Transposing infrastructural remedies—performing breakdown

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"What I am doing is simply refusing to grant existence to the object while knowledge itself would be floating around without being grounded anywhere. Knowledge is not the voice-over of a nature film on the Discovery channel."

Latour, B. 2007:24

"…history of science should mean the history of what is known as well as of the knowledge itself."

Latour, 2007:27

<u>Introduction</u>

In this paper I engage some infrastructure studies scholars and subject an experimental project in progress to their lenses. The exercise has yielded generative thought in parts that refuse to conform a whole (Latour, 2012). These parts may be better understood as isles of an archipelago (Furlong, 2014) or stars in a constellation. The *isle~stars* revolve around my interest in the question of knowledge—what is it, how is it generated, constituted, produced, kept alive, embodied, shared, circulated and also how it shapes and constitutes subjectivities, objects and worlds—a charged question that is constitutively tied to questions of power and politics. Through different pathways the vectors of these questions as they engage knowledge in one of its current dominant routes point to an epicenter where the colonial and capitalist mindsets meet. In its doubly dominant characteristic (as manifestation in the form of one key element within the current Western world and in the genealogies that have carved the constitution of today's Western paradigm), knowledge can unmistakably be understood through the framework of infrastructures.[1] Although the forces of the colonial and capitalist mindset have

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[1] As I write this long sequence of words (please forgive me) I realize this should not come as a surprise; in fact it is almost a tautology. Nonetheless it was needed to squarely locate the forces from which the shockwaves of colony+capital still radiate. The choice of language is not intended to naturalize these forces

branched off and taken root with definite local differences, they also respond to well-defined generalizable strategies throughout time and space (McNally, 2020). These in turn have become embodied in general habits of being identified in the modern subject, as well as compounded in modern governance and generally in 'the economy' understood through the infrastructural lens of Timothy Mitchell (2002). This I understand as an extension to Aaron Jakes' notion of 'colonial economisms' (2020) as the latter strategy accelerated and took up a global geopolitical scale in synch with what is called the Great Acceleration Era post WWII (Nixon, 2011).

In what follows I present an inquiry project in preliminary stages of development as it attempts to counter this modern trope at the minute scale of a resisting ballast amidst the multiple and heteromorphous modes of existence of current empire. The project is situated in the bioregion of the Hudson River Estuary and its watershed. The Hudson River Valley holds layers upon layers of material and immaterial significations that make it a rich and charged land. This bioregion was the gateway of the settler colonist into Anglo-Saxon North America, where since the late 16th century indigenous populations were their target of systemic dispossession as strategies for the territorializing and abstracting means of capitalist empire. This bioregion is as well the location where the US megacity of New York stands and the place where I currently reside. Whereas a critical dimension is always already necessary and best engaged with in homeopathic doses, I am mostly interested in crafting morphogenetic praxes that refuse to be categorized as research and are instead searching for ways to embody a transformative take on education (Stetsenko, 2017). Borrowing from Gabrielle Hecht's notion of

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but to put them in a similar temporal plane with a deep geological time capable of transforming the biogeochemical flows of the planet which human engineering has afforded since the inception of agriculture as mode of sustenance (in both its material and immaterial forms—read financial instruments).

subjective and social plasticity, education thus aims toward a gently guided expansion of

'regimes of perceptibility' (Hecht, 2009) so that they become regenerative of life-

affirming systems and organizations and act as counterweights to the claim to

universality and its expansionist and extractivist strategies that still pollute the waters of

stagnant modernist onto-epistemologies.

<u>Part I—destabilizing by floatation</u>

As I prepare a pilot experimental experience on the Hudson River Estuary this

summer I wonder how approaching it with the framework of infrastructures (small and

large) can open up its scope and my understanding of it. The experimental project

revolves around the notion of a residency where educators will spend three to four days

in kayaks paddling upstream and camping along the river shores. The infrastructural lens

comes to me as I re-read Susan Leigh Star's "The Ethnography of Infrastructure" where

she quotes Gregory Bateson saying that "What can be studied is always a relationship or

an infinite regress of relationships. Never a "thing."" (Star, 2012:379). My wondering is

reinforced by Bruno Latour's synthetic thinking in "A Textbook Case Revisited[…],"

whereby he calls for a de-epistemologizing of knowledge and an ontologization of it

instead. In what he calls a second empiricism, the artificial gap between subject and

object created by first empiricists from Lock through James (exclusive) dissolves by

shifting the accent so that the factors are understood to be in co-constitutive relations

