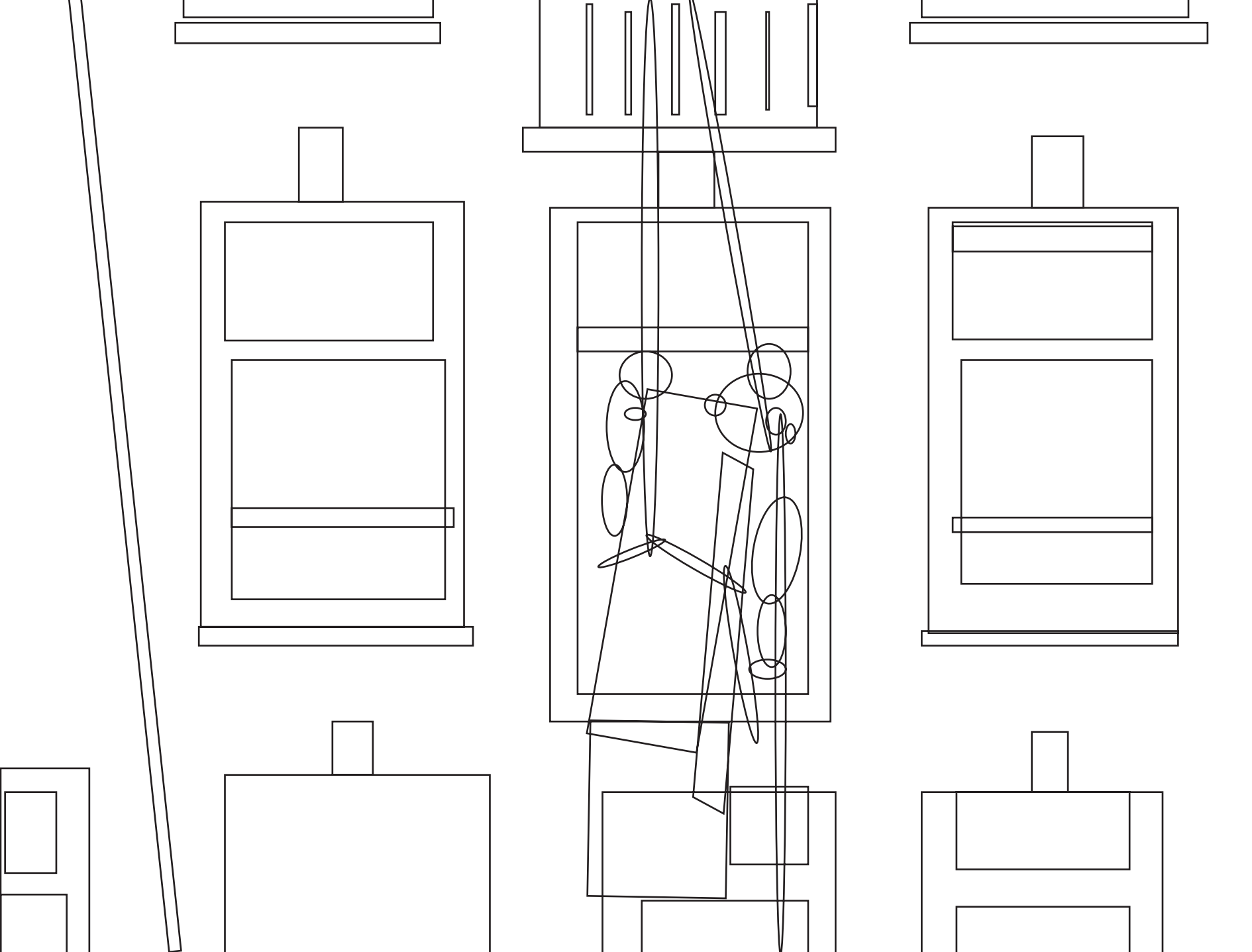
OFF THE GRID



Foreword

For centuries the grid has dictated how human beings move through space; read images, texts and maps; and exchange goods and energy. Entire cities are modelled on the rectangular division of space, and, although predominantly associated with modernity and Western civilizations, there are examples of premodern non-Western gridded cities that could be regarded as blueprints for contemporary urban environments. One well-known example is the Aztec city of Teotihuacan, located in today's Mexico. Recently, archaeologists discovered that Nixtun-Ch'ich', an early Mayan city situated in what is now Guatemala, was also built according to a gridded structure between roughly 600 BC and 300 BC. This discovery was called remarkable in *Live Science* by Timothy Pugh, researcher and professor in archaeology at Queens College, as "[m]ost Mayan cities are nicely spread out. They have roads just like this, but they're not gridded […] the space is more open and less controlled." Pugh goes on to say that the top-down organization of Nixtun-Ch'ich' denotes "a very powerful ruler," and speculates that such a "controlled environment" might not have been the Mayas' favourite place to live in, it being such an

anomaly compared to the more typically spacious, lush and freely organized Mayan cities.

While such conclusions may be deemed anachronistic, Pugh's reading of the ancient Mayan city illustrates the workings of gridded structures: a rise in power and population combined with scarcity of space seems to demand a top-down, gridded organization. The grid has proven its use time and again as an efficient tool of government and organization — as well as oppression. In today's networked society, these kinds of organizing structures seem omnipresent, both materially and immaterially: the railroad network, electricity grids, telecommunication systems. As a response, an increasing number of people in the Western world are seeking ways to live their lives in the marginal spaces beyond the hegemonic grid, to take control back into their own hands. Developing the theme for this issue of *Soapbox*, the editorial board wondered whether such a thing as going off the grid is still possible, considering ever-present surveillance, pipelines and data accumulation. In other words, is going off grid now nothing but a romantic, and ultimately futile, gesture?

Going off-grid certainly seems to be something of a fantasy for the privileged few. Around the globe people fight for access to the grid — whether that is to educate their children, take a bus to school or work, heat their homes, or communicate with far-flung relatives. Inhabitants of some favelas attach their own

wires to electricity pylons — thus very literally attaching themselves to the grid from which they have been denied access, and at the same time cheating and manipulating the system.

The articles we present in this issue take up these and many other questions discussing the grid's enduring lure and pitfalls. The manifold ways in which grids operate, leave their mark on everyday life, and can perhaps be resisted are taken up by these wide-ranging articles. We open with Gretchen Bakke's insightful and witty introduction. She takes up the threads of some of the articles in more detail in the next few pages, but suffice it to say here that the range and depth of ideas and approaches to this issue's topic are myriad. To round off the collection, Jeff Diamanti provides another perceptive reflection in his afterword, where he advocates for an infrastructural turn in academia. In conversation with two *Soapbox* editors, Noura Borggreven and Calvin Duggan, Katía Truijen, Marten Kuijpers, and Marina Otero, researchers and curators at Het Nieuwe Instituut in Rotterdam, approach the grid from a crucial vantage point: that of the (public) institute and the people working in it. And last but not least, besides taking care of the graphic design, Sissel Vejby Møller and Stepan Lipatov contribute to this issue with a collaborative visual essay that explores how things get stuck and unstuck.

To the authors of this issue's papers: Thom Aalmoes, Mina Burnside, Tânia Cardoso, Aaron Dowdy, Pepita Hesselberth, Lena Reitschutser — thank you for your inspired ideas, and for the relentless redrafting and rewriting of your papers. It has been well worth the effort, if you ask us. And, again, we would like to take this opportunity to say a big THANK YOU to everyone who has worked with us on this issue.

On behalf of the editorial board,
Zoë Dankert and Laura Pannekoek

Gretchen Bakke

Off the Grid, An Introduction

> The conception that objects have fixed and unalterable values is precisely the prejudice from which art emancipates us.
>
> John Dewey, Art as Experience

Someone once said to me in passing that "civilization" is just an ideologically-loaded way of saying "infrastructure." Meaning, I think, that when we talk about ancient civilizations, we are mostly having a conversation about complex infrastructures. Most especially those civilizations we remember because their infrastructures continue to inspire us: Roman roads, Mayan temple systems, the gold mines and complex trade routes of the Empire of Ghana, Stonehenge. Likewise, when hinting that some places — like Europe — are more civilized than others — like Borneo or Alabama — this too can be

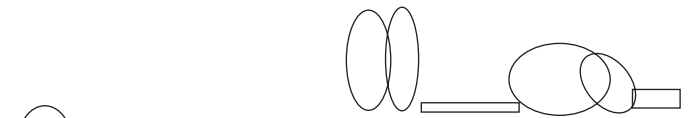
understood as a claim about the prevalence and functionality of existing infrastructural systems.(1)

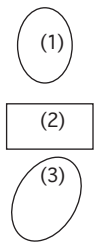
Such "civilizational" infrastructures include not just gas, electricity, and water networks, but also unemployment insurance, universal health care, and retirement plans. Considered thusly, infrastructure is not solely a thing built from concrete and steel, but is also constructed of ideas and bureaucracies. The lines of functional government or of global trade routes or of diplomacy (rather than war) are etched into societies in much the same way as are street plans, sewer systems, and internet cabling. In this volume, though far from here alone, all these civilizational infrastructures are rolled up into a single, if conceptually voracious, term — the grid.

The grid — it sounds a ridged thing, built of metal and stones and tight-mouthed bureaucrats tasked with putting all the things and all the people into the right slots. Concrete reinforced with steel. Social structures reinforced with paperwork. There are narrower ways of defining the grid than this, as "a network of lines that cross each other to form a series of squares or rectangles" or "a framework of spaced bars that are parallel to or cross each other; a grating" or "a network of cables or pipes for distributing power" etcetera. (2) In the essays gathered here, however, The Grid seems to deserve to be written with caps (like The Man). Grid: catchall of infrastructure. Grid: be all of civilization.

When you fall or fail in life, the grid (in this expanded understanding) is what catches you. It is the hospital system that puts you back together and the welfare system that sets

you back on your feet. And, when all else fails, it is the mortuary system that lays your body to ground. When the British first arrived in Singapore they were aghast at the dead lying under thin earth and scattered around willy-nilly. Many of the locals, whom the British were setting about "civilizing," followed the rules of fengshui (right placement), and this included a completely irrational (from the British point of view) burial system. Worse than nonsensical was the fact that every colonial attempt at a construction project was met with arm bones here and jaw bones there sticking up out of the dirt. It was ghastly (for the British), and thus came the cemeteries, those great civilizational griddings of the afterlife ground down into dirt and into culture, until colonial Singapore's dead, like England's, were put properly into place.(3)





The opposite is also the case. When speaking of a "decent into barbarism," it is possible that what is meant is the return to a life of minimal infrastructures.

From the Google dictionary (called simply "Google") search terms: 'grid' and 'definition'.

It is worth noting that the British were also in the process of rationalizing their mortuary systems during the same period. Both at home and abroad, the dead were being brought to order. All of what I know of the history of the dead in Singapore I learned from an exceptional essay by the then master's (now PhD) student Siti Hazariah Binte Abu Bakar, whose MA thesis in anthropology (McGill University) was on undertakers in Singapore.

As much as they organize the spaces of "civilization" (like streets or graveyards), grids are also about temporal rules and rhythms. A well-gridded life, or being "on the grid," thus means having access not just to safe drinking water (no corpses near the water mains), but also to a predictable biography. As Stef Jansen's recent ethnography of the interminable in-between time of postwar Bosnia makes clear, the loss of the "normal" gridded rhythms of life leads to an intensification of yearnings of all sorts. In postwar Bosnia, in what Jansen calls the "meantime" of peace-without-governance (or the non-terminal yet incurable blight of "Daytonitis") the obligations (infrastructures) that hold a good life (civilization) in place are rarely, and only randomly, met. The bus does not come on schedule, the Hausmeister does not replace broken light bulbs or doorbells, the paperwork to attend university cannot be obtained, a job (when luck has it, is found) does not pay. Months go by and no paychecks come. None and nothing. And the garbage is not gathered. And one cannot find a policeman, or see a doctor, or retire. The cement in the streets cracks; the power flickers on and off; the TV reception is terrible; the cell phones work in certain spots, but only sometimes. And life, instead of marching smartly along from birth through education to work to retirement, or through dating to marriage to childbirth and growing one's own family, simply goes all wonky. Some of these things will happen, randomly, to some people. Life, after all, is still

there, but the grid has gone missing, and with it the sense of sensible progress. Without it, personal biography and everyday life are constituted by meandering in circles in hopes of happening upon something: a light bulb, a husband, a bus, an apartment, a dentist appointment, a box of fresh berries, and so on and on. Here, the grid's absence is both felt and mourned. So much sorrow comes from being denied the possibility of walking a known path, be it just across town or across the whole of a life.

What does it mean then to be "off the grid," when the grid itself is such an all-encompassing prospect? What yearning does a collection by this name index? Surely not the erasure of the entire grid. Nobody wants a nation that "works" like postwar Bosnia. And yet the double-sided coin of civilization/infrastructure has failed to capture something, and "off the grid" both breathes and quivers with hopes for an expanded life.

The essays collected here answer these questions in such diverse ways that one begins to feel the whole of it only when they are read together, as pieces of a single thought. They, each in their own way, find the grid and its edges, faint and fuzzy, but there. And they explain and describe it as did the blind men who approached the unknown elephant of lore: "Here the beast is long and flexible, warm with breath and scattered with hairs," says one; "Here it is a muscular tufted snake that whips about at great speed," says

a second. “And here,” murmurs a third, “it is thick as a tree but with horn rather than root at its base — a great heaving pillar of a beast.” And the others too, tasked with the heavy round of the belly, or with wide, soft flapping ears, or with tusks and fragile eyes, work together to define a something. Vague yet precise, unimaginable but whole, as intelligent as the men are wise.

So too does the grid, or rather “being off of it,” gain definitional form in these essays. It’s a funny form though, like asking for a flower and getting smell, as the authors each dance differently away from firm edges toward infirm ones. No cemeteries will reign here. And this is an important point, for if the British worked hard to impose on the deceased squares of land with walls around them to serve as a gridded home, then the postcolonial-more-earnestly-capitalistic Singapore of today has banned burial altogether. In Singapore you must now be cremated upon death — hell on ancestor worship, that law — and once burned, some of the dust of you escapes inevitably into the sky. The grid that was imposed is overcome. The body that was bounded is diffused and caught up in the air, where it mingles with the particulates of trees as the palm oil plantations on the far coast burn (Myers). Monocultural capitalism diffused into air. Dead humans turned to dust and blown away. Fuzzy atmospherics are created by new policies and new economies. Outside, today’s residents of Singapore breathe in what is off the grid. As surely as microplastics

infiltrate fish, the aftereffects of postcolonial laws infiltrate us. The grid, of course, is not gone, but remains; what once were cemeteries are now the solid foundations of air-conditioned urban towers. Finance takes the land and makes a new air for the insides while the atmosphere absorbs the rest.

This “looking for the cultural shifts that make old lines obsolete and new lines hard to grasp” is a central analytic of this collection. The taxonomical classification of beasts discussed by Lena Reitschuster in this volume leaves out a spider that nurses its young with “milk” until “they reach sexual maturity”. Thus, the author continues:

> [a]lthough the jumping spider, or Toxeus Magnus, shares a set of qualities with other animals of the class Arachnida — defined as joint-legged invertebrate animals — it differs severely from its assigned class regarding its reproductive behavior. The nursing habits of the spider have not been observed before due to assumptions about the spider’s behavior that were based on its classification into the class Arachnida, which, in turn, was based on its physical features, rather than empirical verification

This jumping spider is not so much off the grid as bifurcated by a line of that grid meant to separate the

mammal and the arachnid. The line we see, via the truth of the spider, was once a good infrastructure for sorting the known world. It's now a bad one because it leads to wrong conclusions. Likeness in one square of the grid (eight-jointed legs) is taken to index likeness across a number of squares (indifference to progeny). Spiders don't nurse, ergo spiders don't care for their offspring. And research stops. And care, a term we need to know a great deal more about, remains without nuance, without subtlety, and critically lacking an expanded model. But why a taxonomy, or grid, at all? My anthropologist's instinct is to turn toward Mary Douglas' insight that things that stand between systems (like shrimp that live in the sea but are not fish) cause perturbations in those systems that do not so much reform the lay of lines but eject the cause of the trouble. "Don't eat the shrimp, they are off the grid." This is one story; humans order worlds by repeating matrices of relationships near to them.(4)

Reitschuster however, uses the spider to tell a different tale: don't reject the creature, but instead reject the grid that cannot account for it, and not just the grid but the historical subjectivity that produced it and the contemporary scientific practices that continue to rely

(4) See Lévi-Strauss. See also Bakke.

upon it. In this way, the fact of a lactating spider is the poster-child for a decolonization effort akin to that which kicked the British out of Singapore. A grid comes with values and it grinds those values into the management of scarce land and strange species alike. One can reject that which cannot be accounted for (grandma under the thin soil of a Singaporean garden, shrimp, lactating spider) or one can reject the system that cannot account for it (British colonialism, Jewish dietary laws, traditional taxonomy). This new mode of ordering is in this essay glossed as the "interdependency and situatedness between species that constitute every life form." "Off the grid" is thus a leap in conceptual ordering. It replaces the "line" with enfolded relationships, ties of affinity and dependence, atmospherics in which dust and ruined palm trees are pulled into the lungs of all species alike, including the humans and some of the spiders (because not all of them have lungs, it turns out).

But what of the air conditioning units — the lungs of buildings — that purify this new entanglement, that work to make a barely habitable city (too hot, too smoky) wealthy, comfortable, and populous? How might these be understood in a new ecosystem's thinking of context, interdependency, co-constituency, and interrelatedness? How are the ruins of world — the "trashfrastructure" of civilizations, past and present, so vast now that they might be called by the umbrella term "environment" — made to remain outside of enclosures?

We do not lack for strange things (lactating spider inclusive), for chaos or for creativity. Nor are the particulate and the unexpected disallowed by the contemporary grid; they are rather held to the (out)side, filtered out, sidelined, and, when necessary, translated through systems that, like lungs, make the unexpected of the world into useable, systematizable, standardizable, navigable and profitable products (as Anna Tsing has so masterfully shown). This process of creating standardized environments can be done materially, by things like air conditioning (for building pods) and pressurized cabins (for highflying pods) or organizationally, for things like businesses (profit pods) and governments (nation pods). What is wild — the polluted air, the thin air, aimless idle behaviour, the migrants and activists — is kept outside. Or, just as often, only let in once rendered safe, by the lungs of translation, to the interior. The world may burn, but the air inside is nevertheless sweet.

This is the contradiction driving most of us a bit batty at present, and it leads to a question many of the essays herein have also asked: What is the relationship between being "off the grid" and being on it? And how might activities in one domain (off) translate over to and effect the other (on)? Without a good answer, one's ambiguity (Hunt) or flânerie (Cardoso), risks being forever marginalized as the great filtering lungs of the grid reject and reject and reject certain forms of living in order to maintain other ones.

Infrastructurally, these essays chew at the grid, trying to find where it breaks down or can be broken. Within the Solidarity movement in late socialist Poland, there was the feeling that communism could never be destroyed, that the Soviets could never be routed out and flung away. Despite this sentiment, though, cracks in the system were everywhere and evident. Dissent worked like ice in concrete upon these cracks, swelling and making them larger, and then melting and slipping away. The cracks were endlessly troubled and exasperated and pushed into chasms without the larger task of a total system's overthrow ever really being conceptualizable. "Everything was forever, until it was no more," to quote a particularly propitious book title (Yurchak). It all came apart so fast. Before all that, however, there was a shared public feeling across the Eastern Bloc that the structures of rule had gone wrong in ways large and small. People still did work, but with an understanding that the system that caused society to function wasn't right anymore (if it ever had been). This sensation from late communist Poland is shared by the essays gathered here, as is the impulse of a society that can see — can pinpoint very precisely — where its ways no longer work and then, like Solidarity, weaken what binds the whole thing together: namely, The Grid.

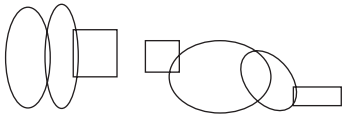
There is thus something more radical than is at first glance obvious about a community, or a home, or a practice, or a taxonomy, or a diegesis that is "off the

grid," even if it is not "out of control" (Hesselberth 126). The state may govern borders and determine where bodies are buried; it may grid a city's street system and issue the permits that allow alternative communities to flourish for a while, before being permitted to be bulldozed to make room for condos. But there is always an in-between, and always a relationship to lines that can be broken, or severed, or tied up into curious knots. This is known. It is also known that "grids, no matter how seemingly certain, are subject to constant reformation and reorganization" (Dowdy, this volume). But what we begin to understand, and what each of the essays collected here grapples with (in its own way), is that after what is known is something else. After the British build graveyards, after the modern state bans them and burns all the bodies to ash, after the atmospherics that already betray the grid there is something else.

Here is what I think that something else is: an attempt to demonstrate — in theory and in practices — that infrastructure and civilization can be negatively correlated. Infrastructure can (and perhaps must) become less in order for civilization to become more. "Off the grid," in other words, intimates that degridding — or the lessening, loosening, or disembedding of infrastructure — is the next necessary step for a better world. Crucially, this needn't mean taking a step backwards. The essays herein do not dream of a life on planet Bosnia where we all meander about in search of a

grid that has abandoned us. "Off the grid" can, rather, be a step forward — civilizational progress is still a part of this story — toward a world that is (infra)structured differently.

