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## On the Shore: Thinking Water at a Prospective Mining Site in Northern Norway

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### ABSTRACT

Drawing on material from a projected copper mine development in northern Norway, the text explores and contrasts several ways in which water functions as a local “theory machine” to model, reflect, organize, intervene into, and think through relations. Working back from specific examples, it identifies three locally important modes for thinking (with) water: water as a constitutive metaphor, structuring particular ontologies of the social; water as a normative diagram, organizing potential future formations; and water as a kind of boundary, antagonistic (potentially) to the spatial logics of the capitalist resource extraction project. Situating these three “theory machines” of water within the current resource boom in northern Scandinavia, the text examines their potential valence—as figures for thinking through politics, sociality, and relations (human and otherwise) in an age defined, increasingly, by ecological upheavals.

### ARTICLE HISTORY

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Capitalism; mining; representation; water

This article explores a series of water representations I encountered during preliminary fieldwork at the site of a prospective coastal copper-mining project in Finnmark, the northernmost regional district of Norway. The argument is based on interviews, conversations, participant observation, media analysis, and literature reviews conducted, in 2013 and 2014, as part of a larger project that examines the emergence of “sacrifice zones” in the context of the new Arctic mining boom (Estonian Research Council, grant PUT30). As of this writing, the project is still at a relatively early stage; reflecting this, the argument unfolds as a combination of ethnographic vignettes and theoretical analysis that places this material in dialogue with the other contributions to the “Thinking Relations Through Water” special issue. More broadly, the text positions itself as a contribution to the study of resource imaginaries (Ferry and Limbert 2008) and of how these articulate with differential imaginaries of the future as an ethnographic site (Rosenberg and Harding 2005).

The empirical background to the case is easily summarized. Nussir AS is a private company that aims to reactivate and expand an old mining facility near the village of Kvalsund, on the shore of Repparfjord.<sup>1</sup> The latter is at the head of a protected national salmon river, home to long-standing fisheries traditions, as well as a spawning ground and a key site in the local migration system for a number of fish species, including particularly cod. The sensitive location of the mine makes the issue of waste disposal one of the central controversies surrounding the project. As they stand, plans for the mine involve depositing

approximately 2 million metric tons of mining waste—including crushed ore, residual metals, and a range of industrial chemicals—into the fjord every year, initially for a period of 15 years. The projected impacts of this massive disposal are contested, varying from “some damage”—according to the company hired in by Nussir to perform the impact assessment—to devastation, up to and including catastrophic loss of life in the fjord and the dissemination of toxic materials into the wider regional ecosystems (and food chains) of the Barents sea. Norway is one of a small handful of countries in the world that permit tailings disposal in coastal waters, and the only country currently planning to open new deposits of this type.

Not surprisingly, water relations—both relations mediated by water, and relations to water itself—are very much to the fore in discussions about Nussir. Local residents, activists, fishers, politicians, scientists, journalists, entrepreneurs, and planners problematize the waters of Repparfjord continuously, framing and reframing them in an ongoing play of moral, scientific, social, and economic arguments. The local pertinence of water articulates strongly with issues that surface at the national, regional, continental, and global scales. In a present increasingly marked and organized by catastrophic near-futures, local waters refract issues (and waters) from elsewhere: from the depletion of Atlantic fish stocks, to the poisoned rivers of tar-sands Alberta, to the fragile brand value of “purity” for Norwegian seafoods in the global marketplace, to the world oceans themselves, increasingly susceptible and exposed—to oil and toxic spills, radioactive contamination, acidification, and molecular plastics and dioxins bioaccumulating in the colossal trash vortexes of the Atlantic and the Pacific (e.g., Decker 2014). Advocates of caution, at least, take the waters of Repparfjord as a matter—and object—of serious, urgent, and translocal concern: a substance with emergent, uncertain, and indeterminate vulnerabilities.

For all the material concern it transports, however, water is also more than a material substance—it can also serve as something like a “theory machine” (Helmreich 2011), a kind of “natural symbol” (Douglas 1970) that prompts elaboration, rooting significance and offering itself as a generative figure of thought, language, and (re)description (Strang 2004; Chen, MacLeod, and Neimanis 2013). Drawing on this idea, I examine here some of the ways in which water embeds itself in the language and imaginaries that surround the Nussir project, focusing particularly on three tropes or figurations of water: “ripple,” “cycle,” and “depth.” Despite this focus, however, the following is not a linguistic analysis as such; my premise is, rather, that language and concepts operate with constitutive, world-shaping power—making and remaking the world in ways that tend, once in place, to appear given, self-evident, beyond question, or invisible. Engaging phenomena such as resource capitalism ethnographically therefore requires, to my mind, a sustained effort not just to question and denaturalize “their” language, but also to render it in its ontological functioning (Stengers and Pignarre 2011): drawing out the specific ways in which terms like “resources” can act both in the world and on it—say, by producing reality as composed of certain entities rather than others, then establishing some of these entities as destructible, transformable, or interchangeable (in ways that almost invariably serve enfranchised interests). In other words, I view resource capitalism as an ontological project, and the critical deconstruction of its imaginaries<sup>2</sup> as a form of political practice, with local relevance—a key to the otherwise-possible, opening for the reinvention of the given as contingent, the absolute as provisional.