(Latour, 2007). My proposal, intention and vision for this 'residency' is precisely that—

that we come to the river to allow an encounter with it; that these encounters might

encourage reciprocal and mutual relationalities and bring light to the inherently co-

constitutive character of the encounter. Orienting our 'regimes of perceptibility' in this

way, it is hoped that we will come to understand the more-than-human as holding inherent value and in turn decentering anthropocentric, dualistic and reifying approaches to the more-than-human. The C.A.R.E. Program (Collaboratory in Active Regenerative Ecologies) focuses on pedagogies of embodiment and immersion with the overall goal to learn *with* the estuary and *from* ourselves as co-inhabitants in the bioregion. It aims to then amplify these experiences, nurturing practices of care, curiosity and solidarity by regenerating them in other sites. It proposes to do so by experiencing the Hudson River bioregion as an open-air (opener) transformative space, fostering communication and awareness of the close interconnections that exist at cultural, historic, geographic, socio-economic, emotional, and ecological levels. In other words, to engage ethically and onto-epistemologically with the bioregion.

Deeply concerned with climate change and its onto-epistemological complexities, one of my main questions revolves around building conditions of possibility to understand what exactly entails transitioning to different energy regimes altogether—from a carbon-based regime to a renewable energy one. If energy regimes rest on infrastructures that in turn feed other infrastructures, and following Star's assertion that infrastructures are fixed in modular increments, then the C.A.R.E. program can be understood as a temporary pause in the infrastructure of infrastructures—a momentary stick in the big wheel of our carbon-propelled lifestyles. Another way of explaining this through Star's words is that C.A.R.E. invites educators to listen to the master narratives they and their students might be following. Star mentions that "Listening for the master narrative and identifying it as such means identifying first with that which has been made other, or unnamed." (Star, 2012:385). C.A.R.E. invites residents to deeply listen to others

(humans and more-than-humans alike), to begin to feel comfortable with the uncertainty and uneasiness of not knowing, to pause before we name, categorize and even question. Other key questions raised by Star are what are designs that become factors in how the river is or can be experienced at urban and rural levels, and why are these realms even perceived differently—the urban and the rural—in terms of their relationalities with the river. As Star mentions, the processes of discovering the status of indicators are complex, and because both knowledge and/as infrastructures are politically charged, indicators are often seized to control larger systemic issues (388). If, as Star continues to assert, infrastructure is a relational concept and one that becomes real via organized practices, perhaps this differently organized experiment points to collective ways to destabilize current infrastructures as provisional trials at de-carbonization and minute attempts to problematize the binary urban-rural. In this bioregion the estuary is the connective liminal tissue between the rural and the urban along the valley, both benefitting from the watershed in order to sustain their livelihoods; both also experiencing the river in similar and different ways depending on their regimes of perceptibility. The C.A.R.E. project is an invitation to bring educators to experience a decarbonized way of transiting and inhabiting the planet, even if at a modest spatiotemporal scale. This limited scope makes the experiment a counter-infrastructure; as well, its invitation to not solidify in form and remain immanent runs counter to both material and immaterial takes on infrastructure.

In "People as Infrastructure: Intersecting Fragments in Johannesburg," Abdou Maliq Simone argues that (urban) experiences that are regular can still be made or thought as flexible, in a sense made to remain open and resist the generalization (that converts it to population behavior) that is then made a key element of governmentality.

He contends that these experiences can still be experienced as singular acts that nonetheless anchor phenomenological aspects of the urban and make them into infrastructure—anchored yet volatile. Simone also reflects on issues of tactics within larger strategic designs (Simone, 2004). I wonder if these tactics of resistance to generalization are indeed what I am after in my experiment of encounter with the river from urban and rural experiences alike—to be able to tactically operate within specified domains yet to open singular encounters that in turn open further unspecified domains that point to the need for non-generalization. In a way the request is to remain dynamic in individuation (as per Gilbert Simondon[2]), never consolidating individuality, and hence escaping governmentality and 'carbonmentality,' even if briefly. Thought as a collaboration between humans and the more-than-human riverine ecologies, this experiment relies on the notion that being and floating on kayaks will instill in residents a comfort with the non-stable. Floating about in kayaks remains, at an embodied level, outside of the scope of a search for metastability—equilibrium is suspended from disequilibrium and is sustained by movement, breath, balancing weights, currents, waves and winds. Spending time with the river and its ecologies will also elicit a capacity to improvise similar to what Simone understands as one capacity of 'people as infrastructure.' At least at a conceptual level (until proven in embodied ways), this experiment attempts to generate the conditions of possibility for 'carbonmentalities' to become unmoored from within the habits of 'civil society'—it is an experiment in ways to destabilize them by offering them the capacity and time to float with the river.