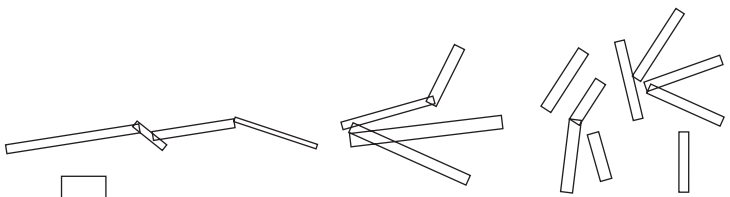
And while "off the grid" can, in one sense, be taken to be individualizing, it needn't be. The super-rich may be pouring money into the construction of impermeable compounds in New Zealand. They may be planning to survive the coming climate- (or zombie-) apocalypse "off the grid" and in style. But this is an old-fashioned way to approach a grid and the project of being off of it.(5) It's like taking the logic of a grid and then applying it only to oneself without allowing for any of the quixotic and queer interconnections or unexpected entanglements for which these essays argue. Better to be "off the grid" in good company; better yet to off-grid the world in a systematic attempt to institutionalize or infrastructure sustainability, conservation, and care into



(5) There is a scene in *World War Z* (dir. Forster, 2013) in which one such off-grid bunker is overrun by hordes of half-rotten, ambulatory corpse-people (zombies). It is a perfect snapshot of that moment that neither the best-made walls of the rich nor well-laid graveyards of modern civilization, nor nature's own call to death and rot ("the circular economy") can keep the dead from rising from their graves and consuming everything. Capitalism in the shallowest grave of allegory, plus Brad Pitt.

(6) Or as my erstwhile (Canadian) editor suggested, not "Make America Great Again" but "Make America Anew".

something after, rather than merely off (yet simultaneous to) the existing system/grid.(6) Better to think sidewise, to use the lines available to us to pattern and give rhythm to life differently. Better to think of the ways the lines that structure our stories can be understood not as the firmware of civilization but as affinities, or "an opening of inside on to outside" (Dowdy, this volume). Infra- no more, these authors describe and dream of a differently-structured world. But which Latinate prefix will guide us as the below of infra- gives way to the beyond of "off the grid"? Might it be ultra- (above-)structured and yet also local? Or perhaps intuo- or hiostructured and filled with care, consideration and wonders? Or, exstructured, such that we feel the opening and movement outward from an enclosed interior? Or perhaps easiest, just interstructured, as between us we build the sort of a web that even a lactating spider could love.(7)



(7) Here is a novel worth reading on the subject of spiders and their webs: Tchaikovsky, Adrian. *Children of Time*, Pan Books, 2015.

biography Gretchen Bakke holds a Ph.D. from the University of Chicago in cultural anthropology. Her work focuses on the chaos and creativity that emerges during social, cultural, and technological transitions. She is author of *The Grid: The Fraying Wires Between Americans and Our Energy Future* (2016) and co-editor of *Anthropology of the Arts: A Reader* (2016) and *Toward an Artful Anthropology* (2017).

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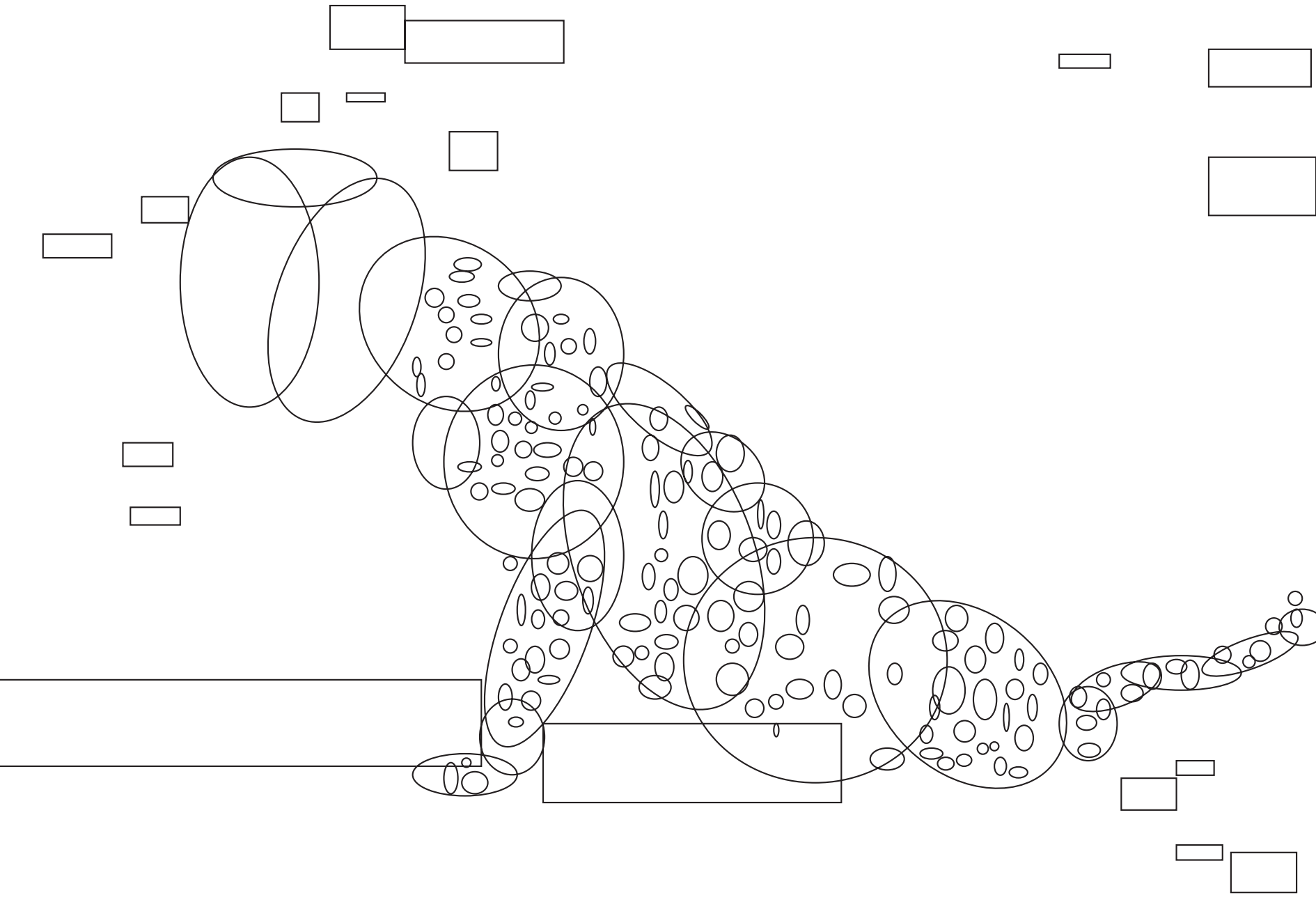


Lena Reitschuster

Caught in the Lattice

abstract This paper connects recent philosophical discourse on ontological entanglement and materialist epistemologies, following the unfolding of the ecological crisis with the modern episteme, through the historical example of the Linnaean classification system. It suggests a comprehensive theory of grids as a relay between the concrete and the abstract, coining the term conceptual grid. For this purpose, Bernhard Siegert's media-theoretical understanding of the grid is modified.

As conceptual grids shape perception, they become widely invisible. This unnoticed pre-structuring of relations to the world is problematized in the contemporary humanities discourse on the ecological crisis. To counter the separating functions of the conceptual grid, notions such as holobiont, endosymbiosis and sympoeisis are drawn from recent observations in evolutionary biology, arguing for an entangled becoming-with.

In 2018, a spider was observed nursing its offspring — a scene more often associated with mammals, such as cats and dogs, than with spiders. The Chinese scholars who observed this phenomenon published their findings in *Science* and emphasized the extraordinary mammalian behavior of this jumping spider (Chen et al.). There have been other cases that included pigeons and cockroaches, for example, in which animals that are not classified as mammalia produce a nutritious fluid to feed their offspring. Their way of food provisioning differs from the

class of mammalia in the duration of providing milk and the associated social interactions with their offspring (Chen et al.). What is interesting about the observation of the behavior of the jumping spider is the fact that the "milk" produced by the spider resembles the milk produced by mammals, not only with regard to its nutritional composition but also regarding the behaviors that surround the procedure of nursing (Chen et al.). These findings are surprising and uncanny because they appear to fracture the persistent taxonomy and the practices of observation that depend on it.

Although the jumping spider, or Toxeus Magnus, shares a set of qualities with other animals of the class Arachnida — defined as joint-legged invertebrate animals — it differs severely from its assigned class regarding its reproductive behaviors. The nursing habits of the spider had not been observed before due to assumptions about the spider's behavior that were based on its classification into the class Arachnida, which, in turn, was based on its physical features, rather than empirical verification. This spider emerges as a monster, challenging the very logic of taxonomy itself. The notion of the Monster, as I would like to define it in this context, bears a twofold meaning. Firstly, it implies something "un-natural," meaning that it defies the normative functions of taxonomy. Secondly, and according to the way that Donna Haraway employs the term, it describes a being that merges two separated

categories and is therefore something in between (*Simians* 180). This is also what happened in the case of the Toxeus magnus, as it exists both inside the order and simultaneously outside of it. Therefore, the case of this spider is able to demonstrate the limitations of the taxonomy precisely because its reintegration into the order does not quite work.

In my view, the simultaneity of the application of order and its failure lies at the core of the emergence of monstrosity. Therefore, I would like to argue that monstrosity is actually produced by the order itself. Seen and described through the grid of the order, Toxeus magnus subverts the perpetual naturalization of the taxonomic grid by its monstrous emergence. It does not only indicate the contingency of the order but also calls attention to the in-betweens that exist alongside the established categories. In the introduction to *Arts of Living on a Damaged Planet: Monsters of the Anthropocene*, Anna Tsing et al. propose that "[m]onsters are the wonders of symbiosis and the threats of ecological disruption" (M2). In other words, symbioses of entangled species appear as mythological chimeras known for transgressing species boundaries that emerge from presupposed separations. The quote also refers to the perceived monstrosity of certain species caused solely by the disruptive actions of humans. With these propositions in mind, the case of the Toxeus magnus compels us to rethink the historically contingent order that constituted its monstrosity in the

first place. This paper explores the means and materializations of classification as a conceptual grid, departing from the paradigmatic case of the taxonomy invented and established by the Swedish biologist and botanist avant la lettre Carl Linnaeus (1707-1778). His ordering system of plants and animals is, with its modifications, adaptations, and an ongoing expansion of classified species, still in use today (Polaszek vii).

In the first section of this paper, I will provide a brief overview of the history of the creation of Linnaeus' taxonomy and examine its connections to theology and European colonialism. In the segment that follows, I will analyze the "mission" of Linnaeus' attempts to establish an inventory of "nature" and point out the effects of economic rhetoric and the relation to life forms along the lines of Martin Heidegger's notion of the GESTELL. I will then turn to Foucault's historical analysis, in which he identifies the Linnaean taxonomy as emblematic for the modern episteme, which emerges alongside a new practice of knowledge production, organization, and visualization. I will argue that the Linnaean order imposes the structure of a tabula, a conceptual grid that implies specific mechanisms of inclusion into the order. However, its scope is not limited to the classified objects, as it transforms the relation between entities. Thus, its structure also has an immense impact on our perception and ways of existing in the world. Our acts of observation are caught and shaped by the lattice and

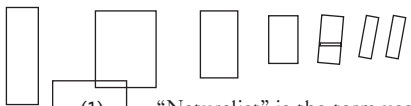
inform the investigative gaze of scientists and knowledge communities. This section will be guided by questions concerning the characteristics and implicit functions of organizing knowledge in a conceptual grid. In conclusion, I will develop a critique of the "naturalist ontology" of which Linnaeus' taxonomy is a part. With regard to the ecological crisis, scholars such as Donna Haraway, Anna Tsing and Bruno Latour have questioned this particular way of producing, organizing, and representing knowledge in and through conceptual grids. They emphasize the interdependencies and the situatedness that constitute every life form. Their projects each offer a distinct approach to the reintroduction of the human into its wider entanglements, thereby overcoming the separation between "culture" and "nature."

Genesis of a Symbolic Arc

Born and educated in Sweden, Carl Linnaeus (1707-1778) published his ideas for a system of classification of plants and animals according to their sexual organs in what would become the first of twelve editions of *Systema Naturae* (1735). His system of classification was founded on a method of comparison, identifying similarities and differences among anatomical and reproductive features (Stach 41). It allowed the organization of entities into taxa or groups. These groups were then assigned a certain rank: domain, kingdom, phylum, class, order, family, genus, and species.

In addition to the taxonomy, Linnaeus invented a corresponding naming system that resembled the first-and-last-name system used by humans, and which has therefore been described as "more people-like" (Farber 11). The classified entities thus received the equivalent of a family name, referring to the genus, and a first name reserved only for the single species. This system, called the binomial nomenclature, consists of a combination of two Latin or Latinized terms and cannot be employed separately from the taxonomy. Thus, in order to accept the designations, Linnaeus's contemporary scholars were forced to accept his system of classification as well.

Historian of science Paul L. Farber has described how Linnaeus and his contemporary colleagues encountered newly imported species from the colonies. He notes that "[n]aturalists examined these specimens in order to document the creation and to keep better track of potentially valuable products" (Farber 8).[1] The search for economically exploitable species that could be transformed into commodities by selling them to collectors for their "curiosity cabinets" can be considered one of the reasons that classifying and ordering took



(1) "Naturalist" is the term used to refer to the scholars who were working in the broad field of what we understand today as the distinct disciplines of biology, botany, and zoology.

place (Farber 22). The other reason proposed by Farber is that the naturalists realized that nature, or "God's creation," was a lot more diverse than they expected (22). These experiences of the unknown, the exotic, or the alien sparked the motivation to integrate what was not yet integrated into the commonly accepted framework for ordering and describing natural phenomena. Linnaeus and his "apostles," as he had started calling his students, saw the ordering of the "divine creation" as Biblical, and as fulfilling "Adam's task" of giving every animal and plant a name (Blunt and Stearn 183).

It is important to note, however, that Linnaeus and his contemporaries thought of "creation" as static and complete. Thus, Linnaeus believed that the species as he observed them during his lifetime had not changed since their "Godly creation" (Farber 11), and he assumed the task of classifying to be a finite one. Only seventy years after Linnaeus's death, the dynamic genealogy of species was introduced by Charles Darwin, transforming the visual representation of taxonomy from a grid structure into the tree of evolution.

Divide et Impera!

The Linnaean INVENTORIZATION — I use the word inventorization here to emphasize the process of converting entities into elements suitable for an inventory — of "Godly creation" has manifested itself in two ways. On the one hand, the inventory has become a system to

demonstrate the extinction of numerous animal and plant species. The classification system has thus taken up an emancipatory function for organizations and activists that fight for the protection of the diversity of species. This is made possible due to the structural qualities of the grid: species assigned to a certain place in the grid cannot be found anymore because they have gone extinct. Through the empty spaces and fields we can now see the destructive effects of climate change and human activity on the earth. On the other hand, the term "inventory" employs a rhetoric of economics. In this sense, an inventory is performed to check which resources are available and in stock.

A philosophical account of the inventorization of the planet and its reduction to exploitable qualities has been provided by Martin Heidegger, who embeds it into a larger historical and epistemological configuration of Western scientific thought. Heidegger uses the term BESTAND ("standing reserve") to address how through inventorization the natural world becomes inanimate and passive, a resource that is "ready at hand" (17). This perspective on the world also turns itself against humans and includes them in the Bestand. This particular way of engaging with any possible entity is due to what Heidegger calls the GESTELL ("enframing"). It puts ("stellt") entities in an assigned place and frames them according to a technically accessible understanding (Heidgger 19). This pushes other possible modes of

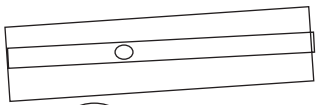
being, interdependencies, and interrelations between the entities declared as Bestand into the background. If we attempt to visualize the Gestell, it resembles a grid structure in which humans perceive the world around them as passive and ready for inventorization and exploitation. Vice versa, the Gestell helps to highlight how the Linnaean classification system can function as a grid in the sense that it has the tendency to passivize and stop the metabolic circle of life forms — to wipe out interrelations and categorize all entities under even more specified forms of control and supervision. The classification system bears specific functions concerning the production of knowledge and diagrammatic characteristics that will be examined in the following paragraphs.

Linnaeus's project of classification is exemplary of scientific development at the cradle of modernism. Michel Foucault identifies a break with the previous episteme of the "classical age." He explains how "[w]ithin a few years (around 1800), the tradition of general grammar was replaced by an essentially historical philology; natural classifications were ordered according to the analyses of comparative anatomy; and a political economy was founded whose main themes were labor and production" (Foucault xi). These newly emerging sciences

> always carry within themselves the project, […] of an exhaustive ordering of the world;

> […] and at their center they form a table on which knowledge is displayed in a system contemporary with itself. The center of knowledge, in the seventeenth and eighteenth centuries, is the table. As for the great controversies that occupied men's minds, these are accommodated quite naturally in the folds of this organization. (Foucault 82)

In this passage, Foucault connects the material table — a piece of furniture — to a conceptual table as a new way of framing and organizing knowledge. Foucault's description of this historical turning point can be positioned in opposition to Heidegger's suggestion that the Gestell had already emerged in ancient Greek society and throughout the history of the Western world. In the following passage, I will focus on a more specific inquiry into the functions and subversive presumptions of the grid as a taxonomic tool. Accordingly, I shift the focus to the researcher's table and its role in the process of transforming living beings into data to make them conform to the conceptual table, or, what I found to be a more useful term, the CONCEPTUAL GRID (Siegert 98).



(2) I apply it as a broader notion for not only the Linnaean classification system but also a certain set of specifically functioning taxonomies.

In order to define the term "conceptual grid,"[2] I will compare it to the analysis of grids in urban planning and geography developed by media theorist Bernhard Siegert. By doing so I aim to clarify the similarities and differences between them and point out the analytical surplus of the conceptual grid in the context of the Linnaean system and beyond. Although these two forms of the grid share many characteristics, they differ in one crucial aspect. Departing from Siegert's understanding of the grid, I will propose that his notion needs to be extended and modified in order to transform it into an applicable tool for the analysis of qualitatively operating systems of classification.

Siegert proposes that the grid can be described as a "cultural technique" — orders of symbolic apparatuses of differentiation, which make "the real" articulable and thus operational (Siegert 14). He adds that grids have the tendency to assert themselves as the real and can therefore become "naturalized" and, thus, invisible. Alongside the dividing and separating qualities of the grid as cultural technique, Siegert identifies three main characteristics deriving from the inquiry into representational, cartographic, topographic, and speculative grids. Firstly, the grid serves to constitute a world of objects imagined by a subject (Siegert 98). This point evokes Heidegger's notion of Gestell in that it underlines the functions of the conceptual grid concerning availability and controllability of all that is conceived through it.

Secondly, the grid serves as an imaging technology that enables the projection of "a three-dimensional world onto a two-dimensional plane" (Siegert 98). In this sense, the grid must be understood as a type of representation that presupposes a geometrical space in which objects can be located. Although Siegert refrains from making this statement, I would like to propose that this form of visual representation is the end point of processes of abstraction and reduction. Let us take up Foucault's thread again and reconsider the material aspect of the table and its function for the naturalist episteme. The physical table enabled scholars to lay out their objects of study, arrange them in order to overlook them and assign them to a certain order. The categories of the order were derived from the anatomical qualities that could then be compared to others' intrinsic characteristics. Therefore, the grid's mechanisms of dividing and separating could be understood literally with regard to what is done to the bodies of examined animals: the organism is taken apart, resulting in its death (Siegert 98). Connected to this practice is the development of preservation strategies such as taxidermy, which can be etymologically translated to "ordering of the skin." Furthermore, the removal of an animal's skin is a clear example of Siegert's argument that three-dimensional objects can be flattened onto two-dimensional surfaces. These material requirements of classification are the steps of abstraction

through which an object has to go in order to be classified into the grid-scheme. In the following paragraphs, I will take a closer look at these processes of abstraction.

By the time the animal arrives on the scholarly table, the first steps in the abstraction process have already been taken. The animal, either living or dead, is brought into the artificially constructed environment of the scientific laboratory and is thereby taken out of its former context. Through the processes of examination described above, the animal is turned into an object and thus becomes data. In the final step, the object gets assigned a "new" name and is then assigned its corresponding place in the table of the classification. Much like the physical table, however, the space of classification is conceptualized as a geometrical, Euclidean space, in which every object can be placed next to the other without taking engagements among them into account. This new idea of a space divided into columns and rows turns a three-dimensional world into a flat surface (Siegert 98). In the case of the Linnaean classification system, the process of positioning in the grid is determined and indicated by the binomial nomenclature that employs a coordinative function through genus and species. The void of each window in the grid builds the operative condition of enclosing life forms in a coordinative system and results in a specific type of perceiving the world.

The scholarly table, tightly connected to the new episteme of organizing and ordering knowledge,

necessarily also evokes the role of the scholar that stands behind the table. The entity watching over the physical table necessarily stands outside of the realm that can be translated into the two-dimensional world of the conceptual grid. Haraway proposes that this "God trick, of seeing everything from nowhere" has established a new subjectivity of the all-observing subject that takes on the "Godly" position outside of space and time ("Situated Knowledges" 581). This absolute subject thus envisions itself in a world of objects and understands itself as the only actor in a passivized "nature" through the conceptual grid (Siegert 98).

