioned composers. The image is already "formatting" the topography in a visual way, failing, as a two-dimensional representation, to mediate its ever-changing liquidity, and rejecting all hints of representational accuracy.

[23] Yeoryia Manolopoulou, *Architectures of Chance* (Surrey: Ashgate, 2013), 193–220.
[24] Merriman et al., "Landscape, Mobility, Practice," 203.

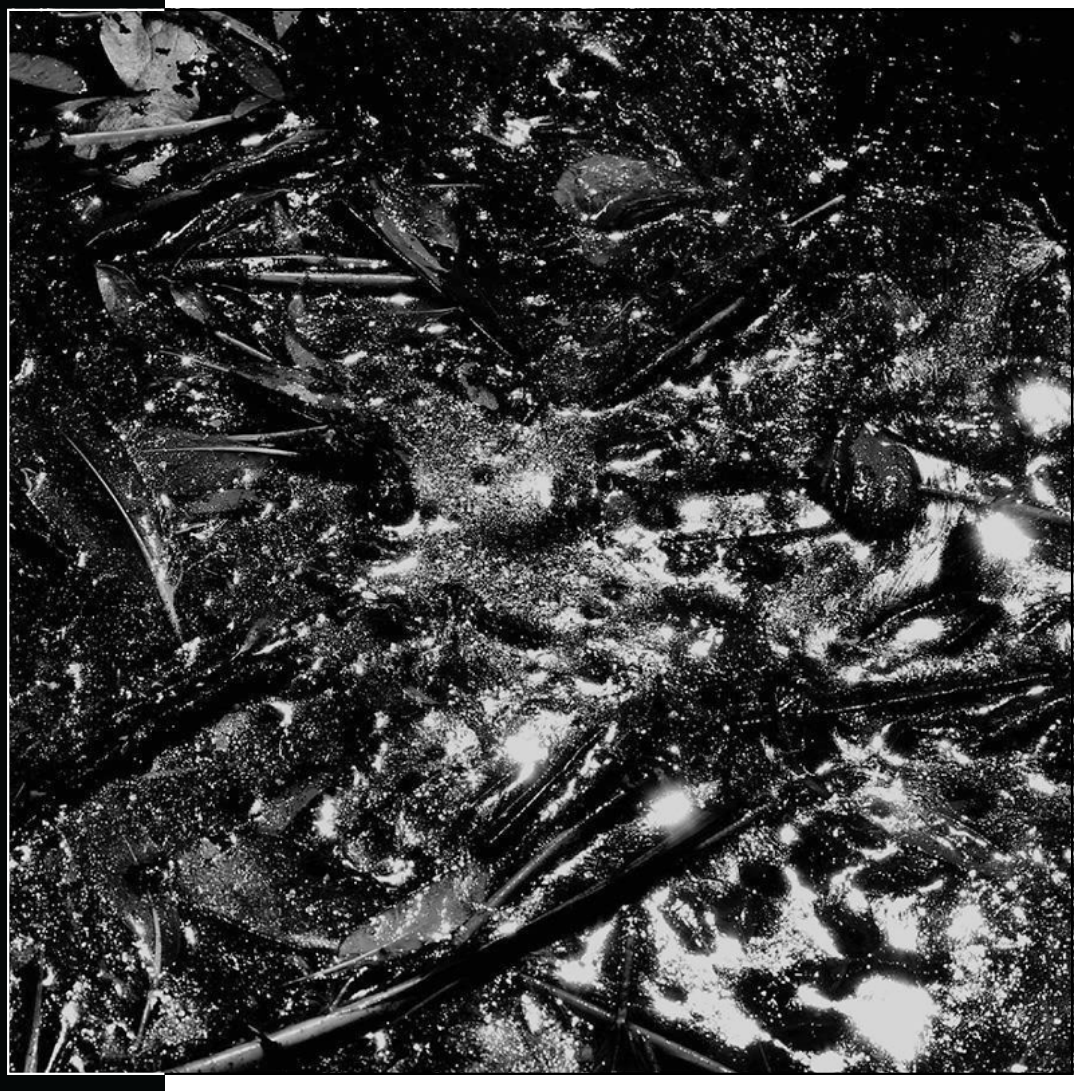


Figure 4:
Oceanic Practices.
Rolf Hughes.