Simone also touches on the idea of collectivities that are able to explore tentative

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[2] Simondon's notion of individuation is a continuous process by which the formation of individuality is never solidified; instead it is a dynamic whereby individual-environment or subject-object are in constant and iterative processes of co-constitution (Hansen, 2009).

manners of trust. In a similar vein, my attempt at collective engagements with the more-than-human, if anything, might elicit spaces where trust amongst the human residents can be developed, if nothing else due to a shared foreignness with the more-than-human, but perhaps transcending this foreignness. Simone describes the urban as enmeshed in an economy of interpenetrations that enable notions about what is possible and what is impossible. Within this approach, a shift in the regimes of perceptibility of sociality as proposed by this experiment allows the social to be no longer just human and thus elicit a questioning of what is possible, what is impossible and why within this expanded social organization. Relying on speculative dimensions of the imagination, to let emerge, begin to experience and care for newly formed solidarities. Yet, whereas Simone contends that making visible these underground (urban) collectivities that rely on the emergence of heterogeneous groups to make business will enable the understanding of these through the infrastructure lens ('people as infrastructure'), I remain skeptical that this ethnographic approach through visibilization might ultimately render the 'visible' co-optable and made the target of governmentality. As such, my experiment resists the idea of research altogether and remains buoyant within the realm of the unspecified or the liminal, where uncategorizability becomes tactic. And here the question of development, growth and continuity is key—is it possible to not have to reinvent the wheel every time it is needed, yet not fix the wheel so that it becomes institutionalized and thus loses its singularity? Is it possible to build continuity without accumulating power? Is it possible to remain performative without wasting crucial energy in the effort? In other words, how do we build deep anchoring relationalities without transforming those anchors in ballasts that weigh too much and pull in the wrong direction? A different temporality comes to

mind, one in which cycles of growth and degrowth are interwoven, so that accumulations

are released so that giving and taking remain performative exchanges[3]. Or is it that if one

chooses to remain buoyant with respect to power, one is always already refusing strategy

and instead ever engaging in the quotidian tactics of survival? One and the other do not

just differ in temporal scales and scopes but in their relationship with power.

      As Kathryn Furlong points in her extension of modern infrastructural theory, I

also seek to approach this experiment through a political ecology and a political economy

lens, looking to critically engage the conflation of energy regimes transition with yet

another set of displacements—of human and more-human-human populations—through a

new version of the capitalist monologic trope of eternal growth in renewable disguise.

Perhaps this experiment points more to the need to open spaces of reflection and

imagination to shed new light in what Furlong calls multi-level transitions (MLT) in

sociotechnical systems. She describes that "…MLT theory posits three "levels" of

interdependent activity through which transitions occur. Briefly, these include the level of

technological development (niche), the institutions, norms and practices that surround a

technology (the regime), as well as broader societal trends (the landscape)" (Furlong,

2014:140). In these three levels and due to the possibilities entertained in a small-scale

experiment like C.A.R.E. I see this project as able to afford new possibilities within the

'regime' and the 'landscape' levels of transition. Yet, a contradiction exists as a deep

transition amounts to a complex set of shifts in the overall way of doing economy and its

systems of extraction, production and consumption called for in the West (as exemplified

mostly by the nation-state North and South) and where the level of 'niche' is in reality

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[3] Here George Battaille's *Accursed Share* comes to mind but is beyond the scope of this paper to engage it.

embedded or nested in all three scales of the political-economic. As well, Furlong warns

us that MLT's approach is nonetheless mistakenly oriented in that, although it proposes

several possible paths of transition, its goal is to reach and settle on a single universal

outcome. Contrary to this, C.A.R.E.'s goal is to 1) unsettle and remain

buoyant/dynamic/alert/immanent, and 2) open up the universal to pluriversality

(Mignolo, 2013). In this regard it is that I understand the C.A.R.E. program as non-

assimilationist—there is no central domain of knowledge or regime of perceptibility to

'assimilate' to but co-existing notions of these. Continuing with the metaphors afforded

by all-things-water, Furlong gives me a useful disaggregationist tool—instead of focusing

on splintering universalized infrastructural networks, she tells of 'archipelagoes' of

infrastructure, a much more generative way of thinking about relationalities of dissimilar

infrastructures (Furlong, 2014:141). She goes on to list a series of benefits to thinking in

terms of allowing the co-existence of difference (in her case of levels of water

infrastructure; in C.A.R.E. and for ecological thinking, co-existence means taking all

beings for their inherent value, descaling anthropocentrism and remaining open to the

uptake of difference). Following the idea that all infrastructures are situated in the ways

they are embedded in different communities and made of use through communities of

practice, C.A.R.E. can be thought of as a disruptive occasion that affords a

disengagement with a community of practice that fosters carbon-fueled economies and

thus proposes to think about dis-attachments, alternatives and adaptations. Furlong

carefully delineates a critique of consumer education that relies on behaviorist

approaches to consumerism, whereas problematizing the consumer end of the economy

would instead entail bringing consumers to become responsible agents of their choices.