I approach the watery “theory machines” of Repparfjord here via the intersection of two devices; the first of these is *metaphor*. Languages such as English and Norwegian abound with watery images that describe objects, relations, and phenomena metaphorically: Relations and identities become “fluid,” assets may be “liquid,” wealth “trickles down,” innovations (and feminisms) come in “waves,” bodies and commodities “flow,” voices are “drowned,” and so on. Liquid imagery and metaphors are common to the point of invisibility—and often they do disappear, precisely through this “naturalness” that hides them in plain sight.<sup>3</sup> Water metaphors are ubiquitous to the Nussir case—from the projected “flows” of capital and workers that will enrich the region, to widespread idioms and proverbs (“if it rains on the priest, it will drip on the clerk”) that conceptualize the distribution of wealth as a liquid substance. I focus on some specific examples over the next sections. In addition to metaphor, I am also interested in the role of diagrams—as one of the key devices that enable the waters of Repparfjord to circulate in a figurative form: as the flow rate schematics, particle distribution models, and marine trophic level ladders that support commercial impact assessments, scientific critiques, and activist counterclaims alike. In a straightforward sense, such diagrams are devices that operate through formalization, reduction, and simplification. They encode information, allowing it to move between sites; in the process, they also structure thought, organize relations, and reshape reality (Latour 1987). At the same time, as representations, their meaning and effects are also inherently underdetermined: They must be interpreted, and are therefore bound up with the contexts they move between.

In anthropology, of course, the notion of context functions to ground claims of disciplinary particularity, shorthanding the “value added” provided by anthropology (Dilley 1999, 2002). One important understanding of anthropological work is precisely that it involves reframing, adding contexts to supplement those already in play (Strathern 1995). Along related lines, the idea of multiplying contexts, and rendering their relations and mutual interferences visible, also captures a particular understanding of anthropology-as-critique: to collect suppressed or minoritarian “perspectives” and bring them forward—into policy, public debate, or reality. This in turn links back to a less straightforward understanding of the diagram, as a schematic not of reality but of potential. In *A Thousand Plateaus*, Deleuze and Guattari indicate that “the diagrammatic or abstract machine does not function to represent, even something real, but rather constructs a real that is yet to come, a new type of reality” (1987, 142). Thus conceptualized, the idea of the diagram can shift the task of analysis—from identifying what present realities a diagram represents and circulates, to naming (and perhaps also manifesting) the unrealized future potentialities it contains. In line with Stengers’s articulation of pragmatics as a “care of the possible” (Stengers and Bordeleau 2011), the critical challenge then becomes to sort these latent realities and, potentially, to ensure that the ones that matter—for whatever reason, in whatever way—are brought forward. This is akin to the challenge posed by water itself, at the present moment: to rethink, make visible, and bring forward those possibilities—political, ontological, aesthetic, existential—that are foreclosed in objectifying imaginaries of water as “resource” or “object” or “substance” (Linton 2010; Schmidt 2014).

Metaphors and diagrams both figure centrally in the unfolding story of Nussir as a project that in important ways has yet to materialize: As I write this, assuming the Ministry of Climate and Environment grants a permit, the Nussir project is scheduled to start operations no earlier than 2017. In the shadow of this “virtual” future, oriented by it and toward

it, the following is an attempt to think about “thinking relationships through water” (Krause and Strang 2016)—exploring some of the ways in which water makes itself available for thinking relations, society and the social, community, time, life and coexistence in a particular setting. Water is, I suggest, already profoundly implicated in the various imaginaries that constitute the Nussir project, shaping the form, scope, and substance of relations. To describe the manner of this implication will, perhaps, help gain some critical purchase—not just on the present but also, hopefully, on the futures that it brings into being.

## Ripples

For at least two centuries, the north of Norway has served as a sort of supplement and periphery in Norwegian imaginaries of the national (Niemi 2007). Stereotypes of the northerner abound, as the “underdeveloped” denizen of a lagging, backward, and uncivilized periphery (e.g., Edvardsen 1997; Hellstad 2010). Set against a long history of pejorative colonial representation, the sudden promise of wealth—through oil, gas, minerals, extractive industries—can appear to some also as the promise of entering as equals on the national scene, of shedding the burden of backwardness, compensating for centuries of embarrassment and dependence (imagined or otherwise) on the centers of wealth and governance in the urban south. Across Finnmark, local mobilization around political discourses of job creation, modernization, affluence, and wealth attest to the enthusiasm with which this project of transformative “catching up” is being embraced. The undertaking is not without objectors, but the political representatives of Kvalsund—a small coastal community of some 1000 souls situated on the southern side of the Repparfjord, a few miles from the projected Nussir development—are, for the most part, not among them.

Here, as elsewhere, the promise of transformative change through “development” functions by means of particular representations of “the social,” and of the mechanisms by which things will improve. Following an application under the 2011 competition “Local Social Development in the Districts” [*Lokal Samfunnsutvikling i Kommunene*], the municipality of Kvalsund was allocated 2.25 M NOK—approximately US\$375,000—for a “ripple effect project” [*ringvirkningsprosjekt*], to maximize and amplify the local effects of the Nussir development. Interestingly, these funds were allocated a year or so before the regulatory plans for the Nussir project received initial council approval, in May 2012 (“En gledens dag for Kvalsund,” *NRK Sapmi*, May 30, 2011); the position of manager for the ripple effect project was advertised (twice) with deadlines in 2011. The funding application document for the project (Kvalsund Kommune 2012) laid out its objectives in surprisingly clear detail: The population of Kvalsund was to increase by 2% every year, starting with the second year of the project. The number of inhabitants between 20 and 34 years was to increase by 10% over the course of the project; by the end of the project, the proportion of female inhabitants in Kvalsund would also have increased by 10%. The local councils of Kvalsund, Hammerfest, Alta, and Måsøy were to establish a regional task force, to ensure cooperation around the establishment of Nussir and to act as a formal arena for cooperation between the company and local authorities. Other goals of the project included building local capacity in service provision, enabling new businesses to spring up around the Nussir project, and—somewhat recursively—increasing regional awareness of how government initiatives could enhance the local effects and synergies of future industrial

development: A ripple effect of the ripple effect project would be to amplify future ripple effects.