Oceanic Practices
Rolf Hughes

We should not connive in the construction of our own abject formats, the surface currents we generate, running a ruler over depth and flow while thoughts flit haphazardly from rock to sky then plunge abruptly towards uncharted oceanic depths. Our lungs, once entwined, are vulnerable to incursions of seawater, which is the source of our peerless intuition, as well as our bottomless rage.

The ocean harbours ingrown volcanoes once known as the island's multiple eyes, but today hollowed and lacklustre. Occasionally, in their manifold furrows, the explorer may glimpse flashes of defiance.

I bought a strong cage and poured in the typing pool, howling like banshees. Today I lower this into the saltwater lagoon. Mounds of swollen flesh slowly ripple, then part as sunken eyes survey their new home. I toss live rabbits and hens which they shred in seconds, gobbling guts and bones alike.

You lunge at me whenever I approach, sending showers of sparks from the iron bars. To have unloosed your soft skin, pressed my lips to your heat until rising subsides in delight, served choice meats from calfskin platters, hands encased in the finest, blood-mottled gloves – all this counts for nothing in the inferno of fury you have currently brought yourself to.

And so I wait, clinging to a rock gnawed by the ocean, drawing light and energy landscapes – my face in your wild Medusa hair, inhaling its sulphurous musk, ruptured stars – folding a trick back into itself, a perfectly purposeful accident, a ring dropped into a lagoon to summon crustaceans.

Here they come, the billion white-lipped barnacles, sucking mutely on effervescent salt blooms.

RACHEL ARMSTRONG
SIMONE FERRACINA
CHRISTOS KAKALIS
ROLF HUGHES

> What is its medium, this glorious siphonophore – its manifold diversity, microbial alchemy, squirming through plasma landscapes, water islands where one can live by choosing flexibility over strength; by writing liquid naming rituals in water, subjecting the metaphors of the machine to saline jaws until they rust-crumble, diffusing orange cloud-showers of iron nutrients?
>
> Is it the back end of something becoming the front end of something else? Cambrian explosion? Origin of life as stinking pantomime horse?
>
> Or should we prefer a middle to fronts and ends –
> Liquid city: sluicing
> Back and forth, slice and dice Material silence, science Tabula rasa, thrumming...

*

Against coherence and causality, the bounded and the rational, *oceanic practices* invite us to yoke together seemingly disparate components to bring forth hitherto latent potentialities. Discourses of identity, gender, genre, disciplinarity, arising from narratives of evolution, science and progress, have framed what passes for criticality in the modern period; *oceanic practices* instead propose vibrant sites of experimentation where categories and certainties are separated and whirled together in new, provisional assemblages. Experimental ecologies within a nascent *ecocene* suggest that the nature of life itself may be choreographed into existence through rethinking interactions between bodies, spaces, soils and the many potential relations between them. Revisiting pre-modern forms of acquiring knowledge, unafraid of scrying, augury, magic and witchcraft, developing concepts and prototypes, *oceanic practices* explore what a third millennial experimental research laboratory – wet, messy, magical and dripping – might involve.

How does one *evaluate* such oceanic (or emergent) practices? By developing assessment apparatuses (languages, materials, methods and instruments) i.e. working prototypes shaped by living processes – choreographies of bodies and spaces in

which "epistemic things" appear but are never fully demystified or "solved." The goal is neither explanation nor paraphrase (i.e. the *context of justification*), but rather inducing experiences from which moments of enchantment and insight appear (i.e. the *context of discovery*).[25] This is an ongoing conversation where the modes of living, tools of assessment, bodies, communities and the materials themselves relate through constant flux. The term *oceanic practices* is used to denote an exploration of our relationship to our materials within a larger story of nature. Such practices are multiple, hybrid, transdisciplinary. By liberating the *context of discovery* in this way, in place of theories and mimetic representations emerge *new practices* and *epistemic things*. These are not valued in terms of *truth* and/or *error*, but rather as *strategies* that promote *generative diversity*, *asymmetry*, and *disequilibrium*.