Siegert's third and final characteristic of the grid is that the grid serves as a diagrammatic procedure that uses specific addresses to store data. This can be implemented in the real as well as in the symbolic. With regard to the Linnaean taxonomy, this perception turns living beings into data by extracting certain qualities before assigning them a place in the taxonomic conceptual grid. In Siegert's example of the urban planning of colonial cities such as Lima, the assigned address refers to an actual place in the material world, a street and a house where the person resides. Conversely, in the conceptual grid of Linnaeus' classification, the address or the assigned place in the grid does not refer to a place in the real but to an artificially constructed conceptual space. I would like to propose the example of Toxeus magnus. Through processes of reduction and

abstraction, the spider is transformed into an object that can be arranged not only on top of the "table of knowledge" but also within the conceptual grid of taxonomy. As an object, it can be categorized into the class Arachnida based on certain qualitative attributes. These attributes have been singled out and thus constitute the logic of the order. Furthermore, the animal's name becomes operational in the symbolic order of the taxonomy, referring then to the classification system itself and its own intrinsic order. Arguably, what I referred to as MONSTROUS in the introduction now reveals itself as the "real" breaking into the symbolic realm of the ordering system, suddenly claiming two distinct places simultaneously. It is actually the monstrosity of symbiosis when multiple species that live across boundaries demand a single place in the conceptual grid. Held against that reality, the monstrosity of human behavior towards its living surroundings becomes apparent.

Limits of Order

As we have seen, the grid, as a medium of rationalization, demands the stripping away of most of the interrelations and dependencies in which the animal is embedded during its lifetime, and therefore underlines its independent autonomy. In order to fit into the grid, the animal is reduced to a type based on specific predefined characteristics. Rather than reducing living entities to

passivized inanimate objects that can be positioned in a Euclidean space, I would like to propose that these entities should be considered as situated in a space that has been constructed on the foundation of their intrinsic entanglements. This understanding would associate this space with having its own history, development, ephemerality, and being constituted by the living matter inhabiting it, rather than the other way around. This does not mean that everything is connected to everything in a universal sense but rather in a local one. As a critical anthropologist, Anna Tsing employs the notion of ASSEMBLAGES to describe these local entanglements of life:

> Assemblages are open-ended gatherings. They allow us to ask about communal effects without assuming them. They show us potential histories in the making. […] For living things, species identities are a place to begin, but they are not enough: ways of being are emergent effects of encounters." (16)

For Tsing, every life form is at the same time product and producer of assemblages. They build worlds through entanglements between species that are not limited by the supposed "purity" of species based on their assigned position in the conceptual grid (168). A living being always refers to the living beings around it, which cohabit

in symbiosis or other ways of entanglement. By emphasizing the relations that exist between living entities, Tsing counters the naturalist classification that produces a hierarchy from the general to the particular.

When creating his classification system, Linnaeus considered only sexual relationships and means of reproduction to be of importance for species' survival. A possible explanation for this approach is the importance of reproduction for securing a species' availability as a resource. However, this approach of "enframing" conceals the fact that life is dependent on other life in a much broader sense, as proposed by Tsing. To give an example: a single individual tree conceptually can exist on its own in the classification system. In the material world, however, a tree could never autonomously sustain itself. Recent publications on the "Wood Wide Web," for instance, stress the communication and exchange of nutrients among trees in a forest (Macfarlane 2). A vast network of fungi not only connects the tips of the roots and mediates between the trees but also extracts minerals out of the soil so that the tree can absorb them. The Linnaean order maintained the image of a single tree standing in an isolated space, and existing as a closed-off individual entity. The tabula structure, with its columns, rows, and qualitative features limited to a topographical logic, tends to support a restrictive understanding that does not allow us to perceive interactions and cross-pollinations between its cells and

boxes.

The field of environmental humanities has been characterized by the critique of conceptual grids that govern the binary distinction between human and nature. Scholars such as Haraway (2016), Tsing (2015) and Latour (2017) have introduced notions such as SYMBIOSIS, SYMPOIESIS, ENDOSYMBIOSIS and HOLOBIONT — terms that, interestingly enough, originate from the field of evolutionary biology — into their critiques. The latter two terms, endosymbiosis and holobiont, were originally coined by the biologist Lynn Margulis, following her research on the mutual exchange of DNA between bacteria outside of reproduction (Margulis 2). In particular the notion of the holobiont is an attempt to reintroduce the human into its wider interspecies entanglements. It tries to capture the human being's dependencies on all sorts of bacteria inside and on the body's surface, ones that take on an important role in the health and wellbeing of the organism. What has been classified according to Linnaeus's system as Homo sapiens, is in fact a unity of various species and uncountable organisms that originate from different kingdoms. Boundaries that have been traced between species are therefore not only transgressed in behavioral aspects, as was the case with the Toxeus magnus, but also on the level of physical boundaries. Examples of these transgressions could be the horizontal DNA exchange between bacteria, or the incorporation of one

organism into another, creating a long-term symbiosis, like mitochondria in every eukaryotic cell.

Like the monstrous jumping spider, these notions, which address the entanglements between species, emerge out of the classification system — they attempt to reunite what has been separated into single individual units by the consistent application of the conceptual grid. The means and materializations of conceptual grids, such as the Linnaean taxonomy, not only prove to be insufficient to account for and think about twenty-first century planetary entangled living, but could directly endanger its future.

Conclusion

The Linnaean classification system established in the eighteenth century had a significant impact not only as being fundamental to emerging new disciplines such as botany, biology, and zoology, but also in shaping the way humans perceive and interact with the world around them. Identifying Linnaeus's project as a conceptual grid allows for a broader examination of its functions and material requirements. First of all, it works as a mechanism of abstraction in displacing and reducing living beings to certain characteristics with emphasis on reproductive behaviors, thus materially deconstructing the objects it aims to classify. Secondly, it introduces a mathematical understanding of space that enables the assignment of places in an infinitely expandable grid.

Thirdly, the conceptual classification of species divides and separates different entities that co-exist interdependently in the material world. These entities are reduced to certain characteristics, given a name and assigned a place in the conceptual grid, and are thereby stripped down to a conceptual object that can be assigned a place in the symbolic realm of the classification system itself. Furthermore, the system demands that a subject takes on a Godlike position that overlooks all species in order to assign an object to a specific space. However, this Godlike subject is also, like the objects of study, stripped of its context. Ultimately, the conceptual grid also has effects in the material world because it has heavily shaped our perception of and our access to nature by conceptualizing it as an exploitable resource.

With the human gaze caught in the lattice, no single species can escape the net of the conceptual grid. The ordering and assigning of places in a tabula structure results in a blindness for entanglements, interrelations, and dependencies. Thus, the conceptual grid illustrates a way of being in the world, and exemplifies one aspect of the naturalist ontology that makes it relevant, not only in contemporary scientific discourse but also in the experience of everyday life. As living beings we must remind ourselves of our dependencies on everything living around us, for Life, as shown, happens off the grid in its gaps and cracks.

biography Lena Reitschuster studied South Asian Studies and Religious Studies at Heidelberg University, Philosophy and Curatorial Practice at HfG Karlsruhe, and Media Studies at The New School in New York. Her research is located at the intersection of philosophy and biology with a focus on the conceptualization of broadscale system change in the face of ecological crisis.

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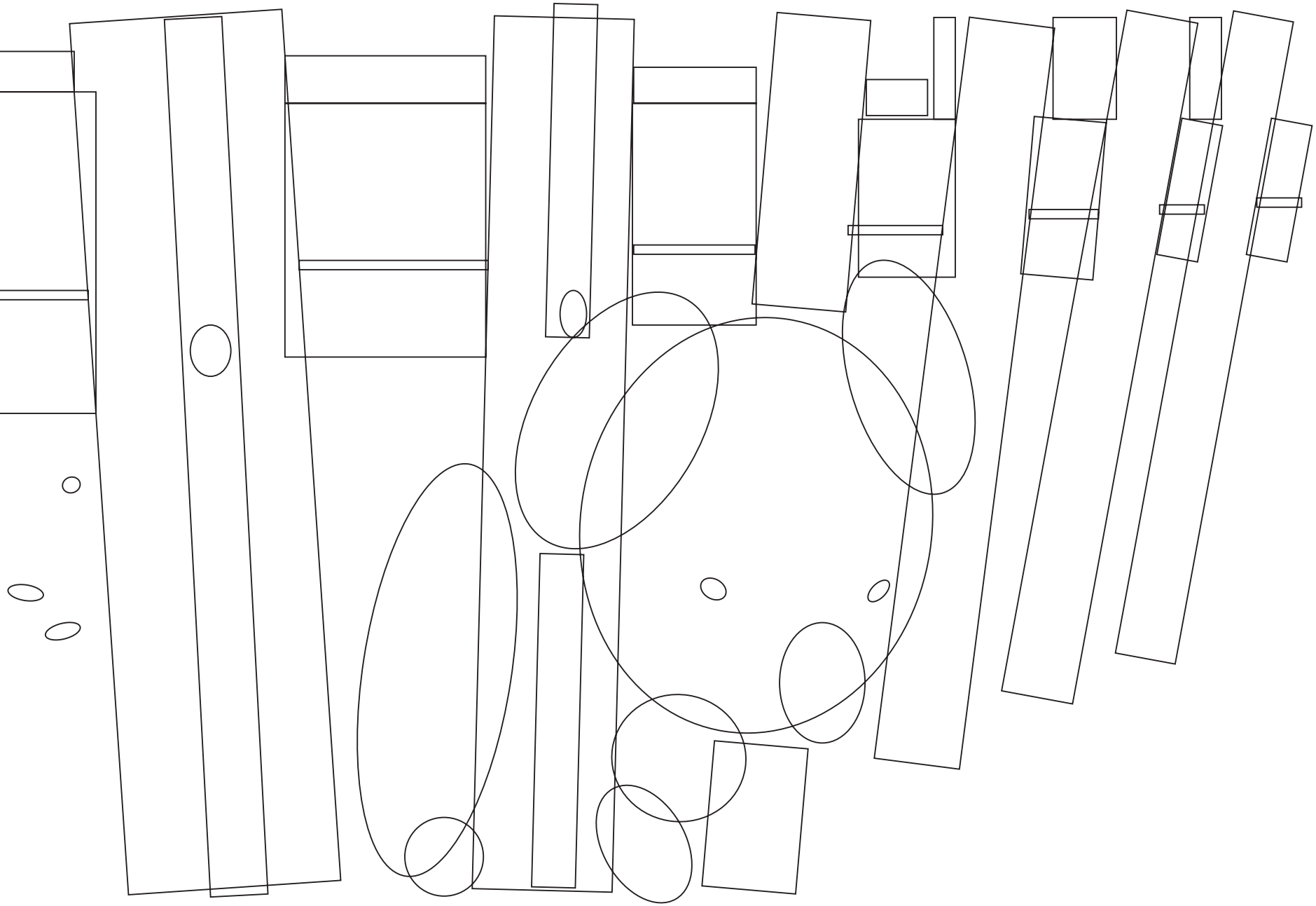


Mina Hunt

Grid Locked

abstract This essay explores how migrant transgender experience is structured through medico-legal and temporal grids. Following other trans scholars, such as Dean Spade, this paper uses autoethnography to break down the barrier between theory and its object, foregrounding my own subjective stakes within grids of transgender control. Specifically, this essay analyzes the consequences of being in-between or off the grid, and ultimately asks to what degree this is currently possible for trans people seeking medical and legal services

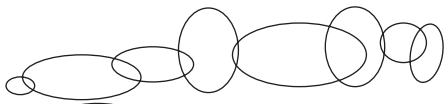
as migrants. Ultimately, despite my own privilege as a white transgender woman, at the time of writing this I have not been able to escape the controlling aspects of the grid(s) described here. This lack of agency has reinforced, and reiterated, a progressive linear temporal unfolding through the medico-legal system as I fail to become fully legible to the biopolitics of the grid.

> Midway upon the journey of our life
> I found myself within a forest dark,
> For the straightforward pathway had been lost.
> Dante Alighieri "Canton I," *The Divine Comedy*

In 2016, while recovering from a scuba diving accident that almost claimed my life, I began to medically transition from male to female.(1) At the time of my accident in the South China Sea, I was living in Asia. As a result, my transition has defied typical trajectories, taking place across three different countries, as compared to a process that normally unfolds in a single country. What makes my experience a potentially unique frame for analysis is its position outside

of the usual frameworks which determine the transition from one gendered category to another.(2) I find myself unintentionally outside of the grid.(3) As a white, Canadian, transgender woman, transitioning outside of her country of origin and citizenship, my experience helps to expose the rigid nature of the medico-legal and temporal grids which structure transgender experiences. From this perspective, I can test the normalizing tendencies of these grids and their potentially dire consequences for trans people trying to do their transition differently.

By using my own experience with organizational structures, which function to discipline and normalize subjects, I aim to shed light on the degree to which we can have agency as we move through grids of transgender control. Starting from my experience with the different medico-legal systems, this paper outlines two overlapping



(1) "MtF" is a hackneyed term which does not account for my own sense of gender/sexed subjectivity, but it is a useful shorthand.

(2) "Transition" is a complicated term. Though I dislike this definition for myself, and the normative temporal mechanics it casts my narrative in, I believe that it suits the use of the word in this paper, if problematically.

(3) My prepositional relationship to the grid(s) is disorientating; whether outside or between grids, my position is heterotopic, which allows for an incongruent discursive space to materialize from which to analyze the grid.

grids implied by my transnational gender transition. The first grid is composed of two aggregate parts: medical and legal, referring to the medical transition process and how it is imbricated with the legal legitimation process to which only some trans people who are fortunate enough to live in certain states have access (for example Canada and the Netherlands). The second grid I outline is temporal, it enfolds and subtends both the medical and legal aspects of my transition. This paper explores my attempts to work outside and in-between these grids as structuring systems, questioning how they determine the biopolitical metrics of some trans people as worthy of life and others as worthy of death and abjection. My work also explores the specific consequences of being in-between or off the grid, and ultimately asks to what degree this is currently possible for trans people seeking medical and legal services.

Autoethnography

An autoethnographic method is central to the work of this paper. Drawing from my own experience to write the theoretical across the personal, I follow a methodological choice practiced by other trans scholars. In using my own experience as a transgender person who has transitioned transnationally, I aim to show how existing in a liminal position between various national and legal systems of administration reveal their biopolitical function, while remaining acutely conscious of my own position. Writing from his own experience with the medical system in

"Mutilating Gender", Dean Spade comments on how medical services both enforce and potentially alter normalizing processes. "His refusal to feign a disinterested distance from the topic of his analysis, his explicit articulation of his embodied stake in the matter at hand, and the knowledge gained from his own embodied situation," as editors of *The Transgender Studies Reader,* Susan Stryker and Stephen Whittle argue of Spade's work, "all exemplify important methodological hallmarks of transgender studies" (315). In a sense, autoethnography refuses categorization: it is interdisciplinary, a hybrid style of the personal and the ethnographic. It is a disruptive form, blending the personal and political and sitting at the limits of academic writing. Like Spade, I choose this mode of writing, thus refusing to ignore my own positionality within the grids that control me, as this methodology will inevitably reflect the position that I inhabit within the grids I analyse.

Elizabeth Ettorre writes that one of the primary roles of autoethnography as a feminist method is to demonstrate that the personal is political, while also highlighting the precarious position of the subject (4). To autoethnographically engage with the concept of the grid helps me uncover how medico-legal systems create precarious positions for trans subjects, drawing particular attention to the challenges faced by mobile trans bodies like myself. Moreover, Ettorre points to autoethnography

as a performative method committed to the future, a future that does not merely maintain the status quo but holds a liberatory potential. For queer theorist Judith Butler, PRECARITY and PERFORMATIVITY are intertwined. Butler argues:

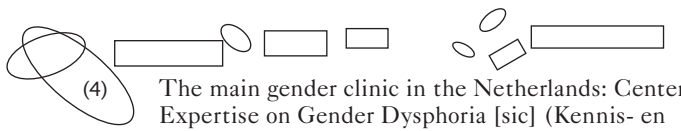
> Performativity does take place when the uncounted prove to be reflexive and start to count themselves, not only enumerating who they are, but 'appearing' in some way, exercising in that way a 'right'…to existence…The exercise of the right is something that happens within the context of precarity and takes form as a precarious exercise that seeks to overcome its own precarity. (Butler and Athanasiou 101)

By thinking through Butler and Ettorre, and making the analytical focus of my work my own personal position — situated off and in-between national medico-legal grids — I attempt to create a space in which I can point to the precarity of this situation and its consequences. By doing so, I highlight a lack of services, an oversight of the system, and an intolerable positionality, which, ultimately, I seek to transform. Through my autoethnographic method, I count myself in the calculus of societies which surround me and demand to be counted, to demand a better future for myself and others in my situation.

Personal Context

In retrospect, I always assumed that starting the process of my transition in South Korea would be the most challenging aspect of the experience. In a sense, I was fortunate as I was able to pay out of my own pocket for my psychotherapy sessions, my diagnosis report — which was not covered by the insurance — and the thousands of euros' worth of medication and laser treatments. However, I was looking forward to relocating to the Netherlands (and to Westen Europe in general), where I hoped I would be able to express myself openly, and to pursue further medical treatment. In South Korea, surgery is not easily accessible and legal recognition of a sex change is difficult for natives and impossible for foreigners to attain. Although I was waitlisted at the VUmc(4) and had contacted the Canadian government with regards to my legal status within a month of arriving in the Netherlands, I am still waiting for a response today, more than a year later.

Around the time I relocated, in the summer of 2017, there was a considerable amount of global media attention that focused on Canada as a leader in LGBTQ+ rights, particularly regarding the inclusion of



(4) The main gender clinic in the Netherlands: Center for Expertise on Gender Dysphoria [sic] (Kennis- en zorgcentrum genderdysforie)

gender identity in the Human Rights Act (Bill C-16, which was ratified in 2017). The Williams Institute on Sexual Orientation and Gender Identity Law and Public Policy, based at UCLA School of Law, ranked Canada in the top five countries for both the protection of LGBTQ+ rights and acceptance by the wider population (Flores and Park). Bill C-16 uses a nebulous definition of anti-discriminatory language when outlining its protection of gender identity. EGALE, the largest Canadian trust for LGBTQ+ rights, defines this in the context of federal and provincial services ("What is Bill C-16"). An example of this anti-discrimination policy at federal and provincial levels is the recent extension of non-binary labels for passports at the federal level, and for birth certificates and drivers licenses at the provincial level (for some provinces).

However, contrary to this narrative, my gender identity was not protected, recognized, or made legitimate through the Ontario provincial government or through the Canadian federal government. This lack of recognition and the government's refusal to take action on my account hinges on a technicality which exposes the nationalism implicit in these rights extensions. I am no longer a resident of Ontario, my home province. Therefore, I cannot change my name on the basis of the Ontario Change of Name Act. At first, I considered this a surmountable legal barrier. After all, I had the Canadian Human Rights Act on my side. However, through dealing

with the Ontario Office of the Registrar General, the Premier of Ontario (the highest level of the Ontario provincial government), the Minister of Consumer Products (also a provincial minister), the federal advisor to Justin Trudeau on LGBTQ2[5] matters Randy Boissonnault (a member of Parliament for Edmonton Centre), and a minister of Citizenship and Immigration in Canada, I was repeatedly told 'no'. My attempts to be recognized by the Dutch system were equally futile. My failure to conform to the grid has had severe material and affective side effects: access to job opportunities, travel, issues with finding a place to live, and the emotional and psychological effects that this ongoing precarity caused.

Grids as Regulatory Structures

In my experience, two regulatory structures, the medical and the legal, are decisive in transitioning across three national medical systems. Together, I read these systems as what Michel Foucault names "a grid of intelligibility of the social order;" a complex interaction of power structures and systems of social regulations (93). While I will analyze both of these structures as separate but overlapping, according to their particular functioning, and

(5) "LGBTQ2" is primarily a Canadian variant of the LGBTQ+ acronym. The "2" refers to two-spirited.

the power and control they wield in their national contexts, I will also consider the consequences of their interlocking into a multi-faceted system of control — a grid of intelligibility.

> Gender, as a grid of intelligibility, finds its materializations in social regulations of gender norms. For Judith Butler, gender norms allow for certain kinds of practices and action to become recognizable as such, imposing a grid of legibility on the social and defining the parameters of what will and will not appear within the domain of the social. The question of what it is to be outside the norm poses a paradox for thinking, for if the norm renders the social field intelligible and normalizes that field for us, then being outside the norm is in some sense being defined still in relation to it. (Butler, *Undoing Gender* 42)

Butler's performative take on subjectivation allows for movement within the grid of legibility. Within performativity, there is the occasion of slippage when we reiterate and perform norms. While we cannot escape the grid at once, we may be able to shift it through reiteration. I am here performing a form of resistance to the grid through autoethnography and writing this essay. I am not simply reiterating what is, but attempting to rearticulate a new norm — a better future. Thus, grids become a matter

of legibility and regulation of norms, but with a chance to reshape its rigid structures.