The Kvalsund project is only one of many similar initiatives at the regional and national levels, associated particularly with the development of extractive industries in the framework of the ongoing “northern regions initiative” [*Nordområdesatsingen*]*—*a national cross-sector policy drive to stimulate growth and development in the northern regions that took shape in the early 2000s and was formally launched in 2006, under the previous “red-green” coalition government (Angeland, Ekeland, and Selle 2010). The term *ringvirkninger* recurs across these initiatives, at all levels: from the vocabulary of national strategy documents, to town hall meetings in remote fishing communities in Finnmark. One of the more interesting functions of the concept is as a formula that explains and justifies projections of local “growth” and economic benefits—despite limited or nonexistent income from direct sources such as mineral extraction taxes. Weighed against the risk of disincentivizing investment, the projected social and economic benefits “rippling” out from large-scale resource extraction operations will (supposedly) far outweigh any benefits that would have accrued from direct taxation—or, in another register of value, from restrictive environmental protections. The algebra of these arguments is often problematic in its own right—but uncoupled even from numbers, rhetorical invocations of the “ripple effect” frequently resemble nothing so much as a form of magical thinking (cf. Appadurai 2012). The powerful aporias involved in such discourses of expectation make it doubly relevant to clarify how the theory machine of “ripples” actually functions to think through, organize, and restructure relations.

Literally, *ringvirkninger* translates from Norwegian into “circle effects”—but the most common translation is “ripple effects,” which also captures the everyday connotations of the term, of concentric circular waves radiating out across a liquid surface from a central point of impact. The term is a commonplace in 20th-century Norwegian vocabularies of the social (e.g., Nilssen et al. 2012). As a child, growing up in rural Norway, I remember poring over pedagogic diagrams of the ripple effect in secondary-school textbooks about industrialization. In the middle of the page, say, there would be a stylized shipyard; arranged around it, the various industries that might benefit from the presence of the ship-yard; in the next circle out, the industries that might benefit from the benefit to the industries in the second circle; and so on. The metaphor does straightforward work: Traveling outward from a central point, the ripple reifies the medium it travels across as horizontal extension, as the smooth surface of a liquid body—normalizing a particular understanding of the social as a medium of causal effects radiating across a flat plane, modified by “distance.” The “impact” of an industrial enterprise is rendered intelligible in a concrete image, as a heavy object landing in water. In the case of Repparfjord, the relevant “surface” is the local community, framed within wider regional and national economies—and the structure of the image foregrounds powerfully the Nussir project, as a discrete singular “object” impacting as if from outside.

The “ripple effect” offers a persuasive and convenient image of change—a map charting growth, profit, and development, rendering the future in the form of benefits radiating outward through a social body. In this sense it also operates as a diagram in another sense—one akin to the sense that Foucault captured, when he described the panopticon as a “diagram of a mechanism of power reduced to its ideal form” (Foucault 1995, 205). Simply, the ripple effect captures a particular relation between forces, rendered in their abstract

essentials as the elementary diagram of a process or event that “may and must be detached from any specific use” (Foucault 1995, 205). The model is simultaneously descriptive and normative: This is how innovation and economic growth function, and this is how they should function. As per the Kvalsund “ripple effect project,” the ripple can be amplified; the question is how.

The model offers a naturalized description of the world, and of how things will unfold within it—but the “obviousness” of that description only highlights the degree to which the ripple effect is already operating in a world, or a context, understood as coextensive with the world that the diagram constructs. One might say the ripple effect functions here as an “abstract machine” of capitalist ontology (Deleuze and Guattari 1987): a traveling device that builds and rebuilds the world as it needs to (already) exist for the purposes of capital.

Diagrams are unruly, however; they move around, shifting between contexts, subject to interpretation. In Repparfjord, the ripple metaphor spirals back to its referent and the figurative ripples of profit compete for attention with other ripples. The social and economic “ripple effects” of the Nussir project will arise through—and concurrent with—the seismic physical shock waves from millions of tons of gravel and toxic waste being dumped into the fjord, annually, into the indeterminate future. Ripples will propagate unequally, in different temporal patterns—across the surface of Repparfjord itself, as they do across other, more figurative spaces. The diagram of the ripple can thus be unmoored and redeployed. A hearing response from one of the local reindeer herding districts, for example (Reinbeitedistrikt 22 Fiettar 2011), describes the adverse environmental effects of the Nussir project as “ripple effects across the entire region”: evoking the ripple not as the concentric waves of profit and development envisaged by local planners, but rather as a series of concatenated and unpredictable material disruptions that will radiate out into the delicate Arctic ecosystem of the fjord and its environs—impacting the modes of life, human and nonhuman, that constitute it. Roads and buildings will be built, reindeer pastures fragmented; there will be traffic, heavy machines, new infrastructure, noise, dust and nanoparticles, disruptions of marine life and life on land; traditional livelihoods that have persisted for centuries will be rendered unviable, exchanged for intensive activities that promise great but short-lived profit margins. Particulate copper, heavy metals, and industrial toxins will travel out from the initial site, destroying life, climbing up the food-chains of the Barents Sea and into the imagination of consumers attracted to the “clean” brand of Norwegian sea-food.