Even if one does not consider this proposition at face value, there exists the critical

argument that this approach at tackling the problem reverts the responsibility back to the

individual consumer in a never-ending neoliberal strategy of engineering stepped reforms

designed to fail while profiting at each step and leaving more systemic approaches intact.

Furlong also points to some scholars who understand that the real possibility for

transition is at the niche level and how definite momentum for catalyzing change appears

during moments of disrepair and disruption. Such could have been the case with the

current Covid-19 pandemic that disrupted enough of the economy to give hope that a

return to 'normalcy' would be challenged from below as from above. Unfortunately this

has not been the case, and as much as I would like to advocate for a 'nichean' push to

transition, as seen in regards to the development of new technologies that push energy

regimes toward renewables, the fact of the matter is that politically and economically we

have remained within the frame of capitalism and its modes of distribution (or rather,

non-distribution) of power and the means of production. Pandemic digressions

notwithstanding, the idea that niche levels alone can foster and sustain a careful and

ethical transition to more sustainable energy regimes certainly obscures the complexities

inherent in the transformation toward the true capacity of humans to coexist with the

more-than-human. Better said, the true capacity of the dominant mode of existence as

given by capitalist systems to co-exist with anything that differs from its profit-making

ultimate drive has survived the pandemic and is possibly stronger than before. Yet, not all

hope has been drowned.

<u>Part II—refloating the scales of appropriate technologies</u>

Brian Larkin's analysis of infrastructure through an expansion of anthropological

ethnographic methods and systemic lenses brings about a more tightly knit idea of how

infrastructures are necessarily political and networked. His approach as well articulates

how technopolitics is imbricated within infrastructure as the latter necessitates modes of

governing and regulating that are part of the informing of the modern subject. I take

technopolitics as a ready-made unfolding strategy whose origins may be traced to the

forerunners of modernism itself. In this sense, I seem to be closer to Larkin's take on

Collier's approach to infrastructure—as a way to understand the conceptual engineering

of infrastructural systems and networks prior to their actual material implementation.

Biopolitics thus comes to the fore as ways in which the design of infrastructures

necessarily implicate life (and its conditions of possibility) with the political. Here,

C.A.R.E. runs counter to technopolitics and biopolitics as it explores subjectivities and

attachments to technological apparatuses, and ways in which subsistence might be

unmoored from industrial food production and health management. C.A.R.E. focuses

instead on care practices that illuminate and nurture the dependencies of human and

more-than-human assemblages, keeping in mind the tensions between immanent and

patterned behaviors in relationship with the ethical. This concern necessarily maintains

scale at the level of situated and involved particulars (Puig De La Bellacasa, 2017).

In thinking about ways of traveling, in particular how to traverse and navigate the

river, I consider vessels as mediums. The scale of these is therefore important, as the

scale of infrastructures and technologies are important in analyzing the capacities that

they afford and delimit. Thus kayaks are receptacles of bodies that cut through the water,

where human bodies have an almost immediate touch with bodies of water. Energy-wise

kayaks are fueled by human energy, wind and currents, thus relying on kinetic clean

energies. For this and other projects it is important that there is sustained coherence between methods and design. This is based on the understanding that the means to achieve an end bleed into the processes by which the goal is reached (or constituted, as per Latourian logic). In other words, because of the co-constitutive character between object-subject mentioned before, methods are necessarily onto-epistemologically implicated in the inquiry process from the very preliminary stages. Thus, it is important to remain focused on ways to reconnect that carry in them the least possible divisive capacities inherent in any technology. This calls for attention to scale as much as driving intentions. Stephen Jackson's call for the work of repair and articulation comes to mind along with the work of caring that the C.A.R.E. program proposes—repairing, recalibrating, in order to better articulate things that are perceived as disconnected but that are instead intrinsically implicated. And as he mentions, this is a work of practices, not representations—in a sense echoing my claim about the performativity needed to keep things together in connection. His mention of the photographic series about shipbreaking (224) brings me back to the vessels that transport and the vessels that give for someone else's taking from them when they get old and permanently landed—the ingenuity in repurposing is also an affordance of the infrastructure, an offering of its modes of existence in the shape of a carcass (as in a new individuating phase). Jackson speaks of the technological life of things and the repurposing that in certain ways continue the lifespans of these things in ways that were not initially intended for them but nonetheless come to offer a material excess against the entropic. For Jackson, breakdown and repair are at opposing poles from innovation (and I would add growth); or rather, he proposes that innovation is a kind of repair, not a superseding operation above and