To contextualize my own experiences within regulatory state practices that govern gender, I draw on Susan Stryker's understanding of Foucault's concept of BIOPOWER and its role in normative subject creation: "[b]iopolitics, generally speaking, describe the calculus of costs and benefits through which the biological capacities of a population are optimally managed for state or state-like ends" ("Biopolitics" 38). Stryker notes that there is a "near-total absence of a gender analysis" in *Discipline and Punish* and *The History of Sexuality*. She emphasises the importance of including gender in biopolitics, as "gender… is an apparatus within which all bodies are taken up, which creates material effects through the bureaucratic tracking that begins with birth, ends with death, and traverses all manner of state-issued or state-sanctioned documentation practices in between" (39). It is precisely this notion of 'bureaucratic tracking' and 'state-sanctioned documentation practices' from which my own issues with state recognition, and their material and affective consequences, stem.

Temporal Grid

In my case, the temporal grid implied by my transnational transition imposes a kind of recurring retrograde temporality, as each system I move into forces me to start again: the Dutch system will not accept my

medical transition from South Korea, Canada will not accept documents from the Netherlands, etc. This causes any sense of self-progression to be halted, forcing me to go back to the beginning. After almost two years in the Netherlands, I am still unable to get hormones through a gender clinic, despite having started treatment in 2016 in a different country. The legal implication of this interrupted linearity is also complicated, as I currently have two legal genders: one is not recognized in the Netherlands (X for unspecified). I am also in the process of attaining an F for female on my Dutch documentation, something that will force me to start the process over again in Canada. Thus, the unfolding of the legal recognition of my embodiment is systematically interrupted on multiple levels.

Sandy Stone's work helps me to explore trans temporality as a grid which imbricates with the medicolegal grid. Stone's "The Empire Strikes Back: A Posttranssexual Manifesto", is, at its core, an essay about narrative construction and chronology. Two temporal vectors are clearly present in Stone's manifesto and both have important roles to play in the formation of trans temporality. Analyzing Jan Morris' autobiographical mirror scene from *Conundrum: An Extraordinary Narrative of Transsexualism*, Stone recounts Morris' goodbye to herself in the mirror before surgery. She describes this scene as "exit James Morris, enter Jan Morris, through the intervention of late twentieth-century medical practices in this wonderfully 'oriental,' almost religious narrative of

transformation" (222). Stone frames her manifesto with this narrative and in it, Jan's transformation is depicted as inexorable, as if through "mysterious powers." Here he/she bridges a temporal gap and moves into the futural Jan and emphasizes this point by pointing to the "exit," or destruction of the former James.

Stone also points to the retrograde sense of trans temporality in her observation that transsexuals erase their past through "diagnostic criteria" (230). This erasure takes the form of the creation of "plausible histories" (231). In other words, a trans person's past must conform to the medical criteria of what is seen as a typical transsexual — a patriarchal, heterosexual interpretation of female gender conformity. There is a practical sense to the creation of "plausible histories," the imperative to fit in with cis women, "to fade into the 'normal' population as soon as possible" (23). Similarly, this medically-induced narrative device is used to make transsexuals conform to normalized narratives in order to access healthcare. Simon Fisher et al. point out that this negation forces trans women into a "chronological progression from a 'terrible-present-in-the-wrong-body' to a 'better-future-in-the-right-body,'" enforcing a future-focused trans temporality (2). Thus a temporal grid sequence replicates progression and linearity at the expense of diverse and reflective trans experience and temporality.

I want to contest the necessity of a normative

trans temporality that adheres to clinical diagnostic criteria and standardized unfolding of transgender experience through various medical and legal systems—one that takes me from wrong-bodied to whole-bodied. Other trans theorists also seek to resist this temporal grid, such as Atalia Israeli-Nevo who refuses to erase her past, declaring "I wasn't born a trans woman" (34), and Spade, who refused to adhere to conventional transition requirements. My experience with the medical and legal grids resonate with Fisher et al.'s statement that normative transgender temporal narratives negate the complex reality of trans embodiment. However, unlike Spade or Israeli-Nevo, my agency was influenced by the fact that crossing national borders has forced me to restart my transition multiple times.

Exemplifying this interrupted temporality is the process of my legal gender/sex marker 'M'(ale) to 'F'(emale) in Canada, where I cannot access the medical care system because I am not a resident anymore. While, I can, however, change my 'M' to an 'X' in Canada (which I have done to make travel easier), 'X' is not currently recognized in the Netherlands. Thus, my gender is currently registered as 'M/X' in Canada, and 'M' in the Netherlands. To complicate the matter, if my application for 'M' to 'F' in the Netherlands succeeds I will then have 'M/X/F'. This, of course, is undesirable and will create multiple instances of resubmitting myself to the grid, specifically the legal grid which cannot be disentangled

from the medical grid. As such, my access to gender clinic services in the Netherlands turned out to be equally as convoluted, coming from different systems with different degrees of medical transition. Thus, I am ensnared in a complex temporal grid of (un)becoming both medically and legally; my temporal narrative is not linear, but nor is this a deliberate choice. The medical and legal are essentially interrelated and dependent on each other: one grid fits within the larger temporal grid which forces a chrononormative progression, a temporality that takes the trans subject from wrong-bodied to whole-bodied, anti-normative to normative, unrecognized to recognized.

Medico-Legal Grid(s)

My experience demonstrates how the medical and legal are difficult to disentangle. For example, in both the Dutch and the Canadian system, legal recognition of a trans person's gender requires medical certification. As I have attempted to resist the linearity imposed by the grid, my various medical procedures and diagnosis from three different countries are incompatible with each other, which affects my ability to attain legal recognition. The medico-legal grid has the most profound effects on life chances, those which Spade defines are gained through access to "housing, education, healthcare, identity documentation and records, employment, and

public facilities, to name but a few" (*Normal Life* xii). I have failed to attain legal recognition of my gender in both Canada and the Netherlands. One effect of this has been on my employability. I am currently involved in the second round of application for a job in the education sector in Amsterdam, during which I will have no choice but to reveal myself as transgender. As an immigrant, I have to reveal my work permit, social registration number (BSN), etc., meaning that even a simple task like being paid by an employer through the bank outs me.(6) This would not be an issue if I could change my identity documents. There is always a chance that once I reveal my legally documented gender, my prospective employer will close my application.

Bill C-16 functions within a biopolitical regime. In analysing the bill's role, I turn to Spade's work in *Normal Life*, which builds on Stryker's short outline of the biopolitics which govern transgender lives. When shifting the focus to mechanisms of administration from a focus on anti-discrimination laws, Spade calls attention to the "lethal consequences" of the systemic distribution of life chance — or lack thereof — to certain administrative categorizations (74). Spade outlines a form of state administration that is concerned with the health and

(6) Outing is when your queer identity is disclosed against your will.

production of the overall society: "One way to think about these population-level programs is that they are created as care-taking programs" (74). Categories, like male and female, replicated in innumerable government and official documentation as uncontested biometric data points, are in fact not naturally distinguished, but reified through the state's creation and use of identity categories. The issue for me, and trans and gender nonconforming people in general, is that these categories are replicated as ahistorical and pre-existing, and proliferated across a seemingly endless array of bureaucratic policies, programs, and institutions. The grid in its medico-legal incarnation described here, functions as a categorization of bodies. Not fitting within these categories marks the subjects as non-normative and hinders their access to life chances. Life chances can be foreclosed by something as seemingly innocuous as not being able to access a driver's license, or, as I have found out, almost being arrested for not having ID that matches your gender expression at Beijing airport. These experiences confirm Spade's statement that conforming to "population norms regarding race, gender, sexuality, national origin, ability, and indigeneity always condition and determine who falls on either side of that line" (Spade 74). It is this line that distinguishes which bodies receive services and recognition and which do not. Thus, failing to be legible to the grid creates a context of multiple and chronic instances of precarity.

My experiences, ranging from applying for a job to moving through an airport, highlight how these policies of administrating gender have profound material effects on access to life chances for trans people. These categorization processes are a major mechanism for replicating transphobia, and unfortunately, inclusivity and protection legislation do not address these issues. The failure of Bill C-16 is in its almost complete ignorance of these systemic biopolitical factors which create untenable conditions for trans people. Essentially, Bill C-16 addresses societal symptoms of transphobia, not the cause. While Spade's work helps to show why Canadian human rights laws have not managed to protect trans people from systemic transphobia, there is still an issue that I have not addressed, namely, why I am not eligible for recognition by these laws in the first place — why I exist outside of the grid.

Stryker's definition of normative citizenship emphasises the way biopolitics replicate and sustain normative population categories. According to Stryker "biopower constitutes transgender as a category … in order to move some trans bodies toward emergent possibilities for transgender normativity and citizenship" ("Biopolitics" 41). Some trans bodies have been extended normative citizenship and inclusion in state services (not marked for death), just as certain homosexual bodies have been extended the same status over the past few decades. As a white Canadian of European descent, I

would normally be included in the expansion of the normative to include certain transgender bodies as I fit within the racial metrics of normativity.

Race, however, my experience makes clear, is not the only category which precludes acceptance into normative categorization: migration status is also a factor. Human rights laws, like C-16, far from protecting gender identity, function as a form of transgender-nationalism. If one investigates the Ontario Change of Name Act, the issue for me is residency. Non-residents, like me, fall through the legal grid. By transitioning differently, outside of a single national context, I have ultimately been denied recognition and been left unintelligible, on the wrong side of the calculus of biopower.

If we consider LGBTQ+ rights more generally, as a mechanism of national power and maintaining the status quo, it is perhaps unsurprising that falling outside the national systems of citizenship inclusion would limit my access to rights and protection. Trans inclusion, i.e. transgender normalization, becomes an apparatus for enforcing national power. In this rather grim conceptualization of LGBTQ+ rights extension, the individual does not matter, what matters is their utility in upholding normative national narratives and regulatory processes. Lisa Duggan, for example, conceptualises the 'good queer' as one that buttresses and replicates consumptive neoliberal practices (50). Jasbir Puar adds that "domesticated homosexual [and now transgender]

bodies provide ammunition to reinforce nationalist projects" (39). My status as a migrant, outside of normative citizenship, helps to highlight how intransigent and indifferent mechanisms of bureaucratic gender regulation can be. The grid lines outlined by my personal case study cannot be bent to accommodate these differences and inconsistencies. In almost all correspondences with government officials I have been told to consult my embassy. This gesture is a form of casting off, as the embassy is a foreign arm of the federal government with less power to take action. I am therefore excluded from institutional help and sent to the border to languish in a liminal state. In effect, helping me to recognize my gender identity, has no utility to the state. C-16 is not designed to help me, but rather to signal a form of Canadian progressivism.

Conclusion

Regrettably this analysis does not bode well for a radical departure from the grid, instead, it enforces a sense of the inevitability of its control. Regarding both the temporal and medico-legal grids, though I have tried to upend the progress narrative of trans medico-legal transition, I have ultimately had to return to the beginning and submit to the regulatory structures these grids form. And yet, as a speaker, like Stryker before me, there is an intersubjective commentary which can be formed when I talk back to my makers, those structuring

medicolegal forces. Departing from Foucault and Butler, who have outlined the rigid grids of intelligibility, I hope to perform a better trans future by untangling my personal precarious position here. This is also the goal of Stone's manifesto, which I hope I am upholding. It is worth noting that the clinic that I have been going to — an alternative to the VUmc — is not so beholden to binary notions of gender, like those suggested by Stone. So perhaps, through speaking, through reiterating this structure, we are slowly changing it and the nature of the grid, if ever so slightly.

I will finish by saying that the changes to Canadian trans human rights law, and those which affect biometric identification changes — I am thinking here of the new non-binary X markers — were achieved through actively challenging the government by means of human rights violations claims. I hope the last step in this process is doing the same with regards to the Ontario Name Change Act. Thus, perhaps though I will ultimately have to submit to the grid, in order to survive, perhaps it will help others find a way to escape in the future. In a world which is perpetually in motion, one which currently has a quarter of a billion migrants, we need to challenge the nationalism of the structures which dictate the trajectory of trans lives. It is perhaps not enough to merely change policy and law. Rather, the overarching grids which determine and direct gender transition need to be challenged.

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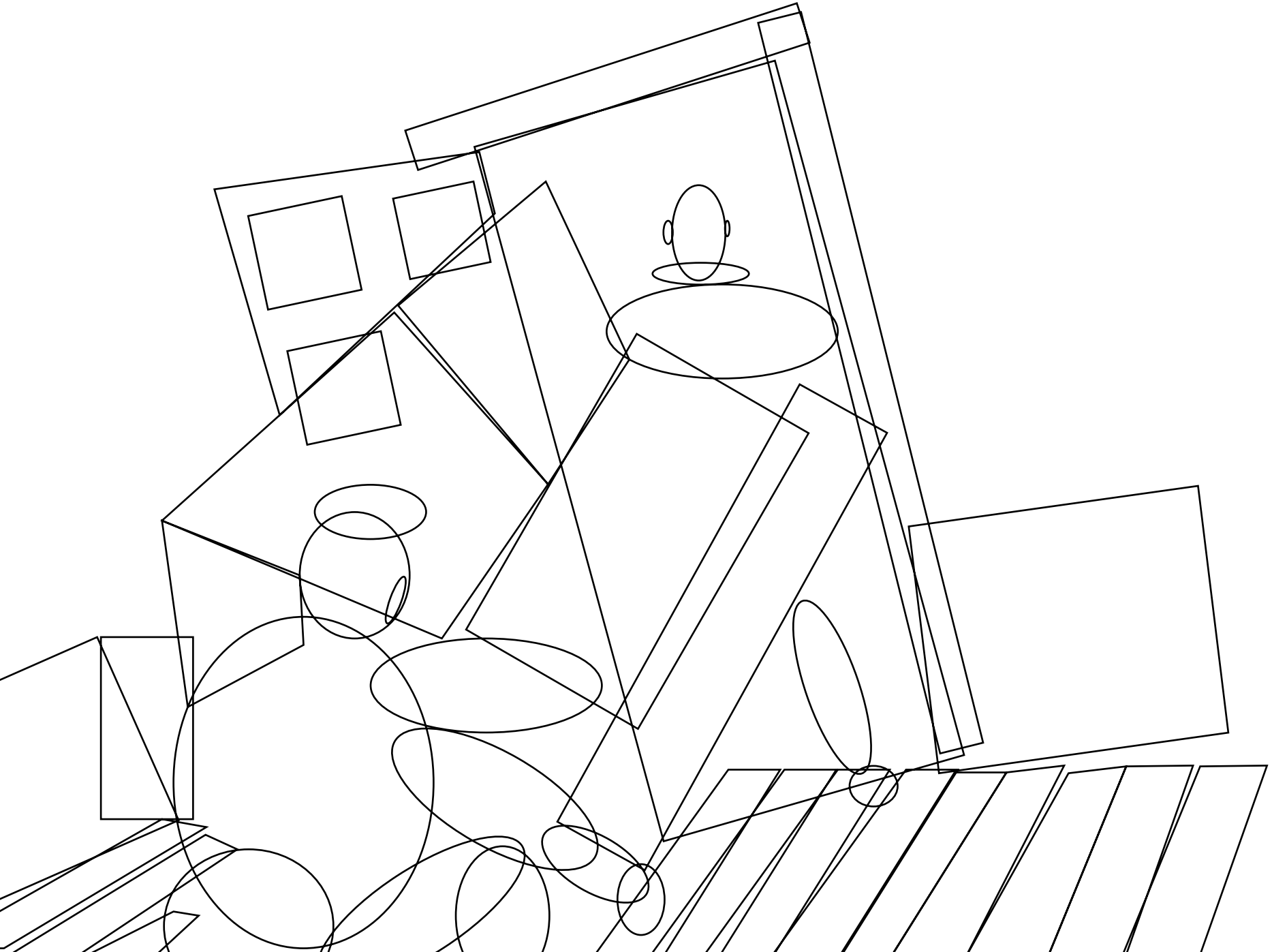

“Why are we so afraid of the grid?”

An Interview with Het Nieuwe Instituut

abstract What is the role of public institutions, museums and archives vis-à-vis the various financial and authoritative grids that support them? The Research Department at Het Nieuwe Instituut in Rotterdam works at the intersections of architecture, design and digital culture to develop the ideas, concepts and formats that in turn shape the institute’s agenda.

We spoke to Marina Otero Verzier (the institute's Director of Research), Katía Truijen (media theorist and senior researcher for *Architecture of Appropriation*) and Marten Kuijpers (architect by training and senior researcher for the *Automated Landscapes* project) about Het Nieuwe Instituut's uneasy relationship with, and attitudes towards, various gridded structures. Is it possible — or even desirable — to resist, reshape or break away entirely from these grids?

Soapbox [Calvin Duggan & Noura Borggreven]: Het Nieuwe Instituut seems to approach research from a range of different disciplinary backgrounds, fields and domains. How does the work you do here differ from that done in a more traditional academic setting?

Marina Otero: I think each of us has a different expertise. In my case, I previously worked at Columbia University in New York. In traditional academic spaces, there is a certain type of language, a set of references

and a form in which research has to be presented in order to have validation, be recognised and actually form part of a long-term conversation. Being invited to come to Het Nieuwe Instituut was a fantastic opportunity to question everything that I had done before and to ask what it means to do research in the framework of a museum, as well as in relation to a national archive. What does it mean to do things not only for professionals or scholars, but for public? What is my role, as well as the role of the department more generally, in connection to the government?

We want to position research as a particular space and time from which to look at the world and from which to disentangle normative, pervasive, familiar — even banal — realities that surround us and their forms of knowledge. We want to unfold these modes of knowledge production, question them and start looking at them differently. Research doesn't necessarily have to have an outcome. It is an open ended process. We work with questions of property, technology, gender, race and the colonial past, but we also question the role of the museum. How might research be able to create other notions of what should be included in the archive, or what an archive actually is? Must research be a phase that comes first and is then presented in the form of an exhibition or a public program? What happens if research does not happen individually, but collectively? In investigating these different ways of thinking about

research, sometimes exhibitions form the first stage of our research. In these cases, an exhibition is a public act where we pose certain questions and we want people to come and think together with us. Suddenly, research is intrinsically public in its nature. It is collective, with both experts and non-experts involved.

Katía Truijen: Maybe I can give a few examples of the kind of research we do in public. We have recently started a long term research project on video culture as a discursive space. The goal is to see how music videos allow us, on the one hand, to address questions to existing realities, but, on the other, also allow us to imagine alternative realities and possible worlds. We will investigate these questions together with a public audience and speakers that we have invited. So tonight, we will transform the library into a kind of public recording studio, almost a TV set. We have invited set designers and videographers to work with us, to help us expose the process of video production and to also build up an archive of the public conversations that we have.

MO: In this way, the subject of research and the media that we use to do the research collide to produce a new way of looking at the subject.

KT: We have managed to develop a public program through which we can update and reformulate the questions we ask along the way.

Marten Kuijpers: This public aspect, as stressed by Marina and Katía, is also key to the way we move forward with the research on *Automated Landscapes*. Our research is an open ended process, but one that is steered towards presentations at biennales and other public events, which themselves become a resource for further research. Often, while doing research, we are already thinking about how to present it. To introduce a concrete example: not long ago, I gave a presentation as part of the ASCA Cities seminar series [a collaborative research initiative aligned with the Amsterdam School for Cultural Analysis] about the container terminals in the new extension to the Port of Rotterdam. We started work on the project immediately after this. Around two months later, we got asked if we could present the project at the Vienna Biennale. I thought to myself, "what, after two months?" But then I realised that we can use platforms like these to not only speed up the research, but also to reflect on our work and share it with others, who in turn can reflect upon it and also move forward with their own research. In this sense, the presentation is not only a summary of the knowledge we have produced so far, but it also becomes the starting point for new research.

MO: We also work with formats that are not necessarily recognised as research. With our work on automation, we often get asked where the results of our research can be found. We respond that we lead a lot of tours! Marten and Victor [Muñoz Sanz] have taken people to visit dairy farms and greenhouses, producing a form of embodied knowledge where you go, you see and you experience. We understand this as an important form of research, one that is not necessarily recognised in other frameworks. People sometimes don't even know what's in their backyard. It is very different to find out about transformations in the environment by reading it in an academic paper than it is to actually go to these places and see, for example, cows interacting with robots. So when people ask where our research is, we answer that it is in our tours, in this podcast, or in that exhibition. We also publish papers, but — for us — a tour, a talk or a formal conversation are equally as important as is a paper with footnotes and references.

We are a public institution, so we are not interested in retaining or protecting authorship of our work. We are not interested in these enclosures of research. Our role is the opposite: it is to open things up. Our aim here is to spark a conversation, to nurture and sustain that conversation and to make it possible for certain topics that are less present in the discourse to be given more attention, and then to find partners that would like to continue and appropriate it. We just say:

take it, this conversation is not ours, is shared. Take it, contest it, improve it. In that sense, it is a bit different from the academic environment, I would say. And I have a PhD, I know! I totally respect academia, but there are things that have to evolve. Many people working in academia, even those from the University of Amsterdam, come here to work with us precisely because of that. They are frustrated in certain academic environments and appreciate the more open ended approach we have here.

KT: We do of course invite a lot of scholars to work with us, present their research and give lectures. We explain to them how we do this public research, and this leads them to adapt how they engage in conversations with our audience, to think of different formats and to address different questions.

MK: This is an issue that is very relevant to this particular institute. We're actually, in this building, sitting in between a huge archive, which is completely author based. It's based on the oeuvres of Architects (with a capital A), mostly men.

KT: I finally have the numbers now: 26 out of the 835 archives are from female architects. That's 3.1%.