## Cycles

More than just a descriptive social theory, the ripple effect functions—at least in the capitalist permutation I have focused on—as a normative blueprint, reorganizing social realities to accord with a particular imaginary of how the world works, how it should work, and how it should be made to work. The water itself remains implicit, an absent referent erased in the naturalized metaphor. Other local water figures are doing analogous work, but by foregrounding (rather than effacing) the materiality of water; as an example of this, I focus here on the hydrological cycle.

Move forward to June 2013, a few hundred kilometers south from Kvalsund. On short notice, I have hitched a ride across the tundra heading east, from Kautokeino to Karasjok, with the head of a local chapter of a national environmentalist organization, to attend a meeting of parties opposed to the current intensification of mining activities in the area.

The immediate catalyst for the meeting is a recent escalation of activities at Nussir and another prospective mining site in the region: Biedjovaggi, a gold mine located in the heart of a reindeer summer pasture in the inlands, near Kautokeino. The meeting starts with presentations by various parties involved in protests—including Torulf Olsen, a prominent opponent of the Nussir project. Toward the end of his presentation, Olsen throws in a slide of the hydrological cycle, mapped onto the biogeography of Finnmark: a diagrammatic sketch of water as it flows through and intersects the various biomes in the area, pouring down over the inland plateaus and down to the coast, into the sea, where it evaporates and is blown back inland, for another cycle. His message at this point is clear: “Water connects us, we are all in this together.” Toxins, pollution, can threaten the hydrological chain at any point, and disruptive repercussions from the Nussir project will be felt by all whom the waters of Repparfjord connect, across their multiple phase states.

The message has specific local resonance. Finnmark has a rich and fractured history, sedimented in the political landscape through centuries of ethnic conflict and divisive resource politics, colonialism and institutionalized racism, identity stigma and the forced “Norwegianization” of the indigenous Sami minority, language barriers and conflicts over land rights and territory, particularly those involving indigenous reindeer herders (Eidheim 1999; Reinert 2009). Tensions run just below the surface, threatening to flare up at any moment—say, if an inland reindeer from the local herding district turns up grazing in the wrong garden in Kvalsund, prompting a furious elderly neighbor to threaten it with a firearm from his porch at 3 in the morning. The conflicts are marked, the largely indigenous core herding areas of the inland are far from the “Norwegianized” settlements of the coast—more so than mere geography would indicate. The herders don’t speak to the villagers, villagers accuse herders of standing in the way of progress, everyone fights over land rights and usage rights and resource rights. Tensions are high.

Set against this backdrop of a fractured and divided social landscape, Olsen deployed the hydrological cycle as a figure of interconnection, through the qualitative material transformations of water. Fresh water runs into the sea and turns salty, evaporates, turns into a gas, moves around in its gaseous form, condenses, precipitates as fresh water. Water figured here as a restless substance, in continuous movement and transformation, simultaneously singular and not singular, identical and not identical with itself. The cycle differentiates and links the many forms of water—from clouds to rivers to the oceanic depths—rendering them all in a system of dynamic transformations between non-interchangeable states. In this sense, the diagram figures interconnection in a particular mode, as a sort of differentiated consubstantiality—organizing difference, in this case, around a shared physical vulnerability. Everyone here was connected, the various communities and groups could be brought together around a common concern, a threat that touched their shared life: from the herders whose reindeer descend to the edge of the water in summer, to flush out throat parasites with seawater, to the fishermen at sea, concerned about toxins in their fish and the international repercussions of mining waste for the reputation of Norwegian seafood.

Water flowed through and between—disregarding social fissures, oblivious to disjunctions instituted over centuries of colonial rule. As Olsen used it, the cycle presented a mode of “thinking relations through water” that foregrounded water as a figure of the political: a connectively differentiated substance, linking communities across their bounded edges, creating new political shapes. Its properties modeled a potential future-present community,



connecting actors and organizing them into a collective to the degree that a shared consensus takes hold around what it represents: “Water connects us.” The action of water in this form was thus twofold: the cycle made visible existing forms of interdependence, and through these interdependences it brought into being certain kinds of relation—alliances, community, joint resistance—that recognized and responded to them. The cycle was simultaneously a representation of the world as it is (geologically, hydrologically, biologically), and as it should be (politically): Like the ripple, it could be used to think relations—and also to create, organize, and consolidate them, according to particular ideas of what the world should look like. Emphasizing interconnection, the cycle created the political effect of a future-present community; maintaining differentiation—between phases, junctures, conditions—it specified the distinctness of the separate elements that composed it. Effectively, at the table in Karasjok, the cycle rendered the flowing, life-supporting function of water as the basis for a promissory ontology of the social, or the political—a diagram operating normatively, in the space of a “real that is yet to come” (Deleuze and Guattari 1987, 142).

Two local “machines,” two modes of using water to “think relations.” The ripple concretized the elusive “social” as a smooth unbounded surface, transmitting causality as effects into the indefinite distance; with this, it also opens these effects to specific modes of amplification. The cycle, on the other hand, rendered water as a pulsing cycle of interconnected transformations—using the granulated materiality of phase changes as the basis for a social yet to come, aligning political interests in a logic of interconnection. Both “machines” were diagrammatic, in different ways; both also functioned as metaphors, whose referential efficacy was contained in an abstracted parallelism (“innovation is a ripple”; “we are all connected”). The entities they rendered visible—society, the social, community, the political—are complex and abstract, unavailable to direct observation; much of their facticity comes about precisely through representation (Latour 2005). As much as both models described preexisting structures, in other words, they equally also gave them structure, using water to render them as factual and concrete, as real, in particular ways. Their inscriptions were choreographic, and world-structuring; causal determination flowed from sign to referent, as much as the other way.