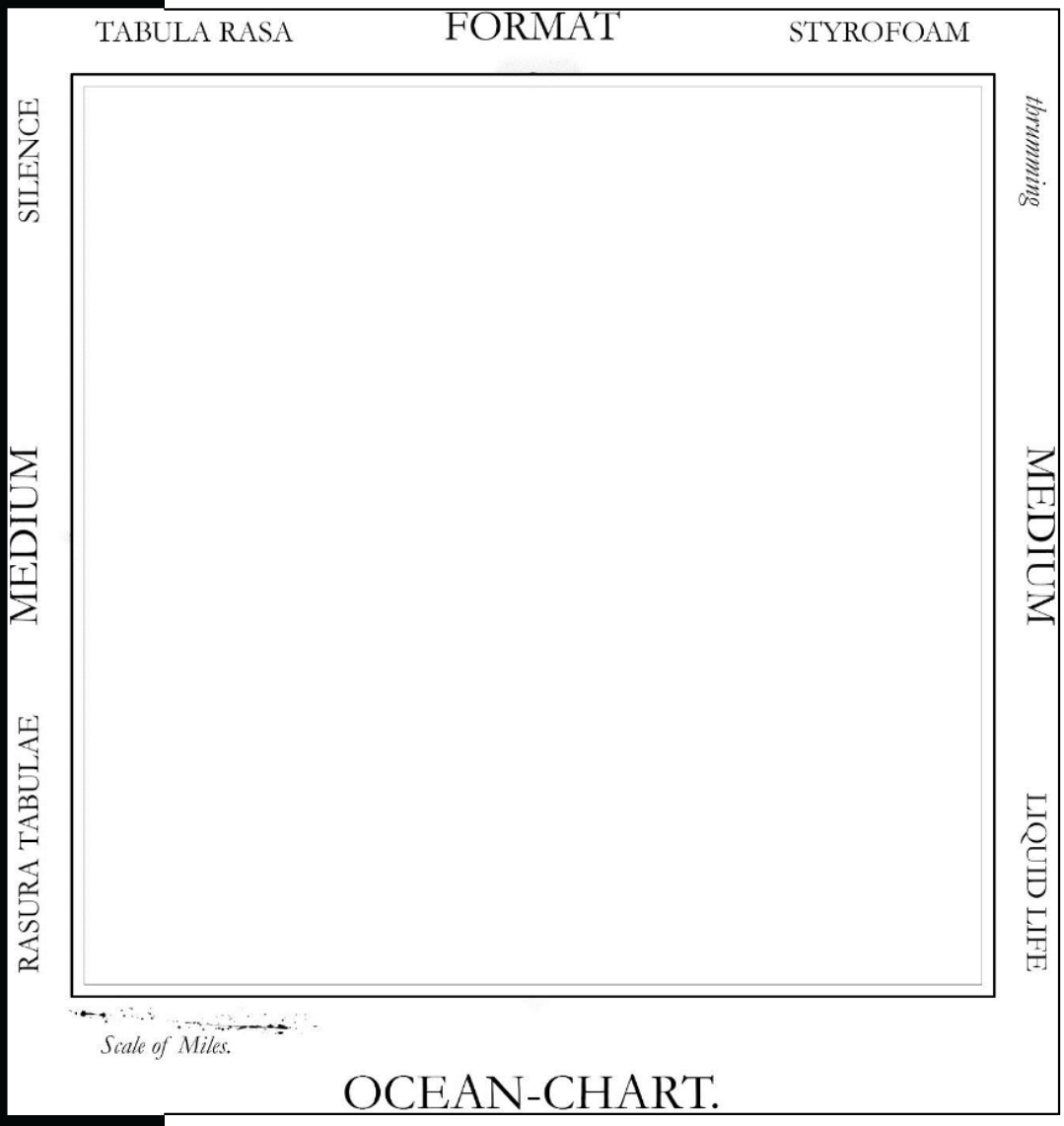
Effusive methods cherish anomalies. For example, consciousness makes us aware of non-linear matter which may not be aware (of) itself. Soils and oceans, all that is too ephemeral (*consciousness* itself) to be matter or format, all that is materially *unassuming*. Rachel Armstrong writes "radiation interacts with matter, is created by matter, can create matter and is emitted by matter but is not actually matter. Radiation is massless and takes up so little volume that it is just too ephemeral to 'be' matter."[26]

> Our oceanic tools are the *paradoxical* and the *unquiet* – disturbances that suck in and throw out energy.
>
> Strategies of ill-disciplined organisation that make life simultaneously possible and impossible, which is perhaps one route to the ecstatic.
>
> Consciousness reveals to us dissipative voids alongside a capacity to navigate in the dark. And so, *shaping* – despite ourselves. Life will have life.