MK: I remember when you arrived, Marina, and one of the first things you said was that we should really reflect on what kind of collection we want to be. What do we acquire, and for whom do we acquire it? I also remember questions such as: what do we have on squatting in these archives? We asked the people in the Collection department, and they told us that if a particular architect was interested in the topic, then it might be somewhere in the archive. And so, they had a look. We managed to find some material in personal files within the archives, but for anything else, we needed to go to the International Institute of Social History in Amsterdam, because that's the institute. But we thought: no, we want to look at this from an architectural perspective. Squatting is in itself a spatial practice, so we should also think about how to include this in our archive. If you want to know something about the history of the built environment, you should be able to find it here. The same goes for automated landscapes.

This is also why we want to go beyond an author-based perspective within the collection. We still acquire oeuvres, and I think we should do that. But aside from that, we also want to focus on an informal, collective architectural practice like squatting and go beyond this dominant notion of authorship and signature. As well as trying to find ways — and it's not easy — to collect material for the archive. What do you collect when it comes to squatting? What kind of

material are you looking for? Is it patterns? When it comes to automated landscapes, is it drawings?

SB: The way you talk about your work seems to suggest the intersection of several different grids articulating themselves to one another: academic, institutional, national and so on. Pepita Hesselberth, in her contribution to this issue, writes about the tiny-house movement, which seems to exist somehow both on- and off-grid. How does this movement compare to the practice(s) of squatting, and how do these, and other, grids interact with one another? What might this mean for the notion of being “off the grid”?

MO: I'm thinking about other grids in terms of logistics. I will allow myself to say that I think the grid is very Dutch. That's why, when we presented at the Dutch Pavilion in Venice [Biennale Architettura 2018] with a project called *Work, Body, Leisure*, the first thing you saw was a grid of lockers. For us, the locker is this architecture that allows bodies to reinvent themselves: you arrive at a factory as a citizen and then you become a worker, or you go to the gym as a worker and transform into a sports person. This orange grid of lockers was also thinking or talking about the Cartesian organised landscape of the Netherlands, a very rational landscape that is designed for productivity and efficiency, but also designed for equality. The Netherlands has always

championed this idea of welfare, and this grid ensures that everyone is the same with an equal amount of opportunities. This is not necessarily true, but it is at least an aspiration. We also see this in the repetitive architecture of modernist buildings, where all the windows are identical, seeming to convey the notion that each citizen too is the same, because the architecture says so. In reality, it gets much messier.

In the history of architecture, the grid has been used in many critical approaches to capitalism to understand the spread of normative spaces and the spread of circulation. It has been used by Archizoom and Suprastudio, by Rem Koolhaas and many others. It has often been seen as this totalitarian system: we have to get out of the grid in order to be emancipated from subjugation. But actually, I'm now thinking that it might be the opposite: what if the grid is the ultimate leftist dream? It is a system that allows for a complete redistribution of resources in an egalitarian way. So why are we so afraid of the grid? This is a paradox: on the one hand, we are averse to this normative space that interferes in all aspects of our lives. But if you think about it, the grid is probably one of the few ideas that, without questioning production, promises redistribution. With *Architecture of Appropriation*, we often talk about the level of institutionalisation of squatting in the Dutch context. Squatters are extremely organised, and they often use the law to their benefit.

KT: There are spaces in the law. For instance, there's eight weeks — the time it takes to bring a case to court and get a verdict — before you are evicted. So, they really are interacting with this grid, or those protocols, in resistance.

MO: Squatting challenges the grid, but it's not completely outside of it. It's about using or deploying tools that make the grid go in your favour. There are actually many institutions, lawyers and others that are helping. Squatting in the Netherlands was legal until quite recently, so it was part of the so-called grid. It was a rational attempt at redistribution: if we have empty apartments, people can appropriate them. This is the paradox that I'm trying to articulate: the grid may be the ultimate leftist utopia.

SB: In a sense, squatting and the tiny-house movement can each be seen as a form of self-chosen precarisation. How does that conflict with the institutionalisation of these types of living? Are these bodies more precarious, and how?

KT: We see this when we look at the history of squatting, although it is of course still being practiced. For this particular project, *Architecture of Appropriation*, we have been working with communities and places that, at the time of research, still existed. They were places that we

could visit. Space is divided differently there: there are private parts, in buildings, but also public and common spaces. These ideas of common living, or of combining work and living in the same space, have been appropriated by commercial interests.

MO: This is also a question of how we, as a formal institution, can deal with more informal, emergent, fragile, and even precarious ways of living. How can an established institution initiate a conversation with other such institutions?

KT: It's a long conversation, a kind of methodology that we try to develop which always returns to this question: what are we actually doing as an institute? We try to document and archive these practices together with the communities, while also using architectural tools, and we try to reflect upon these different forms of representation. For this particular exhibition, an active space where we invited people to engage, we worked with students from the TU Eindhoven to document the types of appropriation, the types of architectural spaces that were constructed by the communities and how these spaces were being used. In the beginning, we were only showing the architectural representations, but then we started thinking about how to also include the voices of the people involved and the communities. In the end, we built up what we might call hybrid documents.

MO: These documents consist of the normative architectural representation together with notations from the communities who inhabit those spaces. In this way, it challenged the expectations of architectural representation by including other voices and oral histories. At the same time, these documents still have the capacity to be presented in a court case. Often, these squatters have no documentation about the spaces they occupy; they have nothing which presents how they live and its value. We thought it would be interesting to have these documents that could be deployed, used or weaponised somehow in a court.

KT: Or in conversations with the municipality. Sometimes, as many of those places have been legalised, these documents are also used in conversations with the owner.

MO: We understand the complex, or maybe problematic, nature of including these documents in the National Archives, but we think it would be even more problematic if they were not here. If we think that this is heritage, heritage understood as what society finds important at a particular moment in time, then this is what those living this way want to leave for future generations. Also, we cannot think that the architecture of the Netherlands is only iconic buildings made by famous architectural offices. The architecture of the

built environment in the Netherlands is being transformed by many agents that are not necessarily architects, among them squatters, who make the preservation of many monuments possible. We want them to be heard — their voices within their own space and their own language — but we also want to recognise that not only architects, but also other agents, can be an inspiration for thinking about housing in ways that are not market oriented.

KT: But this project still adheres to the particular grid of this archive, how we normally register an archive and who are the archive formers, so there was an interesting tension. Nevertheless, this project did produce new kinds of texts and new keywords with which to find material in the archive. And these texts — for instance, those documenting collective forms of living — can also be connected to existing material in the archive. So, there are also new connections that will come out of this.

SB: *Automated Landscapes* engages with spaces that are not designed to be inhabited by human bodies, challenging conventional spatial requirements and normative rules for health, safety and welfare. At the same time, the Port of Rotterdam is part of a huge infrastructural system. How can these automated landscapes help us rethink relations between the human body and space

from the perspective of authorship and agency? Can we think of these landscapes as being off the grid?

MK: First of all, these spaces are made for nonhumans, so the design is based on the requirements for these new technologies to operate well — although I'd like to point out that the spaces are still inhabited by a lot of humans and other species. What I feel in a lot of these larger cases, including the container terminals in the Port of Rotterdam, is that we should actually want these spaces to be part of the grid, because they are not. In fact, they are leaving it. I see greenhouse clusters that are literally going off the grid. If you look at zoning laws and land use plans, these spaces are just a white spot on the map. They're creating their own energy grids and waste grids, but these are off *the* grid, in that they are privatised. In the last two or three decades of deregulation, privatisation and decentralisation of spatial policies in the Netherlands, those behind the container terminals have found all kinds of opportunities — and have been well supported by the national government in this country — to go off-grid.

The container terminals are of course fully embedded in a global network, because otherwise they wouldn't operate well, but they are no longer part of the national grid. For instance, we haven't managed to get access to information about building permits from the

municipality, which we should be able to access. It's a peninsula. it's something new added to the country, but I'm not able to find information about ownership. I know another five examples in this country where I see similar developments and, as I said, the national government is supporting them by speeding up the processes for these huge companies.

These spaces are owned by only a few companies. The landscape is no longer a huge grid where hundreds of farmers take part. It is still a huge grid, but it is now used by only four or five companies, planning and building large environments in which they can produce or do whatever they want and take all the revenue. If you look at the Dutch grid, you see that whilst the majority of land is still owned by the government, this has changed significantly in the last decades. Land is being privatised. The city of Rotterdam, like the city of Amsterdam, is still based on *erfpacht* (leasehold) — that is, renting the land from the government for 50 years. But in these cases, it's privatised, and they're selling the land for relatively low prices. Companies like Google and Microsoft, or Maersk in the case of the container terminal, are buying it and exploiting it. Not only are they exploiting the land, but they are also exploiting the infrastructure and the people.

MO: We always talk about automation in relation to forms of exploitation of certain bodies, whether it is humans, robots or animals. We see in terms of typology that these places are generally enclaves or enclosures, enclosures of certain portions of the land where there are certain conditions that get implemented or enhanced in order to increase efficiency or production. It is now possible to grow huge amounts of vegetables that previously could not be grown so easily. Similarly, 24-hour workdays are now possible in these bubbles. The idea developed in the 1960s and 70s of utopian spaces that are somehow outside of the grid and function as bubbles or spheres for innovation is beautiful. But the idea has been totally commodified. Now, if you think about the libertarian dream of escaping the grid, it is very much market oriented and neoliberal, something that Trump enacts by saying that the goal is to go to space. I'm thinking of Elon Musk.

MK Or floating cities.

MO Floating cities for tax evasion. Tax havens. This idea of being off the grid is often a libertarian mode that is not necessarily a call for many. These forms of exploitation of the landscape are of course historical. Think about the way in which the UK, like the US, had these vast fields that were not owned and how, by creating different portions of land, they could be

exploited. Obviously, they become more productive, but also privatised: a space or bubble to create forms of exploitative practices.

I still feel that there are tools to change whatever we might call the grid: we can change what an archive is, we can change conversations about the legal and illegal in relation to squatting, and so on. It's not that I'm comfortable inside the grid — actually, I'm deeply uncomfortable with it — but I still think that where I want to put my efforts towards is in changing things from within. We really respect people who are activists, who have their own way of doing things and don't want to be absorbed. In the last few years, we've managed to collaborate through mutual respect. These voices are fundamental to transform the institutions. Their positions challenge the institutional mechanisms and the way in which we communicate research and information. I'm not an activist; I have a privileged position working in a national institute with a permanent contract. But I try to do my best to change the grid in which we work. My role is from within, but it is also to establish alliances with those from outside; there is an outside obviously, and I think there should be. I think we are at least aware of our position here. It's important to be critically aware of where you are within the grid, and to be honest and consistent with it.

Thom Aalmoes

Regional Politics: On Region, Nation, and Regionalization

abstract This paper takes up the conceptualization of region introduced by Imre Szeman in his 2018 article “On the Politics of Region” to consider longstanding tensions between different regions in the Netherlands. While Szeman’s conception opens up new ways of looking at regions, this paper argues that it introduces too stringent

oppositions between nation and region, positing the former as artificial and the latter as natural. Considering the case of the Netherland's 'Green Heart' region through Szeman's region concept, and analyzing how regions are constituted, or what Pierre Bélanger calls regionalization, this paper moves away from an opposition between nation and region.

Ever since the first steps towards a Dutch state were taken in the sixteenth and seventeenth centuries, there has been a tension in the country between the state, claiming to represent the interests of the entire population, and the different, sometimes conflicting, regional interests. Central to this debate has always been an opposition between the richer and more densely populated west, which also houses the national government in The Hague, and the rest of the country. In the seventeenth century, this was figured as a clash between the rich and powerful western province of Holland and the other provinces, who feared that Holland was too dominant in national politics. Today

this opposition can be found along somewhat similar lines in the opposition between the metropolitan west of the country, called the Randstad,(1) and the rest of the country, often simply gathered under the name the *Regio* (region). The problem, so the inhabitants of the Regio are said to argue, is that while the national government in The Hague claims to represent the entire country, they are too narrowly concerned with issues facing the Randstad and thus ignore the "normal, hardworking Dutchmen and women" in the Regio.

In his 2018 article "On the Politics of Region," Canadian energy humanities scholar Imre Szeman detects a similar indifference in North American city-dwellers towards not only the extraction zones that provide the energy for their modern lives, but also, if not more so, to the areas those resources have to traverse. To characterize these areas, Szeman introduces a new conceptualization of region. He argues that it is critical that we start to understand regions, as it is here that the effects of contemporary technologies, energy infrastructures and the forms of governmentality that support them are most acutely felt.

In this paper, I will argue that while Szeman's

(1) The Randstad translates as edge-city or rim-city and includes the four largest cities: Amsterdam, Rotterdam, The Hague, and Utrecht, and their surrounding areas.

conceptualization of the region provides a productive new concept, the binary opposition he creates between region and nation, in which he figures the region as "organic" and the nation as an artificial construct indifferent to regions, is too stringent. I will argue not only that the nation and region are deeply entwined with one another, but that regions too are founded in part on a logic of inclusion and exclusion that Szeman exclusively ascribes to the nation. However, Szeman's argument for moving away from a focus on either the national or the global towards a greater attention to the region is valuable. How might we move towards a politics of the region that, while being attuned to the "full range of relationships that exist in any geography" (Szeman), still gives an account of the relations and conflicts that are proper to it?

To answer this question, I will first work through Szeman's conceptualization of region in relation to the case of the Randstad/ Regio opposition. After that, I will focus on the Green Heart, an area in the Netherlands that is not easily characterised as belonging to either the Randstad or the Regio, and one that might therefore help us think beyond Szeman's conceptualization of region by drawing attention to the ways in which particular regions are constituted.

The Politics of Region

Giving an exhaustive account of Szeman's concept of region is difficult, if not impossible, as anything from the

Middle East — with its complex political, religious, and military conflicts — to the northern habitats of the moose might fit this description. This expansive definition is due to the fact that the in-betweenness of a region is not just a matter of its being in between two other geographical locations, it is also a matter of scale, with region being located between the local and the global. For Szeman, this indistinctness is exactly the point. The power of the concept lies in its insistence that every time we study a particular region, we need to be cognizant of what the appropriate scale is. That is, we need to start looking beyond the grid-like predetermined borders and localities imposed by nation-states.

It is the nation that Szeman opposes the region to throughout his article. He argues that nations — with their abstract apparatuses of state power such as the law, police, military, and borders — divide the world amongst each other with little regard for the landscapes and peoples they separate. While they divide externally, nations homogenize internally with equal abandon, reducing the many identities within their borders to a national identity and all languages to a national language. The nation is made internally consistent. Anything that is left of otherness has to conform to internal divisions between formalized legal entities like municipalities and provinces. In terms of the law, the nation provides this homogenization in the form of citizenship, which

promises equal rights and opportunities to those who share it, even though the benefits of that citizenship might be extremely unevenly distributed. Here, the dynamics of inclusion and exclusion that Szeman ascribes to the nation appear: the inhabitants of a country are united by their citizenship and thus divided from the citizens of other countries who thus become their constitutive others.

What characterizes region, on the other hand, is the grouping together of certain non-human and/or human actors by way of specific resemblances and relations and their connection to their local environment. As Szeman writes: "every region can be seen as a type of ecology — an environment [...] the subjects that animate it, [...] and the relation between these two." A region is therefore always a region *of* something; there is always a subject animating it and giving it a particular character, be it a religious community or a type of forest. As a result, regions are never the singular occupant of a given stretch of land. They overlap and interact with other kinds of regions.

Real and Imposed

Szeman also singles out a type of area that we might colloquially call region but that he insists are "regions in name only." These areas include the territories environmentally ravaged by global capitalism: areas of pollution, monocultural agriculture, and commodity

frontiers. It is remarkable that Szeman calls out these areas in particular. One of his main motivations for championing this concept of region, is to pay attention to the natural environment in the face of a nation that is indifferent to it. Why then exclude those areas that have been ravaged most by this indifference?

Szeman thus opposes the abstract ideas of national identity and belonging imposed by the nation to, what he thinks are, the multiple, complex, and organic identities of region. Even though these "toxic ecologies" could be described as regions animated by the characteristic of "being polluted," Szeman's insistence that they are regions in name only suggests any "true" region for him can only be constituted by dynamics internal to it, or one that is non-human in nature. While he does not explicitly argue that regions are somehow more organically constituted, this undercurrent seeps through in other parts of his article as well. The following quote serves as an illustrative example:

> Nations and cities do not seem to pay attention to the demands that multiple ecologies make on them. Regions, on the other hand, are deeply attuned to the realities of the shifting ideas and realities of being there — including the *there* of nations and cities — and spill over and beyond all established political borders (Szeman).

The region is real, what is actually happening on the ground. The nation is an abstract ideal imposed for so long that it now appears to be real even though it is blind to the "demands multiple ecologies make on" it (Szeman). This is why, for Szeman, an attention to region has the power to complicate the sharply demarcated grids in which different nations, provinces, and municipalities are all neatly separated and categorized: the complexity of the region remains outside of the imposed consistency of the nation. The region has the capacity to "rub raw the self-certainties of modern state formations" by showing the realities underneath their imposed abstractions (Szeman).

Randstad and the Regio

When we first consider Szeman's conceptualization of the region in relation to the Dutch opposition between the Randstad and the Regio, it does indeed seem that an attention to region disturbs the nation's promise of equality for all citizens within its domain, as the benefits of citizenship are unequally distributed across the nation. For instance, the Dutch national government under Prime Minister Mark Rutte has in recent years shifted public investment from the paradigm of "a distribution of justice" (Figee, Gosselt and Linders 31) that is, investing public funds in economically or otherwise marginalized or underdeveloped regions, to a model of investing in top sectors, or those areas that are

already highly lucrative and making them even more so. These top sectors are usually concentrated in the Randstad, leading to the neglect of the Regio. "Regions speak the lie of nations," Szeman rightly argues, as they draw attention to the differences in wealth opportunity, state violence, and more across the multiple regions within a nation.

However, I want to argue, unlike Szeman, that in response to the disparate treatment of regions by nations, regional identities may form or strengthen. If citizenship is an attempt to mask the inequalities within the nation, it has failed miserably, at least here in the Netherlands. While the national government may seem increasingly oblivious to the needs of its regions, people in the regions are acutely aware of this indifference. Figee, Gosselt, and Linders found as much in a series of interviews with civil servants and other officials throughout the country. One respondent remarked that national ministries are "places where 'civil servants are dedicated to Randstad-interests'" (Figee et al. 32). Another mentioned that: "[f]iles from outside the Randstad get less priority [...] The 'The Hague arena' keeps the door closed" (32). In response to the national government's narrow concern with the Randstad, regional authorities increasingly work with other regions, both those within the Netherlands and their direct neighbors in Germany and Belgium.

What we see here is a regional identity taking

shape in response to a nation's actions. While, as parliamentary historian Diederik Smit has argued, regional tensions appeared to diminish in importance in the second half of the 20th century, they have regained their prominence in Dutch politics over the past few decades. Now that the national government has moved away from the previous paradigm of justice, those in the Regio, whether public official or pundit, seem suspicious of what comes out of the Randstad. Whilst the neoliberal top sector policy may not seem to be ideologically connected to progressive cultural reforms — such as the movement against the racist tradition of Zwarte Piet — for people in the Regio, they both signal a seeming lack of concern in the Randstad for the needs and wants of the inhabitants of the Regio. Regional identities are thus not, as Szeman argues, necessarily opposed to national identities. In fact, they are implicated in a discussion over what that national identity should mean and who is deserving of the attention of a government that claims to represent all. Rather than arguing that the region is something the nation imposes itself on and masks, might it not be more fruitful to also consider nation and region as two separate but interacting ways of understanding the relationship between space and belonging? To explore this question further, the final section of this paper will consider a region in the Netherlands that fits neither in the Randstad nor in the rest of the Regio: Het Groene Hart.

The Green Heart

Het Groene Hart (the Green Heart) is a peculiar area in the middle of the densely populated Randstad. The Randstad is named as such as it encircles the Green Heart. The Green Heart, in turn, gets its name from being the more rural center of the Randstad. Neither has very clearly established borders, nor do they conform to formal administrative regions like provinces, instead stretching across North Holland, South Holland, Utrecht, and, in some definitions of the Randstad, the westernmost part of Flevoland, thus including Almere, a large commuter city that is part of Amsterdam's metropolitan area.

Historically an area of peatlands, much of the Green Heart's landscape is marked by its being harvested over the centuries. Many lakes formed as a result of these peat harvests and, as they threatened nearby villages and cities with flooding, a large number of them were turned into polders — although some of them, like the Vinkeveense and Nieuwkoopse plassen, still remain. The resulting polder landscapes and the patterns of allotment specific to the region give the Green Heart a distinctive character, both in appearance and in the type of flora and fauna that can be found there.

If we were to follow Szeman's conceptualization of region here, it would be easy to characterize the Green Heart as a "proper" region, or even as multiple

overlapping regions. We find an area with imprecise boundaries, typified by a particular type of geography, flora, fauna, and local identity. However, if we were to go back in time before the Second World War and ask "an arbitrary passer-by the way to the Green Heart, s/he would probably have answered by meaninglessly shrugging his/her shoulders" (Klooster et al.). That is because the landscape and the sense of regional identity in the area are the result of government planning from the 1950s onwards.