## Depth

In a controversy as complex as the Nussir case—a dozen or more impact assessment and evaluation documents, hundreds of newspaper articles, thousands of pages of scientific analysis, tens of thousands of social media posts and comments—other kinds of diagrams also proliferate: mappings and countermappings of flow structures and tidal patterns, particle dispersion diagrams, food chains, fish migrations, cascade effects and productivity over time, the list goes on. Most of these diagrams function in a straightforwardly representational mode. Their object is the water of Repparfjord, rendered as knowable in its structure, its dynamics over time, its populations, its human uses, its geological history, its relation to other bodies of water on different scales, its vulnerabilities, and so on. Taken together, these diagrams showcase an array of modes for revealing, predicting, and thinking through relations: through the estimation of destructive anthropogenic potentials, primarily, but also by rendering visible the patterns of use, movement, and interaction—the relations between parts—that connect human, fish, seal, and plankton, tidal patterns and chemical reactions, geological processes and modes of economic production.

Most of these diagrams represent submarine phenomena, events, and processes—displaying them through thermal charts, flow diagrams, speed and direction for currents, trophic structures, habitat requirements for submarine life, and so on. With this they serve to render discernible the out-of-sight, the not-directly-visible—functioning as figurative “windows” on lives, processes, and habitats that lie on the “other side” of the water surface, phenomena that are not directly accessible to the air-breathing human body (Helmreich 2008). Structured by the genre conventions of impact assessment, I read these diagrams here as offering a third frame for “thinking relations through water”: not metaphorically or instrumentally but literally through water, through its surface as a physical medium—rendering visible (and thus “thinkable,” political) a range of concrete relations contained and concealed in the opacity of water itself. Operating on the waters as inaccessible depth in this way, constituting “windows” of a sort, these diagrams implicitly also render the surface of the waters as a particular kind of boundary. This boundary, in turn, functions in specific but oblique ways within the resource imaginaries of Repparfjord—specifically, I read it as bringing into question the political economy of depth, as this is constituted in the intersection of multiple “vertical resource environments” (de Rijke et al. 2016).

To illustrate what I mean by this, let me move out from Repparfjord itself to a linked site within my own multisited research imaginary. It is November 2013 and I am in Levi, northern Finland. The venue is FEM 2013, the ninth annual industry conference for Fennoscandian Exploration and Mining, and I am here pursuing a lead from Repparfjord: The chief executive officer (CEO) of Nussir AS is scheduled to speak here, at a panel for companies looking to attract investment, and I have come to see how he presents the Nussir case to his own industry and peers. As an industry conference and trade show—with a fairly high ticket price—the event attracts a broad demographic of businessmen, politicians, government officials, tourism operators, entrepreneurs, researchers, policy analysts, and journalists. An early round of presentations involves representatives from each of the Scandinavian countries pitching the benefits of their respective countries, as attractive business opportunities, to an audience hall full of potential investors. The Swedish and Norwegian delegates both emphasize issues such as predictability, solid infrastructures, low taxes, pro-mining governments, and a friendly regulatory environment. Breaking with the pattern, the Finnish minister gives a high-concept talk on the “Green Mining” model, a high-technology state investment strategy that aims to transform mining into an environmentally friendly, future-proof activity, located at the cutting edge of technological innovation. On the giant projector screen behind him, the presentation overruns with diagrams: Aerial spectrographic mapping techniques reconfigure the tellurian mantle as a flat vertical expanse, orthogonal to the laminar plane of the surface and luminous with hidden treasure. Here, the inaccessible depths are constituted as a new frontier, a beyond to be penetrated with powerful instruments: by men (nearly all speakers at the conference are men), armed with capital and tremendous machines. “This new conquest of the world,” the minister calls it.

“This new conquest of the world”: Suddenly, we are not in the realm of numbers or sober policy, not anymore—this is enchantment at work, making-with-words, the *poiesis* of territorial capitalism. The minister has shifted us, or shifted the world; either way, we are in a space of dreams now—and to follow him requires a matching move. Two floors below, the trade-show booths are a masculine playground of drill-core samples and colossal machines: Scattered leaflets parse the male sublime into announcements of “maximum

penetration” and “discover your inner hero”; drill manufacturers hand out portable first-aid kits at their stalls, vividly playing up the physical danger posed by their equipment. Far away, in the depths of the earth, manly bodies glisten in the imagined dark—toiling at the frontier, for the good of all, sacrificing their bodies in feats of solitary heroism. One booth hands out small rubber planets, to be crushed for stress relief by overworked executives. Trying to imagine myself in their shoes, I grab a few and walk out, in the snow, try what it feels like to crush them in my hand. The fist-sized balls are soft, and the pulse of crush and re-inflate, crush and re-inflate, is surprisingly satisfying—if not a little disconcerting.

Capital is a machine that creates outsides for itself, continuously rendering new spaces available for transformative value extraction; its limits are set by its ability to create such new spaces, to advance into. Its frontiers continuously open the world in new directions, marking out lines beyond which new spaces become available for the generation of surplus value—but invariably, the gesture that draws these spaces also generates their converse: spaces enacted as residual, abandoned, disposable, unseen. Revelations conceal as much as they reveal, after all—and here I am, at the heart of a machine that reveals the structure of the earth itself as a continuous succession of frontiers: phantasmagoric new spaces, enchanted by the promise of wealth, open and receptive to the outward movement of technology, progress, innovation. Here is the new future: luminous, ripe with wealth, yet to be conquered. Here too, hidden in plain sight, is its converse. Moving into the earthly depths, the terrestrial extraction machine frames the limit as a matter of what lies beyond, of how to get there, of what untold values there may be to extract. In this movement, the edge of the water, the “other” depth of Kvalsund, is also being rendered as a junk space, a non-space, a subsidiary depth to act as receptacle for the toxic surplus produced in the extraction of “surplus” value. Water and earth, the depths of Repparfjord and the depths of the earth: One harbors riches beyond promise, untold treasures awaiting extraction. The other is, well, for disposal—the unspoken “shadow” depth of a vertical resource imaginary. Both depths are intrinsic to the project of accelerating resource extraction, and to the spatial economies in play—but they are segregated, and one is rarely spoken of. Juxtaposed, they capture the double movement of territorial resource capitalism in its mode of expansion.