beyond repair. This leads me to think that kayaking without specification poetically alludes to repairing spaces and temporalities with the more-than-human that have broken down or have been disconnected. How are these fragile connections to be (re)established? Are these similarities articulated via the temporal dimension, in particular via slower relationalities afforded by them? Have carbon-based energy regimes afforded relationalities and vectors that can only constantly accelerate and reify the myth of eternal growth, feeding on the artificially fertilized promises of progress?

<div align="center">Part III—unbrokered breakage</div>

At an onto-epistemological level, Jackson locates repair as the power force or generator of change, asserting that, "It is therefore precisely in moments of breakdown that we learn to see and engage our technologies in new and sometimes surprising ways." (Jackson, 2014:230). How about if what breaks down during C.A.R.E. is precisely human consciousness as it is currently understood in its limited individuality? In the invitation to float with the river, a way of breaking the individuality of the capitalist subject's consciousness might bring forth a collective sense and new ways of caring-with. For, if what Jackson asserts, that "Breakdown disturbs and sets in motion worlds of possibility that disappear under the stable or accomplished form of the artifact" (230) is correct, then the conditions of possibility for creating different worlds is set in motion when breakdowns collide with the habitual—these are also instances of the poetico-political forces unleashed in breakdowns. Here I echo Jackson in his inclusion of relations of value and order, and his insistence that repair instantiates an ethics of care and a solidarity with things—a relationality of the human with the more-than-human, not just the non-human of the technological object. Against a productivist stance with things in

general and an anthropocentric stance of nature as service in particular, Jackson's take

considers an inversion of values and habits that also point to a different temporality.

These all come handy when taking to travel up the Hudson River in a kayak to figure out

how regimes of perceptibility might be reshaped or repurposed, assembling meaning in

new ways and expanding solidarity to trespass the human domain. If indeed, as Jackson

asserts after Benjamin, we live in the aftermath, perhaps traversing the river in kayaks is

a way to conjure the indigenous peoples of the area before their onto-epistemologies were

severely outnumbered by settler colonists'. In so doing we might get flares or flashbacks

of their cosmologies as they cared for the land in ways that are too difficult for our

capitalistic subjectivities to grasp (Anderson, 2005).

Finally, a summarized yet open description of infrastructures comes through the

claim of Appel, Anand and Gupta that, "…infrastructures are critical locations through

which sociality, governance and politics, accumulation and dispossession, and institutions

and aspirations are formed, reformed, and performed." (2018:3); adding the need to also

"attend to infrastructure's performance as a technology of liberal rule" (4). It is in their

insistence to highlight how infrastructures allowed the separation of "…politics from

nature, the technical from the political, and the human from the nonhuman" that I find

relevance to proceed with the C.A.R.E. program as counter-infrastructural endeavor. As

these authors explain, "Thus depoliticized, the management of infrastructures as a

technical problem formed the grounds on which subjects were "freed" to participate in

civil society and produce economic life"(4). It is here that C.A.R.E. can make a

difference. In embodied ways of experiencing and learning to relearn, the aim of

C.A.R.E. is to highlight precisely the intricate ways in which subjectivity, the

performativity of economic life, the river and its ecologies, and infrastructures are

entangled; and point to ways in which they might disentangle to bring clarity in the

direction in which a-modern ways might emerge. And so following the authors' advice

about the situatedness of knowledge and how where we think from and what we think

about affects the content and processes of thinking, I invited a few educators to think

about multi-species temporalities (Rose, 2012), power distributions and energy regimes

from the buoyant spaces of kayaks, in the two-way flowing estuary of the Mahicantuck

river. Through 'questions of intimacy and proximity' (22) with the non-human, the

C.A.R.E. program proposes opening up to floating in order to connect immanently and

recursively. In the end, this project is about envisioning new ways of understanding the

question of knowledge, about rethinking the epistemological as implicated with the

ontological and necessarily with the ethical (Barad, 2003; Latour, 2007), which is to say

with the political, so as to bring forth onto-epistemologies in accordance with the times

we are living—much in need of making space for the non-human and re-enter the human

from a stance of more-than-human ecological equity, mutuality and solidarity. C.A.R.E.

Program proposes to be immersed in kayaks near the water, at the mercy of more-than-

human forces, propelled by human energy, offering to residents the spatiotemporal scale

needed to float against the stream of modernism.

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