The term 'Green Heart' first appeared in a 1958 policy report by Z.Y. van der Meer, in which it was argued that the green center of the Randstad should be preserved as an area for agriculture and recreation. The first formal regulations for the region were put in place in 1960, restricting the building of everything from greenhouses to residential zones. This alone did not result in a strong sense of regional identity, but, as environmental concerns entered mainstream public debates in the 1970s, the inhabitants of the Green Heart increasingly came to see their region as opposed to the polluted and congested Randstad. The restrictions placed on construction in the Green Heart had given the area an even more distinct character from the developing urban area around it. Here again, we see the hegemonic Randstad region used a constitutive other in the formation of a regional identity. This budding regional identity was further bolstered by national and local

governments, who started to address the inhabitants of the region as "those from the Green Heart" and named a number of institutions in the region after the Green Heart, thereby discursively integrating the materiality of the Green Heart into the sense of self and lived experience of its inhabitants.

As Van 't Klooster et al. argue, the regional identity of the Green Heart is thus partially one imposed by the national government but also the result of a community conceptualizing a difference between itself and the urban inhabitants of the Randstad. Rather than being an "organic" identity opposed to a false identity imposed by the Dutch state, the Green Heart is a region that is the result of material and discursive interventions by the Dutch state and the inhabitants' adoption and internalization of these efforts.

Regionalization

Rather than only paying attention to the region as such then, it seems that it is also important to consider the way a region emerges, that is, we need to pay attention to what landscape architect Pierre Bélanger calls regionalization. For Bélanger, regionalization is "an operative term that designates the geographic, economic, and ecological process of characterizing and forming regions according to overlapping geopolitical and biophysical boundaries" (368). In other words, regionalization is both an epistemic and ontological

process: it ties together a region through practical interventions by private and public actors in their natural and built landscapes as well as through an increased awareness of the impact of those interventions beyond their immediate context.

Contrary to Szeman's account, the increasing recognition of the region as such — that is, regionalization — goes hand in hand with increasing formal intervention in those areas. This suggests that the region as such is not so much opposed to the abstract logic of the state as it is a nexus of economic, political, geological, and ecological forces. As Bélanger writes:

> The deterritorialization of the state/system dichotomy thus opens a lens on urban regions that enters into contemporary society, no longer as subdivision, container, or "territory" [...], but as landscape which "challenges the entrenched geographical assumptions of mainstream approaches to state space (Bélanger 421).(2)

Following Bélanger's conceptualization of regionalization might allow us to move beyond Szeman's dichotomy between nation and region. If the region is figured as

(2) Bélanger is quoting from Neil Brenner et al., "Introduction: State Space in Question," *State/Space*, Blackwell, 2003.

being internally complex instead of being situated within an overlapping complex of other regions in which the state tries to intervene, the nation is itself an element of a region. The Green Heart is not multiple regions animated by single characteristics such as the peat soil, a "rural character," or a specific identity. All of these characteristics are intimately connected and cannot easily be separated: in fact, they give rise, and form, in response to one another. An attention to regionalization can thus "cast light on the network of endogenous (internal) and exogenous (external) processes at work" in a region (Bélanger 421).

Following Bélanger we can also include those areas ravaged by global capitalism, mentioned earlier, in our consideration of region. Rather than denying its character as a region, we might consider how, for example, a polluted area can give rise to new connections between inhabitants, who then mobilize to transform their region into a more habitable place, all the while still tracking the devastating impact industries have on such ecologies. A more inclusive concept of the region would allow for an analysis that tracks the devastating impact of such industries on the wider region, not as something that is somehow alien to it, but as something that is inherent to it and that has to be managed if we are to create a livable region.

Conclusion

Regions speak the lie of nations by drawing attention to the unequal distribution of capital and opportunities, as well as to the awkwardness of their imposed borders. However, regional identities and characteristics can at the same time be the result of national policies. Injustice may give rise to communities fighting for their rights; environmental regulations may change the material character of a region. Regions and nations are deeply caught up in one another. To parse out this entanglement of region and nation, we must pay attention to the process of regionalization — that is, an attention to the historical, political, and material forces that interacted to give shape to a particular region. Only in this way will we be able to move towards an analysis and politics of region that, while being attuned to the "full range of relationships that exist in any geography" (Szeman), still gives an account of the relations and conflicts that are proper to it.

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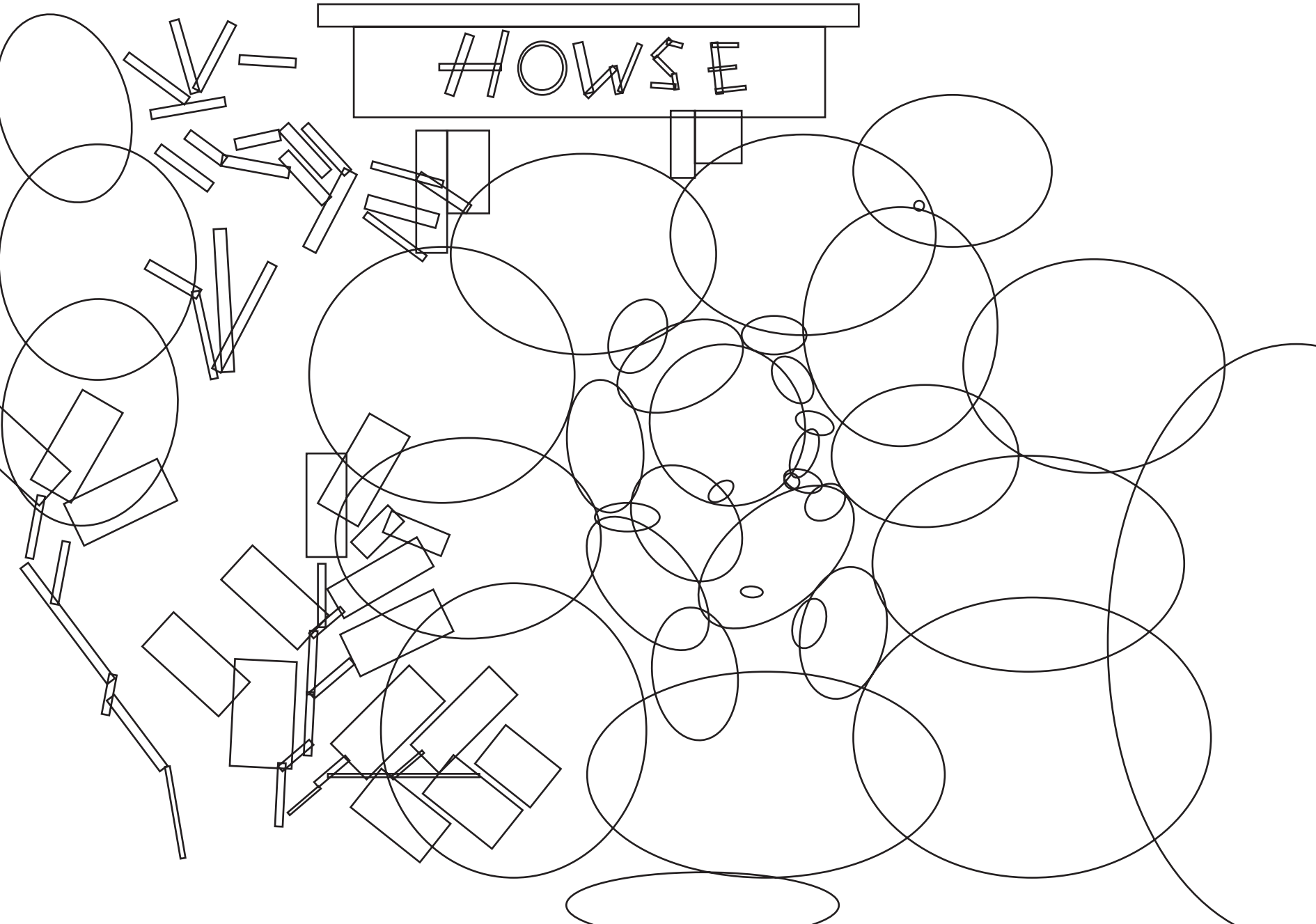

HOWSE

Pepita Hesselberth

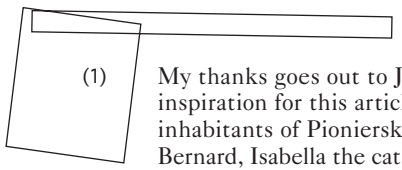
The Grid as Structuring Paradox: A Case of Tiny Living

abstract This short position paper addresses the gap between idealistic, entrepreneurial, and culturally critical concerns over the emergence of new environmental communities that strive for more sustainable and self-sufficient modes of living, taking the tiny house community in the Netherlands as a case in point. Reflecting on the micro and

macro processes of deterritorialization and reterritorialization at play in the concrete case of tiny living, the grid is seen to wield a stricter interpretation of a more general problematic with regards to contemporary urban/human life, where the notion of the grid, I argue, functions as a structuring paradox that at once allows and disallows for the negotiation of possibilities and limits in our thinking about community, sustainability, and alternative modes of living today.

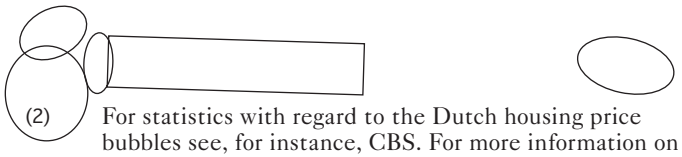
The Tiny House Movement[1]

The tiny house movement originated in the United States and gained momentum as a social movement in



(1) My thanks goes out to Jente de Vries, for her input and inspiration for this article, and to her and the other inhabitants of Pionierskwartier (Jasmijn, Jurre, Ole, Maria, Bernard, Isabella the cat, Happy the rabbit, Sanne and Barry) for allowing me in on what it means to live tiny today.

the Netherlands in the aftermath of the 2007-2008 financial crisis, when the expanding housing bubble — which in the Netherlands peaked in 2008 — burst, only to peak again in the years that followed, hitting new all-time highs in the period between 2015-2018.[2] Where the first bubble peak and burst forced people into debt and even foreclosure, the rapidly rising housing prices and regulatory responses to the subprime mortgage crisis since have forced many residents to leave the expensive centers of especially metropolitan areas and have made it increasingly difficult — if not downright impossible — for (young) starters to enter the housing market. Yet, it has also made them think (again) about possible alternatives to such high-cost living, as well as, more generally, about the widespread values and institutions that underlie our present-day economic system, the logics of which are arguably best captured in the adage "the bigger, the better." Tiny living, then, is about minimizing and downsizing: to save money (to be financially independent), to reduce one's possessions (to declutter), to voluntarily simplify one's lifestyle (Thoreau



(2) For statistics with regard to the Dutch housing price bubbles see, for instance, CBS. For more information on the origins of the Tiny House Movement, see Nonko and "Tiny House Movement" for the United States, and "Tiny House Nederland – Minder huis, meer leven" for the Netherlands.

style), to reduce one's spatial footprint (to help the environment), to be self-sufficient.

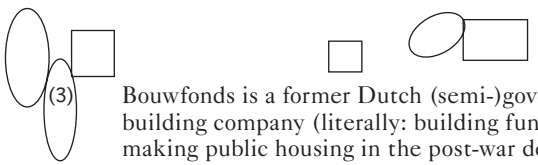
In the tiny house movement, concerns over affordable living, debt, and the impact of consumer culture thus spill over to ideals of environmental and social sustainability, and the development of housing solutions and new modes of living that are both green and space-saving, and, often, cooperative and community-based. Tiny living is also about off-gridding. Habitually designed to achieve relative autonomy from remote infrastructures — including electricity, municipal water supplies, gas, and sewer systems — tiny homes are in the main equipped with onsite renewable energy sources (such as solar panels), rainwater harvesting and sanitation pumps and filtration, other energy-saving solutions like high-efficiency insulation and wood burning stoves, a so-called dry (or composting) toilet, and other more elaborate recycling systems. But the grids from which tiny houses seek to subtract themselves are often myriad and pertain to more than just those of water, sewer, and electrical power alone. To live mortgage-free (if not debt-free) is to disconnect oneself not only from a lifetime of debt, but also from the sway of labor precarity, so as to become less vulnerable to the pressure to (over)perform. Adopting the credo "less is more," many tiny house owners, moreover, openly distance themselves from the grids of growth-based economics, and actively look for ways to make the economy more circular (e.g. through reuse and

regeneration). Finally, adhering to a zero-waste ethic in the utilization of (urban) space, tiny houses often make use of (urban) wastelands, temporarily abandoned or unoccupied areas of land, until future destinations are found.

But the off-grid is a messy, contested, and often, volatile space. By imagining the off-grid and making it real, new grids may emerge. Grids challenge one another, and what is perceived to be off one grid may easily partake in, or be undermined by, another. To the extent that it takes a grid to imagine an off-grid, the off-grid works affirmatively: no off-grid without a grid, no grid without an off-grid. Yet, the off-grid can also disturb the grid, if only by making us aware of the latter's taken-for-granted-ness. This short position paper reflects on the tension between infrastructural idealism, pragmatic realism, and corporate and governmental control in the ideals and practices of "off the grid living" under the conditions of late-capitalism and neoliberal reform. In particular, it seeks to address the gap between idealistic, entrepreneurial/governmental, and culturally critical concerns over the emergence of new environmental communities that strive for more sustainable and self-sufficient modes of living, taking the tiny house community in the Netherlands as a case in point.

The Pioneers

In the summer of 2017, a group of young innovative housing pioneers embark on a collaboration with one of the biggest real estate project developers in the Netherlands, BPD, formally known as Bouwfonds.(3) A group of tiny house builders (five houses, eight inhabitants in total) is granted permission to use a former allotment garden in the suburban area of The Hague for a period of two years in exchange for modest rent and their willingness to help develop the area into a place suitable for dwelling. The project is called Proeftuin Erasmusveld.(4) A basic infrastructure is set in place: a minimal grid of a few communal water and electricity taps, wifi (!), two outdoor composting toilets, a constructed wetland, a few

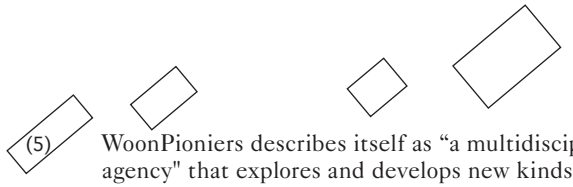


(3) Bouwfonds is a former Dutch (semi-)governmental building company (literally: building fund) responsible for making public housing in the post-war decades. The fund became gradually more commercialized until it was fully privatized in 2005. In 2007, Bouwfonds was subject to a huge national scandal involving massive real estate fraud, which contributed to the downfall and dismantling of SNS Reaal, its main financial stakeholder. It was in this year, i.e. the year of the financial crisis, that Bouwfonds changed its name to BPD: Bouwfonds Project Developers. On the scandal, see Posthumus; on BPD and their view on the project, see: "Proeven aan duurzaam wonen."

(4) Proeftuin plays on the double meaning of the Dutch word proef (the verb "to taste" and the noun "experiment"), combined with tuin, meaning "garden." On the project (in Dutch) see: "Proeftuin Erasmusveld."

paths, a public area, and a designated parking lot. The area's former pavilion is redecorated and turned into a communal space to be used by both tiny villagers and project developers. Equipped with a kitchen, a living/dining/office space, a bathroom, a few empty spaces, and a washing machine, the place is used to organize meetings and workshops, to do laundry, and to facilitate the occasional joint dinner and/or overnight guest. Two neighboring warehouses are freed up for storage, tools, and tiny DIY construction work. A plot of land is kept for urban agriculture (mainly fruit trees); another is developed into a perma-culture garden and run by city farmer Suzanne of De Zoete Wildernis (Dutch for The Sweet Wilderness). Workshops are organized, a festival of waste, and, about every month, an open day, for those curious to know what it is like to live tiny.

It is an unconventional but prolific partnership: the unwieldy market player BPD, a group of principled area developers called Woonpioni ers, a city farmer, and a small community of tiny house builders.(5) With their hands-on approach to DIY (tiny) living, the task assigned to the latter is, first and foremost, one of placemaking: to



(5) WoonPioniers describes itself as "a multidisciplinary agency" that explores and develops new kinds of residential environments and concepts for living (for more information, see "Woonpioniers Ontwerpt Bezielde Woningen, van Binnen En Buiten").

reimagine and reinvent the space and transform it into a place of living so as to attract prospective buyers for the soon-to-be-built residential area. But it is placemaking spun off its axis. Where the process of placemaking typically is said to capitalize on "a local community's assets, inspiration, and potential, and […] results in the creation of public spaces that contribute to [the community's] happiness, health and well-being"("What Is Placemaking?"), here, a new-found community of decoy-hipsters with a picture-perfect life (an image and irony of which the tiny house owners are all too aware) are barreled in as part of a branding strategy that serves to facilitate the sale, and therewith privatization, of a formerly public space. That the selling-points of the new real estate district — i.e. sub-urban, nature-inclusive, energy-saving, car-free, circular, and community-based ("Duurzame Woonwijk") — largely coincide with some of the ideals and ways of living of the area's temporary inhabitants is of course no coincidence: it is contrived (indeed, plotted) this way. But there is irony to the fact — an irony, I hope, that in the remainder of this short position paper will become clearer.

Off-the-Grid, but not Out-of-Control

For, what of the tiny villagers themselves? Meandering between their own venturous zeal — i.e. for sustainable, green, off-grid, community-based living (to which I will return below) — and their delegated task as placemakers,

they are a paragon of proactive citizenship: unpaid for their labor and precarious in their abode, they are to change the world, and pick the fruits of their own effort (but not too many!). Prepared to take risks, many tiny house builders have embarked on the project of tiny living without fully knowing how it will pan out, or where they will end up in the long run. In the interim, they are allocated this plot of land for their own world building. Yet, they are allowed to do so only within the parameters of what feels governable from a corporate (and governmental) point of view: not an unhinged hippie community, but one that is neatly ordered; off the grid, but not out of control. Oftentimes highly-educated, creative, idealist, and entrepreneurial (with the odd exception, the tiny villagers are all builders, social entrepreneurs and/or work in the creative industries) their survival and well-being depends on their skills, creativity, network, and their ability to position themselves socially, as well as on their willingness to cooperate and negotiate the conditions of their own living with the landowners (municipalities, large real-estate corporations) that impose their own grids upon them in the form of restrictions, guidelines, regulations, and legislation.

On the one hand, then, the tiny house community is expected to be self-organizing. On the other hand, however, when it comes to the aforementioned landowner-imposed regulations, the tiny

house builders generally have very little, if anything, to say. To give a few examples: land needs to be formally designated as a living zone within the area's land-use or development plan before it can be occupied, which means that no (waste) land can be occupied without reserve, or without time passing. Altering the zoning plan for a district generally requires a long-term investment and strategy, especially by area developers and landowners, on whose goodwill tiny house owners then depend. Other conditions may have to be met as well. Depending on the size of the plot of land and the aims of the land's owners, a maximum number of houses may be permitted, or minimum required. Some regulations may be site-specific, such as the need to build a (temporary) sound wall when a site is near a highway or train track.

The tiny houses, too, are subject to directives: there is a maximum size for a house to be considered tiny; certain aesthetic standards have to be met: it has to be properly built (a tiny house cannot be a caravan or makeshift hut); it has to be self-made (or at least self-designed). Further, the Dutch Building Order ("Bouwbesluit 2012") demands that, for a construction to be considered a house at all, it needs to be connected to a sewer and running water (rainwater filtering is illegal in the Netherlands), and accommodated with a minimum of insulation that literally would outweigh principles of mobility and tininess. Exceptions can be made, but as a rule, before any new location can be occupied, a basic grid

must be installed, and every home has to apply for its own environmental license (omgevingsvergunning) and/or residence permit based on the principle of equality — which means the investment of a lot of time, money and energy upon every move. Buying land is not really an alternative because, first of all, the same Building Order and regulations apply; secondly, due to these same regulations, a plot of land cannot be occupied by more than one house unless it is formally split (in which case every plot/home needs to be connected to the sewer, and apply for exemption, etc.); and thirdly, the Dutch metropolitan area is simply far too expensive to be populated in this way (where there are now five tiny houses, 350 sustainable homes will be built — neither one of which, needless to say, the tiny house builders can afford).

As is often the case in the Netherlands (and elsewhere), the tiny house inhabitants of Proeftuin Erasmusveld occupy the land under circumstances that are tolerated but not legal, for their conditions of living are formally below standards. These standards, the inhabitants know all too well, are there for a reason: apart from being set in place to prevent haphazard building, they are to keep residents healthy and safe, ascertain a minimum level of well-being, and protect them against the malpractices of, for example, slumlords. The irony of the movement befitting, it is precisely these elementary conditions of living that are romanticized to the point of

being glorified in the tiny house's public appeal:[6] burning wood to keep warm, going outside for a pee, and other kinds of reduced comfort — limited quantities of electricity and water, no washing machine, waste separation, a limited amount of space, a kind of camping life. Genuine in their quest to bring about social change, and with little to no on-grid alternative to build the kind of life that they wish to lead, for most tiny house pioneers, the willingness to compromise is considerable. Yet their alacrity is not boundless. Dissuasion always lies in wait. Frustrated in their initiative, creativity, and resourcefulness by corporate and governmental agencies that (cannot but) pursue their own goals and exercise their own control over these projects (often by milking them for all they are worth), initiative may get killed, and therewith the project: instead of a breeding space for tiny initiatives, a plot of land turns into a temporary parking lot for tiny houses until a next destination is found.