More often than not, the “invisible” mirror geography of profit is a cartography of sacrificial expropriation and damage (Scott 2010; Hedges and Sacco 2012). My suspicion—and the certainty of activists—is that in Repparfjord, the expendable shadow space of profit will be Repparfjord itself. Set against the luminous chthonic shapes projected on the screen in Levi, I take the diagrams of marine life and trophic systems in Repparfjord as populating—and counteracting—those disposable depths, rendering them instead as the sites of a complex, fragile, *and* valuable interdependency. Boundaries are not necessarily frontiers, after all; not always.

## Conclusion: Speculations

Water is a potent thing, a material-semiotic entity capable of structuring action, language, time and relations—quite as much it shapes the fate of species and individuals, or the scope of biotic life on earth. Drawing on material from a mining development in northern Norway, I have outlined here three distinct, locally active figurations of water—as ripple, cycle, and depth—and explored some of the ways these are used to “think

relationships”: specifically, relative to the capitalist imaginaries that underpin and structure the “official” narratives of the national resource extraction project. I have also pointed to the manner in which these “watery” devices traverse domains, shifting context and function with appropriately recursive fluidity: Activists reimagine community using scientific diagrams of interconnected phase change; reindeer herders appropriate the language of social planners, setting ecological ripples against economic ones; diagrams of aquatic depth mirror—and contest—the chthonic frontiers conjured in the spatial economy of extractive capitalism. In each case, specific material properties of water—say, the transmissivity of its planar surface, its multiple phase changes, its opacity to terrestrial life—are intrinsic to its operation as a “theory machine,” functioning in the space between language, materiality, and imagination. As I noted at the outset, such watery machines are also already embedded in the way social scientists “think relations,” in social ontologies of flows and trickling, waves and fluidity. Denaturalizing their transparency is one step toward understanding the worlds they bring into being and sustain, as well as the social and political work they do in specific contexts. It is also, I believe, a step toward thinking these worlds otherwise.

Like any project operating within the promissory logic of capitalist investment cycles, Nussir is a playground of the virtual, of the not-yet-real, of dreams and expectations, of seductive abstractions and overpowering metaphor. Spaces, trends, entities, and projections intersect, mingle, and interfere, continuously, at a feverish pace: Time, value, space, the social, the future, the political, the polity itself—“insiders” and “outsiders”—are in flux. The coming mine is a thing of dreams and fervent speculation, an almost-real that manifests but through a glass darkly. Whether in promises of wealth or threats of devastation, however, advocates and critics alike invoke the potential of this project on colossal scales, crafting a shared sense of something enormous that is on the cusp of happening, of being manifested. On all sides, interpretive efforts are vested into gaining hold or purchase on this “something,” to name it and (thus) control it. Whatever their footing, all parties—myself included—are invested in an effort to name what is happening, to define its contours and gain hold of the materializing future (Stengers and Pignarre 2011).

The contexts multiply, brought into play in articles and editorials, social media discussions, photographs, testimonies, by guest speakers at rallies and seminars: the strained geopolitics of the Arctic and its shifting ecology of powers; national concerns over resource dependence, national growth statistics, provision for developing tech sectors; the constitutional fabric of national laws and international treaties such as ILO 169 or the European Union (EU) water directive; state machineries co-opted by corporate interests through their commitment to financial models of growth. Is Kvalsund a periphery dependent on handouts and state aid, defined by centuries of underdevelopment, faced with the sudden promise of almost unthinkable wealth? Is it a future wasteland, falling prey to the same predatory resource capitalisms that have already laid waste to Appalachia, Alberta, Mongolia, Australia? Is it something else entirely? Among these interpretive frames, I want to interpolate here a context of my own: that of theory in an age of planetary crisis, and of ethnographic work conducted within—and hopefully, perhaps, at odds with—the ongoing escalation of that crisis (Cohen 2010; Rose and van Doren 2011).

Increasingly, representations of Earth figure the planet itself as a site—and figure—of profound crisis: a crowding sphere, wrapped in a thin breath of transforming air, hemorrhaging life. The climate shifts, threshold effects cascade unpredictably; thousands of species, known and unknown, are lost every year to the colossal escalation of human

presence brought about in the “Great Acceleration.” Habitability is becoming a planetary problem—and with this, a challenge to rethink, on shifting grounds, the conceptual inheritance of modernity and the Enlightenment project: ideas of existence and coexistence, of life, alterity, political significance; of what might count, and of who might count. The challenges posed by this context serve to reframe, again, the tropes and figures I have discussed here. Consider the ripple: The total extension of its plane is flat, homogeneous, the entities involved predetermined and bound by simple logics—impact, concatenation, amplification. The hydrological cycle, conversely, figures water as a mobile and self-transforming substance, differentiating itself again and again in a pulse of terrestrial life. It connects earthbound creatures, infusing them in a web of shared substance, permeated by metabolic interdependencies. Scientific diagrams of Repparfjord, finally, present the undifferentiated depths as a relation between parts: between beings and entities that live with the water, through the water, and in the water, beyond the surface. Here the waters form worlds hidden from view, milieus whose depths are alien (yet vital) to the life of human bodies (Helmreich 2009). Pitted against the feverish imaginaries that animate extractive capitalism, I wonder if these waters might perhaps help us rethink the problem of the limit, in a general form: rendering the sacrificial frontiers of capital expansion as boundaries, marked less by the fervor of acquisitive expansion than by a questioning hesitation—before the unknown, and before the life it may contain.