[25] The distinction is made by Hans-Jörg Rheinberger, director of the Max Planck Institute for the History of Science in Berlin, and cited by Henk Borgdorff in Henk Borgdorff, "Artistic Practices and Epistemic Things," in *Experimental Systems: Future Knowledge in Artistic Research*, ed. Michael Schwab (Leuven: Leuven University Press, 2013), 113.
[26] Rachel Armstrong, *Star Ark: A Living, Self-Sustaining Worldship* (Chichester: Springer/Praxis, 2016), 36.

RACHEL ARMSTRONG
SIMONE FERRACINA
CHRISTOS KAKALIS
ROLF HUGHES

Notating Not Knowing: The Oceanic Challenge to Format and Medium



REFERENCES

Agamben, Giorgio, and Daniel Heller-Roazen. *Potentialities: Collected Essays in Philosophy*. Stanford, California: Stanford University Press, 1999.

Aristotle. "De Anima." Translated by W.S. Hett. In *Aristotle in Twenty-Three Volumes*. Cambridge, Mass: Harvard University Press, 1986.

Armstrong, Rachel. *Soft Living Architecture: An Alternative View of Bio-Informed Practice*. London: Bloomsbury, 2018.

———. *Star Ark: A Living, Self-Sustaining Worldship*. Chichester: Springer/Praxis, 2016.

———. *Vibrant Architecture: Matter as a Codesigner of Living Structures*. Berlin: Degruyter Open, 2015.

Borgdorff, Henk. "Artistic Practices and Epistemic Things." In *Experimental Systems: Future Knowledge in Artistic Research*, edited by Michael Schwab, 184–99. Leuven: Leuven University Press, 2013.

Böhme, Gernot. "Acoustic Atmospheres. A Contribution to the Study of Ecological Aesthetics." *Soundscape: The Journal of Acoustic Ecology* 1, no. 1 (2000): 14–18.

———. "Atmosphere as the Fundamental Concept of a New Aesthetics." *Thesis Eleven* 36, no. 1 (1993): 113–26.

Casey, Edward S. *Representing Place: Landscape Painting and Maps*. London: University of Minnesota Press, 2002.

Douglas, Mary. *Purity and Danger: An Analysis of the Concepts of Pollution and Taboo* New York: Pantheon, 1966.

Griffero, Tonino. *Atmospheres: Aesthetics of Emotional Spaces*. Surrey: Ashgate, 2014.

Lee, Matt. *Oceanic Ontology and Problematic Thought*. NOOK Book/Barnes and Noble, 20 April 2016. http://www.barnesandnoble.com/w/oceanic-ontology-and-problemat-ic-thought-matt-lee/1105805765.

Library, British. "The Thinking Machine: W Ross Ashy and the Homeostat." Accessed 7 June, 2017, http://blogs.bl.uk/science/2016/04/the-thinking-machine.html.

Manolopoulou, Yeoryia. *Architectures of Chance*. Surrey: Ashgate, 2013.

McLuhan, Marshall. *Understanding Media: The Extensions of Man*. Cambridge: MIT Press, 1994 [1964].

Merriman, Peter, George Revill, Tim Cresswell, Hayden Lorimer, David Matless, Gillian Rose, and John Wylie. "Landscape, Mobility, Practice." *Social & Cultural Geography* 9, no. 2 (2008): 191–212.

Prigogine, Ilya. *The End of Certainty: Time, Chaos and the New Laws of Nature* New York: The Free Press, 1997.

Steinberg, Philip, and Kimberley Peters. "Wet Ontologies, Fluid Spaces: Giving Depth to Volume Through Oceanic Thinking." *Environment & Planning D. Society & Space* 33 (2015): 247–64.

Stengers, Isabelle. "God's Heart and the Stuff of Life." *Pli* 9 (2000): 86–118.

von Bertalanffy, Ludwig. *Modern Theories of Development: An Introduction to Theoretical Biology*. Oxford: Oxford University Press, 1933.

Whiteley, Nigel. *Reyner Banham: Historian of the Immediate Future*. London: MIT Press, 2002.