The reality of tiny off-grid living, then, is as idyllic and picturesque as it is precarious and entangled in uncertainty. As paragons of proactive citizenship, it may be tempting to view the tiny house builders in terms of the

(6) See for example the project branding strategy "Proeven via Tiny Houses" and "Proeftuin Erasmusveld | Woonpioniers"; or the tiny house mania on Pinterest (Bearfoot Theory).

win-win-situation of their (envisioned yet arguable) immanent success; if all turns out well, they get to inhabit the world as (they envision) it should be: affordable, green, sustainable, and community-based, a world that they have helped built; at its worst, they have taken part in an interesting experiment that might help their careers before being ground to a halt, upon which time they are as likely as they are unlikely to find themselves in a position to buy a house after all (and have to find alternative housing solutions). While there may be a kernel of truth to the observation that there is a gain for the tiny house pioneers, it does not alter the fact that their off-grid living, as said, is characterized by tenure insecurity, frequently substandard conditions of living, endless negotiations with governmental and corporate landowners, and non-stop unwaged inventiveness, networking, and creativity.

Moreover, as Isabell Lorey has rightly pointed out in a slightly different context, the idea of "self-chosen precarization" with which the off-grid is often associated is premised on ideas (i.e. of freedom, autonomy, creativity, participation, and empowerment) that are themselves constitutively linked to the hegemonic on-grid modes of living and subjectivation we call late-capitalism. In other words, they are part and parcel of the "hegemonic function of neo-liberal governmentality" in the global West. While self-precarization may "[contribute] to producing the conditions for being able

to become an active part of neo-liberal political and economic relations," Lorey also points out in line with Foucault that, in this scenario, agency emerges in the paradoxical movement between subjugation and empowerment, coercion and freedom. It is in this paradoxical movement, which manifests itself here in the critical imaginaries and practices of tiny living, that the possibilities for alternative modes of living and housing that are environmentally and socially more sustainable may come into view and are arguably most forcefully negotiated.

The Grid as Structuring Paradox

Reflecting on the micro and macro processes of deterritorialization and reterritorialization at play in the concrete case of tiny living, the claim of this short position paper is that the notion of the "grid" functions as a structuring paradox that at once allows and disallows for the negotiation of limits to (and possibilities within) our present-day societies of control.(7) On the one hand perceived as a potentially adequate response to the negative side effects of consumer capitalism, climate change, and the rise of what Maurizio Lazzarato has called

(7) For a lengthier, more theoretical, elaboration on the notion of dis/connectivity as a structuring paradox, see my "Discourses on Disconnectivity."

"the indebted man," on the other hand, the tiny house movement can be seen to meet the demands of neoliberalism head-on: participation, gentrification, and flexibilization. The on/off-grid, I argue, in this sense, can be seen to wield a stricter interpretation of a more general problematic with regards to contemporary urban/human life, where living off the grid is not so much, or at least not solely, about the refusal or dislike of the grid as such, but can be seen to function as an affirmative force that nonetheless holds the capacity for transformation. As Woonpioniers' Arthur van der Lee and BPD's Hans-Hugo Smit put it: "The real challenge for us is in finding a way to unite the temporary character of our project with the permanent impact we hope it will have" ("Erasmusveld Area Development"). For the area developers, this impact is defined in terms that are both pragmatic and idealistic, local and global. On the one hand, they wish to "positively determine the future demographics in the area"; on the other hand, they aspire to "redefine the core business" of project development by "setting an example for the real estate industry at large" ("Pioneering"). It is remarkable, therefore, how little is uttered on the lived-reality of the plot's temporary inhabitants, whose situation remains as idyllic as it is precarious from beginning to end. Indeed, it is one thing to contribute to optimizing the conditions for gentrification, but another to come up with creative sustainable solutions and develop new modes of living in

situ that make some of the existing guidelines and regulations redundant, as the tiny house pioneers do. It is yet quite another (but it would take another paper to develop this argument more fully) to glorify a substandard quality of living, and contribute, however reluctant or unwilling, to a reverie of the gentrification of poverty as guarantee for the future sustainability of our world. To be continued…

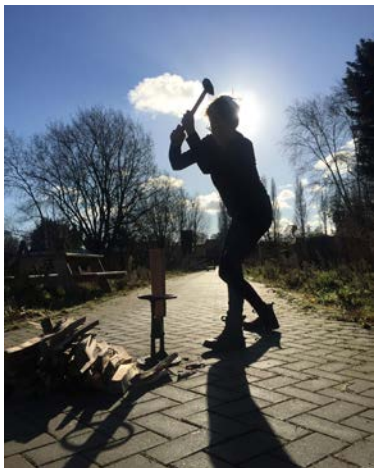
fig. 1

Covering the Roof at Proeftuin Erasmusveld. Photo courtesy of Jente de Vries.

fig. 2

Inside Jente's Tiny House. Photo courtesy of John Hesselberth.

fig. 3



Chopping wood at Proeftuin Erasmusveld. Photo courtesy of Jente de Vries.

biography Pepita Hesselberth is Assistant Professor Film and Digital Media at the Centre for Arts and Society, Leiden University. She is the author of *Cinematic Chronotopes* (2014), and co-editor of, amongst others, *Legibility in the Age of Signs and Machines* (2018) and *Compact Cinematics* (2016). She has published widely on Disconnectivity in the Digital, a project for which she received a fellowship from the Danish Council for Independent Research and was appointed as a research fellow at the Department of Arts and Cultural Studies at the University of Copenhagen (2015-2018).

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Stepan Lipatov and Sissel Møller

A Grid, Memes and David Hockney

> A meme is an idea, behavior, or style that spreads from person to person within a culture — often with the aim of conveying a particular phenomenon, theme, or meaning represented by the meme.
>
> Merriam-Webster Dictionary

For graphic designers a grid is a two-dimensional, visual tool to organise material and information of different kinds — think of a complex body of diverse information, a letterform or a series of pictograms. Grids are mostly used privately whilst creating but they also function as a set of instructions made by one designer, or studio, for other designers. In that case grids are used for the crystallization (or explanation) and reproduction of an identity.

Interestingly, despite being one of the most basic and effective tools for a graphic designer, grids are also controversial and divisive. There are many ways of using grids within design — and many different (and strict) opinions on the best way to do so. Sometimes a grid becomes the main foundation for visual decisions. However, a grid by itself is only a means to achieve coherency, clarity, and visual punch. The result justifies the grid and not the other way around. Once the final product takes shape, the grid is switched off and often it is then really hard to recover the grid on which a certain image or layout was built. Online you can find various attempts at deconstructing iconic logos to prove that they are based on the golden ratio. These attempts are often successful. (Though it should be noted that when looking for the golden ratio, people find it in anything.)

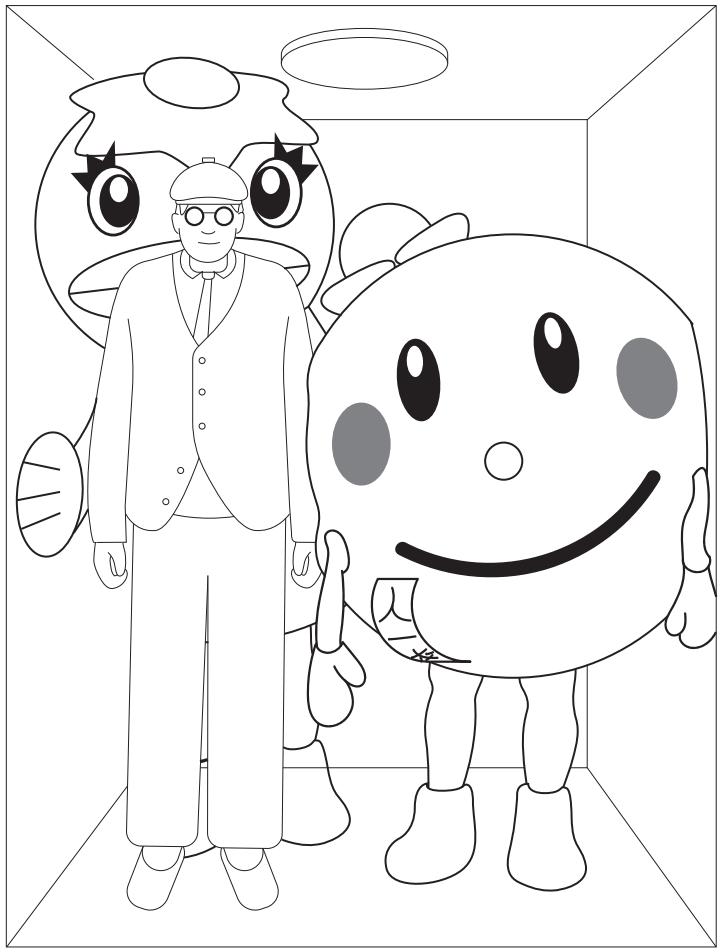
This visual chapter starts from an interest in the situation where a grid (usually it is a system of grids) becomes part of a brand book, and a tool for producing (and later reproducing) new printing matter, digital forms, etcetera. A different angle on a basic instrument such as a grid in graphic design quite drastically effects general views on visual identities. They could be seen quite narrowly, as strict pragmatic systems or as loose frameworks for play and expression. The latter has our preference because it creates a more interesting visual environment — and let's not forget that elements of identies surround us constantly in today's urban world — and secondly, it makes working with such a

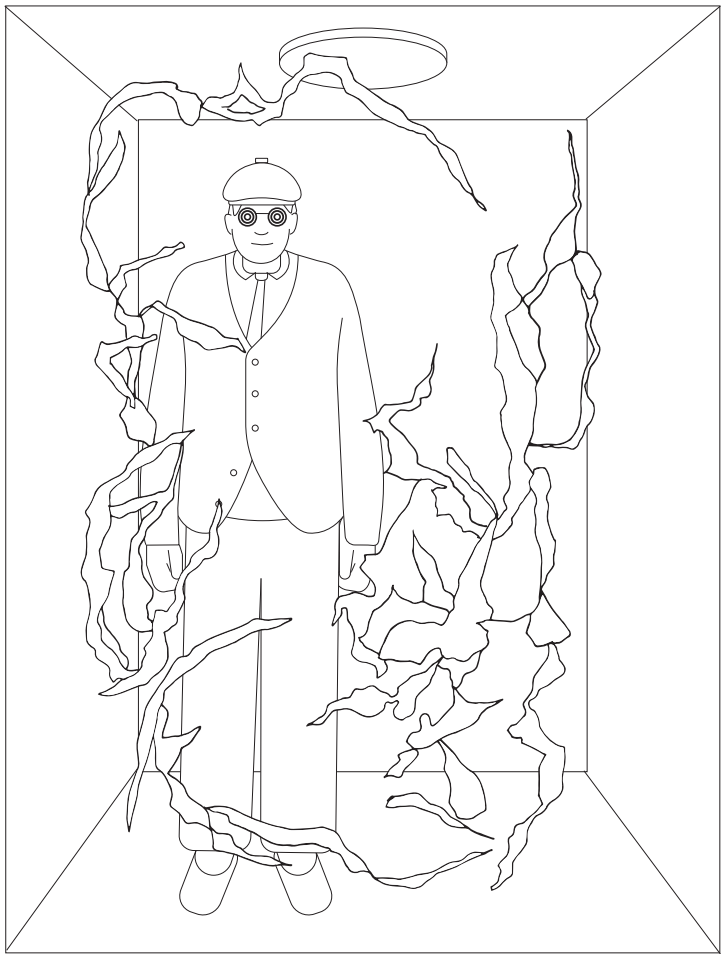
rigid system a creative process. in the first case its not. If the narrow identities operate with the same few visual elements according to strict and simple guidelines the second works with implicit communication: the tone of the message, the context, or the combination of material and technology. Instead of reading of a connection, seeing a logo on every object you could recognize a style.

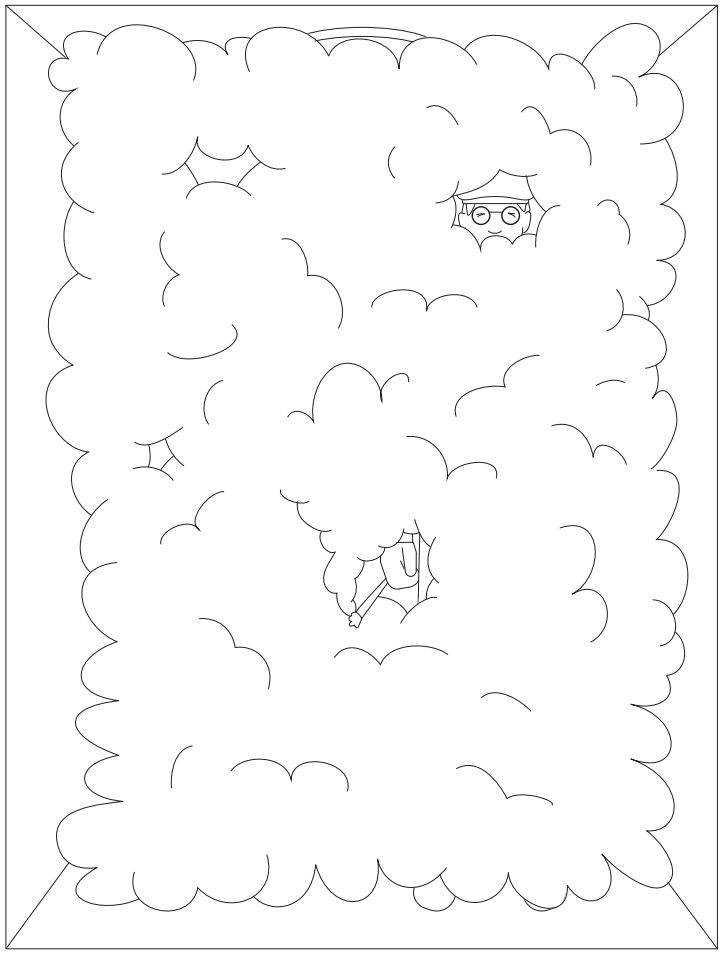
An identity can develop and grow ever more complex to the point of surprise. A quite bizarre example of this is a meme from 2008 called Loss. The development of Loss over time functions as an inspiration for this visual essay. The simple story of Loss is that when in 2008 the original 4-frame comic strip was published online it was immediately mocked. People started creating images, comic strips and similar compositions, some of which are, frankly, quite ugly. The original comic strip became a loose visual base and, fascinatingly, within a few years, a huge body of interpretative works was created. Though some images seem far removed from the original (carrying as little visual resemblance to the original image as possible) they are surprisingly still recognizable as being interpretations of the original comic strip. We are fascinated by this unobvious and indissoluble link between the images to the point that we find it somewhat counterintuitive.

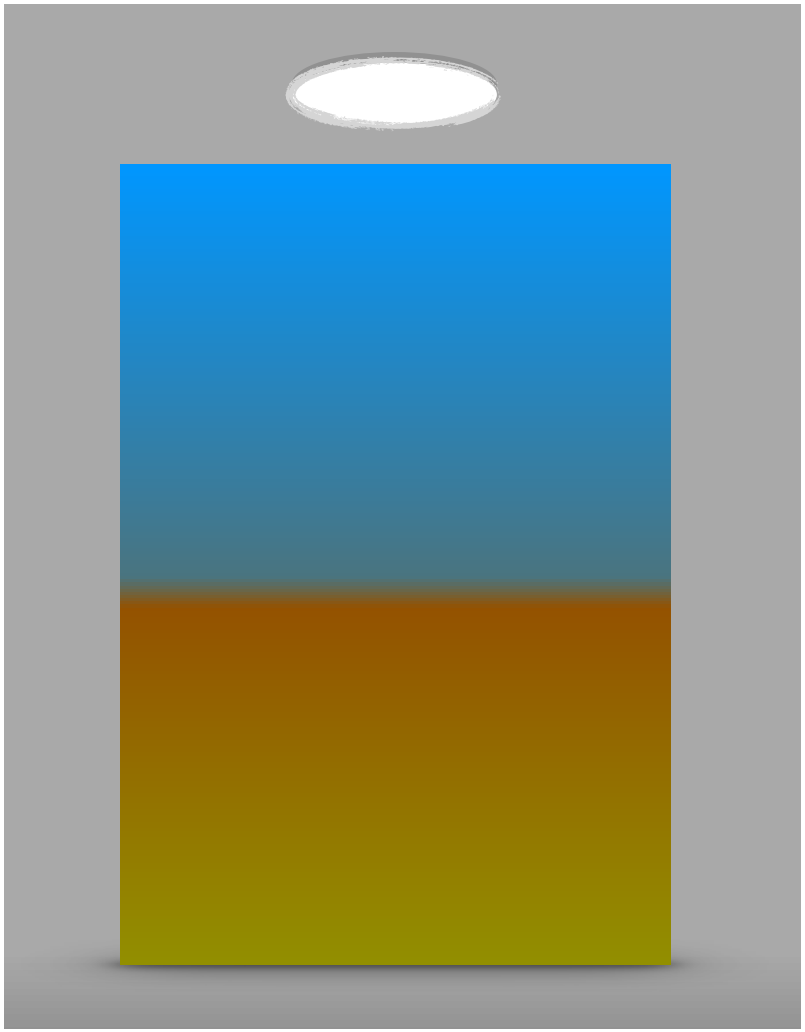
The following illustrations are an experiment mirroring the transformation of the Loss meme. In February this year, the 81-year-old artist David Hockney

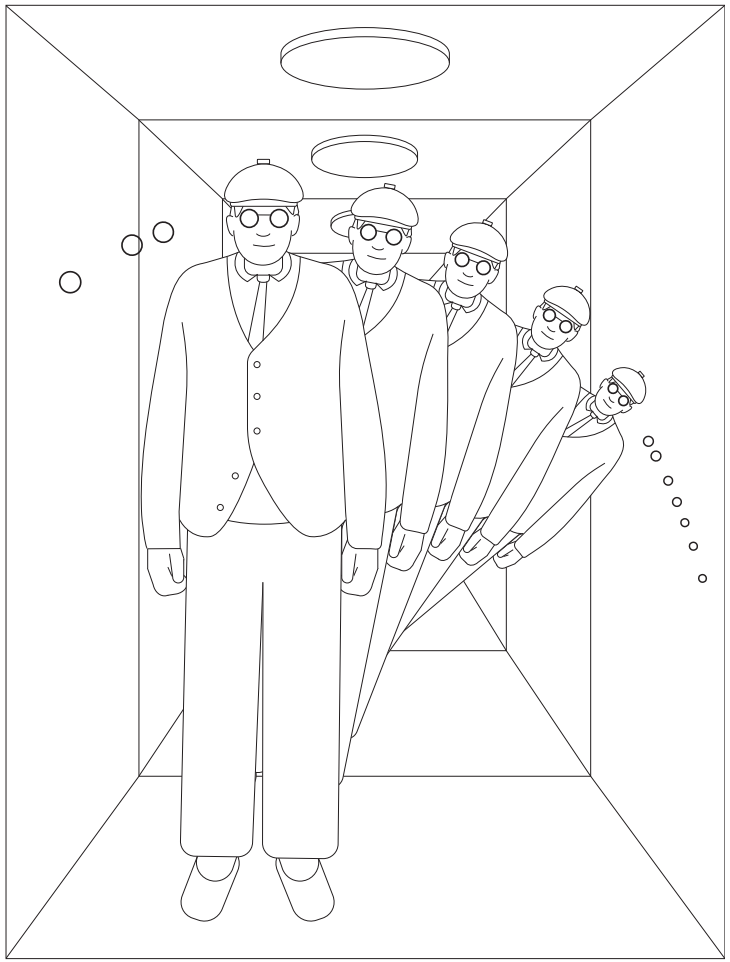
got stuck in an elevator at the Van Gogh Museum in Amsterdam. Being stuck for forty minutes, mid-air, in a small box, the artist and his fellow captives had to entertain each other with jokes to keep their spirits up. Knowing Hockney's universe and his work, it is very unlikely that these forty minutes have been boring and so it inspired us to think about what could have happened in this empty square. The interpretations of the Loss meme happened over years and consist of the work of thousands (or tens of thousands) of people. On a much smaller scale, this visual essay explores a similar mechanism. Friends and colleagues responded to a simple drawing of Hockney in the elevator. We sent each of them one variable keyword to direct the interpretation. We are interested in regarding the images they sent us back a series created with a non-visual grid in a simple act of reproduction. Most importantly, we enjoy the gesture of a collaborative use of a non-visual grid in service of storytelling.