As one walks into Kvalsund along the main (and only) road, a string of wooden houses cluster by the edge of the water: all brightly painted, more or less identical, a legacy of the postwar reconstruction—when houses came in one of a dozen or so standard shapes, designed by well-intentioned southern architects. In one of these houses there lives a woman. She is a poet, and she lives there alone. She spends much of her time sitting on the covered terrace, smoking and watching. Her windows open on the breadth of the Repparfjord. She sits there, watching the birds flock around the fishing vessels, hatchlings stumble around in the tidal pools. She takes photographs over the seasons, collecting; she has interviewed many of the old fishermen, gathering stories of the sea and life at sea, place names, histories of life, memories of the war. Recently, she wrote a book about Kvalsund and the devastation wrought by the Germans at the end of the war: The village was razed, burned to the ground in the scorched-earth retreat that marked the end of the war (Palmer 2010). There is a cycle here, she tells me. Kvalsund was burned and it will be destroyed again, this time by the mining companies. From ruin to ruin, past and future devastations mirror each other across the surface of the present. The grief of this, she tells me, is breaking her heart.

As one sits on her terrace, watching seagulls glide across the smooth dark waters, Repparfjord presents itself as a world that only occasionally surfaces into the air: in the wake of a fish, a porpoise breaching the surface, the signal of seagulls flocking around a vessel, indicating a catch: a space of life caught in glimpses, never more than partially known. Lapping against the shore, the waters constitute a liminal zone, a space of coexistence—an intersection of worlds, vibrant with life. Close one eye, however, read only the figures, and that Repparfjord is gone: flattened, in the ceaseless rolling motion of a “wave” of expansion that leaves lifeworlds expended in its wake—ruined, exhausted, disposed. Some ethic of attentive coexistence might perhaps be mobilized to resist this, to bring Repparfjord itself to the table, into the polity as a living entity in its own right, enmeshed in relational webs of sustainment and facilitation. I overstep myself only a little, I think, if

I say the poet lives with these waters as a kind of friend: a cherished other, possessed of life in its own measure—and if the waters are alive, in some nontrivial sense (Krause and Strang 2013), then the task of analysis might shift, reorient itself toward that mode of life, toward describing it, giving it substance, allowing it to endure (Povinelli 2011). Who speaks for these waters, for her waters? “There is no spokesperson for the unicorn,” Stengers (2010, 5) laments—but in Repparfjord, the poet tells me, there is a mermaid. Stories have it she was a young girl once, lonely and heartbroken; the sea called to her and transformed her. The fish taught her to swim, seagulls taught her their calls. Some fishermen say they have seen her, that she comes as an omen of disaster, a premonition that warns them to turn back, return to shore, to stay at home—because a storm is coming, and the seas are not safe.

## Notes

1. See <http://www.nussir.no>, accessed October 21, 2014.
2. See also Reinert (2007; 2012; 2014a; 2014b; 2015) and Reinert and Benjaminsen (2015).
3. The issue is of course not external to the language that renders it. In academic writing, as in other fields, water metaphors constitute aesthetic norms that structure thinking and practice: Arguments may or may not “flow,” readers may or may not be “immersed,” expositions may or may not be “dry.”

## References

- Angeland, E., S. Ekeland, and P. Selle, eds. 2010. *Nordområdepolitikken sett fra nord [The Northern Area Initiative seen from the north]*. Oslo, Norway: Fagbokforlaget.
- Appadurai, A. 2012. The spirit of calculation. *Cambridge Anthropology* 30 (1):3–17. doi:10.3167/ca.2012.300102
- Chen, C., J. MacLeod, and A. Neimanis, eds. 2013. *Thinking with water*. Montreal, Canada: McGill-Queen’s University Press.
- Cohen, T., ed. 2010. *Telemorphosis: Theory in the era of climate change*. Ann Arbor, MI: Open Humanities Press.
- de Rijke, K., P. Munro, and M. de Lourdes Melo Zurita. 2016. The Great Artesian Basin: A contested resource environment of subterranean water and coal seam gas in Australia. *Society & Natural Resources*, in press.
- Decker, J. 2014. *Gyre: The plastic ocean*. London, UK: Booth-Clibborn.
- Deleuze, G., and F. Guattari. 1987. *A thousand plateaus*. Minneapolis, MN: University of Minnesota Press.
- Dilley, R., ed. 1999. *The problem of context*. Oxford, UK: Berghahn.
- Dilley, R. 2002. The problem of context in social and cultural anthropology. *Language & Communication* 22:437–56. doi:10.1016/s0271-5309(02)00019-8
- Douglas, M. 1970. *Natural symbols*. London, UK: Routledge.
- Edwardsen, E. 1997. *Nordlendingen [The Northerner]*. Oslo, Norway: Pax.
- Eidheim, H. 1999. *Samer og Nordmenn [Sami and Norwegians]*. Oslo, Norway: Cappelen Akademisk.
- Ferry, E., and M. Limbert. 2008. *Timely assets: The politics of resources and their temporality*. Santa Fe, NM: School for Advanced Research Press.
- Foucault, M. 1995. *Discipline and punish*. New York, NY: Vintage Books.
- Hedges, S., and J. Sacco. 2012. *Days of destruction, days of revolt*. New York, NY: Nation Books.
- Hellstad, V. 2010. “Nordlendinger uønsket”: En studie av nordnorsk identitet i møte med Oslo [“Northerners not welcome”: A study of northern Norwegian identity in the encounter with Oslo]. Master’s thesis, University of Oslo. <https://www.duo.uio.no/handle/10852/24292> (accessed October 21, 2014).

- Helmreich, S. 2008. An anthropologist underwater: Immersive soundscapes, submarine cyborgs and transductive ethnography. *American Ethnologist* 34(4):621–41. doi:10.1525/ae.2007.34.4.621
- Helmreich, S. 2009. *Alien ocean*. Berkeley, CA: University of California Press.
- Helmreich, S. 2011. Nature/culture/seawater. *American Anthropologist* 113(1):132–44. doi:10.1111/j.1548-1433.2010.01311.x
- Krause, F., and V. Strang. 2013. Introduction to special issue. *Worldviews: Global Religions, Culture, and Ecology* 17(2):95–102. doi:10.1163/15685357-01702001
- Krause, F., and V. Strang. 2016. Editorial: Thinking relationships through water. *Society & Natural Resources*, in press.
- Kvalsund Kommune. 2012. Kommunal planstrategi 2012–2015 [District planning strategy 2012–2015]. <http://www.kvalsund.kommune.no/kommunal-planstrategi-2012-2015.5073659.html>
- Latour, B. 1987. *Science in action*. Cambridge, MA: Harvard University Press.
- Latour, B. 2005. *Reassembling the social*. Oxford, UK: Oxford University Press.
- Linton, J. 2010. *What is water? The history of a modern abstraction*. Vancouver, BC, Canada: UBC Press.
- Niemi, E. 2007. North Norway: An invention? *Journal of Northern Studies* 1(1–2):81–94.
- Nilssen, I. B., E. Angell, B. G. Bergem, L. Bræin, A. Hervik, T. Nilsen, and S. Karlstad. 2012. *Erfaringsstudie om ringvirkninger fra petroleumsvirksomhet for næringsliv og samfunnet forøvrig [Experiential study of ripple effects from petroleum activity for business and society in general]*. Alta, Norway: Norut.
- Palmer, M. 2010. *Bare Kirka Sto Igjen [Only the church was left]*. Oslo, Norway: Spartacus.
- Povinelli, E. 2011. *Economies of abandonment*. Durham, NC: Duke University Press.
- Reinbeitedistrikt 22 Fiettar. 2011. Uttalelse til reguleringsplan Nussir [Statement concerning the Nussir regulatory plan]. <http://www.nussir.no/environmental-pub/zoning/hoeringsuttalelser/2011-09-07%20Reinbeitedistrikt%2022%20Mikkel%20Nils%20M%20Sara%20Hoeringsuttalelse.pdf> (accessed May 4, 2014).
- Reinert, H. 2007. The pertinence of sacrifice—Some notes on Larry the luckiest lamb. *Borderlands* 6(3).
- Reinert, H. 2009. The Corral and the Slaughterhouse. PhD dissertation, University of Cambridge.
- Reinert, H. 2012. The disposable surplus—Notes on reindeer, waste and biopolitics. *Laboratorium* 3 (2012):67–83.
- Reinert, H. 2014a. Entanglements—Intimacy and nonhuman ethics. *Society & Animals* 22(1):42–56. doi:10.1163/15685306-12341318
- Reinert, H. 2014b. Weight, space and density in the Norwegian reindeer crisis—Notes towards a critique. *Valuation Studies* 2(2):153–83. doi:10.3384/vs.2001-5992.1422153
- Reinert, H. 2015. Sacrifice. *Environmental Humanities* 7:255–58.
- Reinert, H., and T. Benjaminsen. 2015. Conceptualising resilience in Norwegian Sámi reindeer pastoralism. *Resilience* 3(2):95–112. doi:10.1080/21693293.2014.988916
- Rose, D., and T. van Doren eds. 2011. Unloved others: Death of the disregarded in the time of extinctions. *Australian Humanities Review* 50 (special issue).
- Rosenberg, and S. Harding. 2005. *Histories of the future*. Durham, NC: Duke University Press.
- Schmidt, J. 2014. Historicising the hydrosocial cycle. *Water Alternatives* 7(1):220–34.
- Scott, R. 2010. *Removing mountains*. Minneapolis, MN: University of Minnesota Press.
- Stengers, I. 2010. Including nonhumans in political theory: Opening Pandora's box? In *Political matter: Technoscience, democracy and public life*, ed. B. Braun, S. Whatmore, and I. Stengers, 3–34. Minneapolis, MN: University of Minnesota Press.
- Stengers, I., and E. Bordeleau. 2011. The care of the possible. *Scapegoat*. [http://www.scapegoatjournal.org/docs/01/01\\_Stengers\\_Bordeleau\\_CareOfThePossible.pdf](http://www.scapegoatjournal.org/docs/01/01_Stengers_Bordeleau_CareOfThePossible.pdf) (accessed May 4, 2014).
- Stengers, I., and P. Pignarre. 2011. *Capitalist sorcery*. London, UK: Palgrave.
- Strang, V. 2004. *The meaning of water*. New York, NY: Berg.
- Strathern, M., ed. 1995. *Shifting contexts*. London, UK: Routledge.