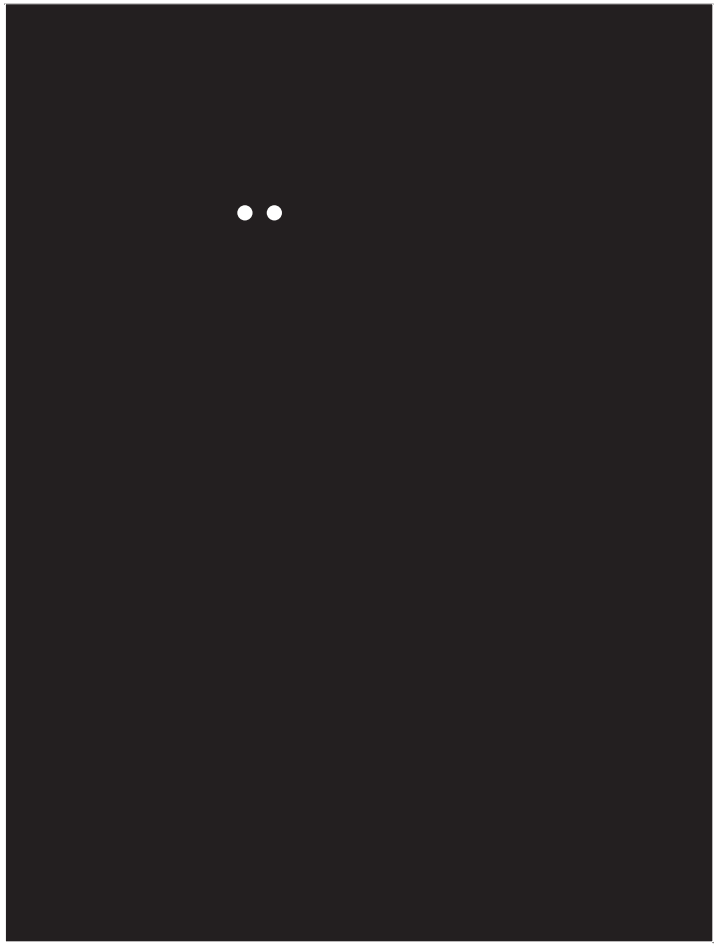


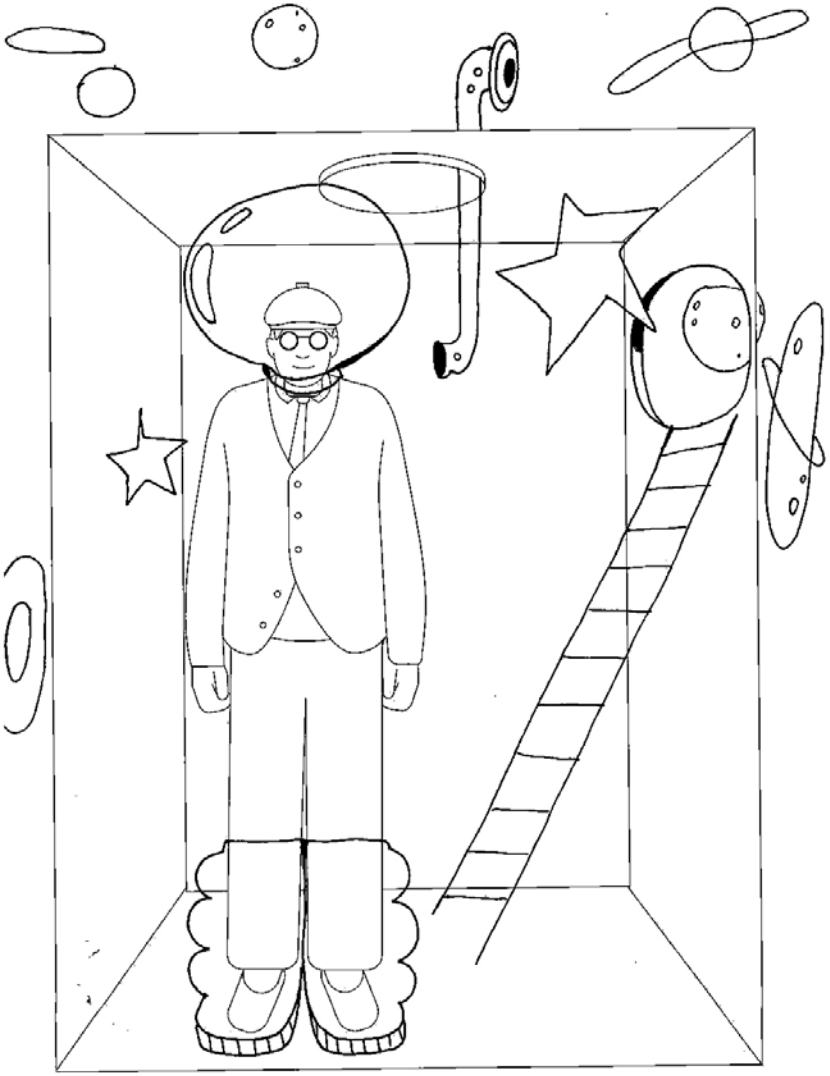


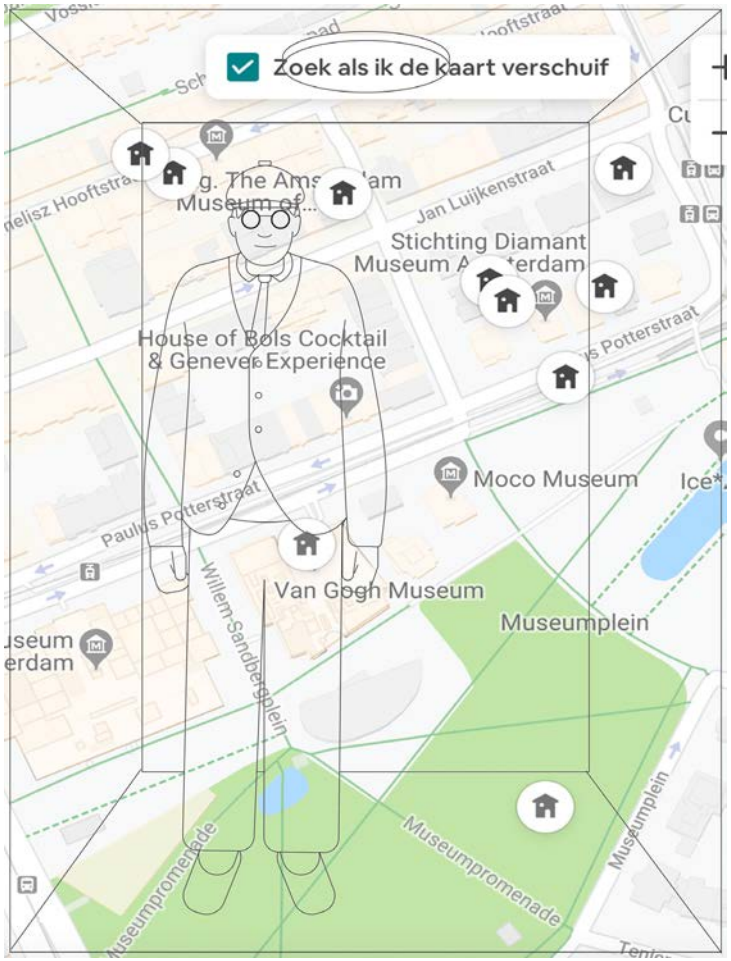











Zoek als ik de kaart verschuif
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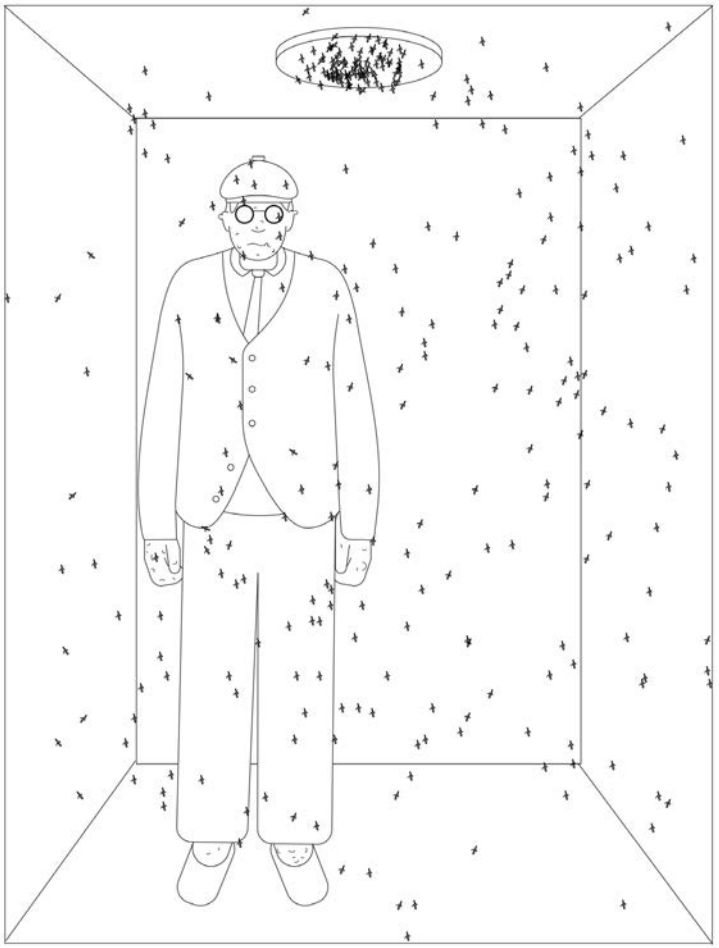
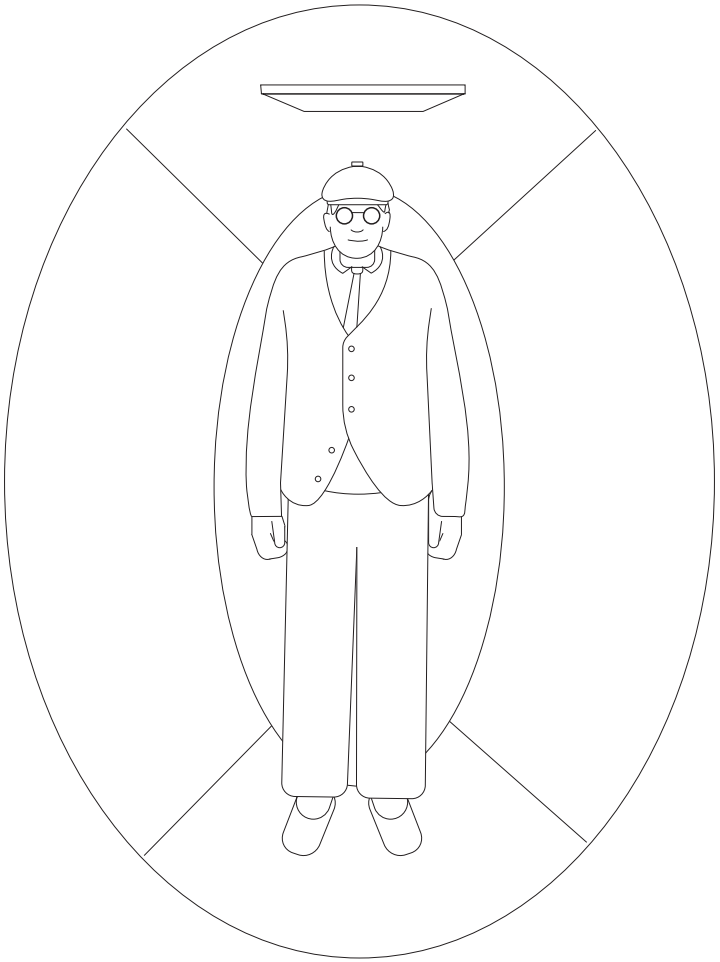
Stichting Diamant
House of Bols Cocktail
& Genever Experience
Moco Museum
Van Gogh Museum
Museumplein
Museumpromenade





contributers
'Mascots' by Stepan Lipatov
xx
'Hot boxing' by Rully Irawan
xx
xx
'Gone' by Paul Bille
'Mirror' by Line Arngaard
'Plant' by Rully Irawan
'Dark' by Stepan Lipatov
xx
xx
'Mosquitoes' by Samuel Rynearsson
'Reverse' by Maxime Selin

biography Sissel Vejby Møller (1994) and Stepan Lipatov (1989) have both graduated from the Gerrit Rietveld Academy in Amsterdam. As graphic designers they experiment with the language between text and image.

Tânia A. Cardoso

Blurred Lines: Challenging Urban Grids On and Off the Page in City Illustration

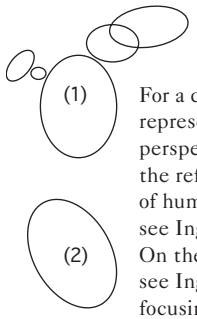
abstract This paper draws parallels between the acts of walking and drawing in the city as appropriations of the urban grid. Following Michel de Certeau's theorisation of urban practices, it reflects on both my own drawing in situ practice and [the] picture book *The Soft Atlas of Amsterdam* by Jan Rothuizen. Both reflect

lived experiences and (urban, spatial) stories, determined by and reshaping the city's constructions of spatiality and an urban imaginary. By distorting the pictorial grid, the illustrations speak back to mapped city space, emphasizing that a line between two spatial elements is not blank but rather full of social and cultural significance. These illustrations, by revealing space through metaphorical practices, disrupt the authoritarian logic of city planners and traditional mapping, creating blurred lines in the urban grid and in its corresponding pictorial grid. This way, their heterogeneous, embodied depictions echo the city's impact on both artists' imaginations.

Introduction

How do you breathe life into a map?

Although there is some scholarly debate about cities focusing on the intersection between subjective practices and cartography, it is still not clear how these practices give visibility to the complexity of the city beyond its official urban grid.(1) This grid is complex, made up of different layers of architectural and urban space that might be appropriated by inhabitants in unexpected ways. In fact, this uncertainty problematizes conventional views of the urban grid as a stable, immobile element. In practice, the urban grid is viewed as the physical layout produced by the city planner, and its pictorial grid is manifested in traditional mapping according to this physical layout. Thus, the pictorial grid defines a map of objects where urban space is frequently represented as blank.(2)



(1) For a discussion of maps as multi-dimensional, visual-representational vehicles of thought, see Camp; for a contrasting perspective on contemporary map making as a reductive view of the referent city, see Solnit (*Wanderlust*); and on the importance of human embodied experience and perception in drawing space, see Ingold and Harvey.

(2) On the problems related to the concept of cartographic illusion, see Ingold (234); and on the historical tradition of map making focusing on the representation of empty and constructed space, see the 1748 Nolli map of Rome on *The Nolli Map Website*.

Attending to both the pictorial and physical in this way therefore requires a drawing practice in situ, which takes walking as a fundamental act, representing urban complexity at the ground level and filling in the blank spaces in the pictorial grid.

This paper examines particular cases of such in situ urban illustrations — drawings by Jan Rothuizen, as well as reflections on my own drawing practice. In doing so, it follows Michel de Certeau's conceptualization of everyday urban practices and their reciprocal relation to their surroundings. Particularly, it reclaims the potentialities of drawing — when combined with walking practices — to resist and complicate traditional mapping's domination of urban space and its representations. It asks: What happens when we consider what both urban, spatial practices can do together?

According to the artist Aileen Harvey, drawing is akin to walking insofar as it is a practice of putting bodies in motion through an ever-changing environment. Following this, I understand that both these movements create space, filling it with activity and diversity. As Tim Cresswell notes of mobility, these movements are both "products and producers of power" (2). Therefore, capturing this experience in illustration highlights the fact that a movement in space is already imbued with meaning and ideology.

Both moving through space and representing it, understood in this way, renegotiate what that space

means; walking and drawing are therefore understood in this paper as productive, *metaphorical* practices. Metaphors, which de Certeau correlates to the Greek word "*metaphorai*" for means of transportation, are ever-changing everyday stories of cities that create space and urban knowledge. In other words, de Certeau relates metaphors to stories because they are "spatial trajectories…and practices" and — just like narrative structures — they organize places through the displacements they describe (115). Space, in these terms, is "practiced place" (117), distinct from its geographical configuration and composed by intersections of metaphors in place. Thus, urban space and metaphor are also intrinsically connected to daily-life: the urban practices and movements of city dwellers, which, according to de Certeau conform to the urban grid but are, simultaneously, active elements in the production and appropriation of the environments that surround them (xiv). This means that when dwellers and illustrators appropriate urban space for their own needs, their perception of the urban grid changes, in turn ultimately re-transforming space and spatial practices themselves.

The types of city illustration this article explores are products of embodied experience, artists' personal reflections, and urban legends and stories. Walking, in particular, provides an essential basis for their representations of urban space. In contrast to the top-

down view of city planners and mappers, de Certeau states that “[t]he ordinary practitioners of the city live ‘down below’, below the thresholds at which visibility begins” (93). Following this, the interaction between urban space and lived experience can only be revealed through a practice that is also embedded in that interaction. Practices such as drawing in situ, therefore, create space through their connection to spatial practices and stories as part of a tactic to question the pictorial grid and how it overshadows everyday life.

While investigating Rothuizen's drawings and my own illustrative approach, four main initial observations came to mind. The first is that cities have as many layers as the people crossing them and are, therefore, in the words of Rebecca Solnit, “practically inexhaustible” (*Infinite City* 2). Secondly, illustration is a selective process. Thirdly, space cannot be completely or accurately represented in totality.(3) Finally, the process of drawing in situ allows for the exploration of the city and the discovery of aspects that are otherwise invisible in traditional city representations. These observations are not guidelines or strict rules, but they inform the importance of using drawing practices as a synthesis of the surrounding environment. Ultimately, the resulting illustrations are communicative: pieces that speak of the city.

(3) See Manolescu (243).

Moreover, as alternative maps, these illustrations both reflect and renegotiate the urban grid. Maps, as common representations of the city, have a particular “ability to reveal relationships and operations in the land” (Bustamante 53), corresponding their two-dimensional format to the geometry of the landscape. However, while revealing the surface, the pictorial grid overlooks the vast majority of other features (55). Subsequently, this reduces the visibility of these practices and highlights a totalizing view of the city that, for de Certeau, is reduced to the perspective of “a solar Eye, looking down like a god” (92). To put it another way, the mapper's perspective shadows lived experience. I here use the word *shadow* with a double meaning. Traditional top-down approaches' emphasis on the urban grid overshadows or puts in shadow lived experience. But, just as 'to shadow' alternately denotes ‘to follow’, mapping can trace fragments of lived experience by glimpses through shadow; lived experience precedes and might (re)inform mapping. The alternative illustrative practices analysed here therefore shadow or follow lived experiences. They put them back on the map by following but obscuring the lines of the urban grid — using it to their advantage.

In the sense of this paper, the act of drawing in situ gives the artist the opportunity to be immersed in place, thus becoming part of his/her surroundings and, in turn, part of the performance of metaphors. What I mean by this is that drawing in situ explores space in an

engagement that involves an embodied approach and observation in a form of thinking by making. By navigating the urban grid and becoming itself part of the metaphors, drawing in situ resists the constraints of the pictorial grid opposing its top-down, totalizing determination of space.

Ultimately, this paper suggests that the action of urban walking is similar to the action of drawing in situ as a gathering of sensorial information and awareness of place. Their combination brings forward possibilities for the creation of an image of space, enabling its consequent communication beyond that of a pictorial grid. Specifically, I am discussing the parallels between the two practices as experienced through my own artistic practice of drawing in situ and Jan Rothuizen's illustration book *The Soft Atlas of Amsterdam*. Doing so requires an interdisciplinary methodology that involves both a semiotic approach in the illustration case-studies and an autoethnographic reflection on the exploration of the practice of drawing in situ. These methods aim to tie in my artistic practice as a participant-observer/illustrator in the city to a semiotic analysis to understand how urban space and experiences are translated to illustration through visual signs.

I start by briefly discussing the action of walking through the readings of Michel de Certeau, bringing his theory closer to my own artistic practice of drawing in situ to reassert (beyond de Certeau's claims) the

connections of walking to the practice of drawing. Building on this discussion, I move on in the second section to examining Jan Rothuizen's illustrations of the city of Amsterdam as a metaphorical practice that documents itself in the process of creation. Ultimately, through these analyses and reflections, drawing in situ emerges as a practice that can restore the aspects of lived experience to mapping. In other words, this practice permits the (re)discovery of everyday life otherwise overshadowed by the pictorial grid of traditional map-making –revealing practices, stories and meanings that float above, break, cross or resist the urban grid.

1. Exploring the metaphorical city

> An Icarus flying above these waters, he [the observer from atop the World Trade Centre] can ignore the devices of Daedalus in mobile and endless labyrinths far below. His elevation transfigures him into a voyeur. It puts him at a distance… Must one finally fall back into the dark space where crowds move back and forth…? An Icarian Fall.
>
> (de Certeau 92)

The title of this atlas refers to *Soft City*, a book written in 1974 … [Author Jonathan Raban's] idea is that the city is where the solid concrete

> reality of buildings and asphalt meets the malleable, subjective experience and expectation of the people who live and work there.
>
> (Rothuizen 9)

Michel de Certeau's quote above formulates a critique to an architectural approach to the city where the planner puts himself at a distance, disregarding urban spatial practices, and emphasizing the urban grid and a totalizing vision. As de Certeau formulates, quoting Roland Barthes, this vision actually obscures urban legibility in contrast to "pedestrian movements [that] form one of these 'real systems whose existence in fact makes up the city.' They are not localized; it is rather they that spatialize" (97). Thus, the inhabitants are the ones who walk the city and take agency in navigating the urban grid, regardless of its intended and official use. This agency creates identity in space and infuses it with stories and meanings: fragmented elements that are interpreted by artists and that inspire their illustrations.

The action of walking can be outlined in a map by its trajectory; however, this alone does not indicate what was experienced. De Certeau claims that the "thick or thin curves [of maps] only refer, like words, to the absence of what has passed by […] [missing] the act itself" (97). In my analysis of Rothuizen's and my own illustrations, my perspective departs from de Certeau's at the point where he discards the possibilities of capturing

the diversity of urban space in a graphic format (99). While the paths represented in these case-studies cannot be shown in totality, urban illustration can combine fragmented elements into a synthesised whole. The illustrator then gives visibility to the spatial story based on his or her practices in space.

Furthermore, de Certeau defines walking as an act of rhetoric, explaining that the body in motion inscribes a path in the environment comparable to how a story is written. He implies that the city's meaning is revealed as it is created by the practices within it, which means that subjective practices and spatial stories are cultural constructions (100). Considering the rhetoric of walking in urban space as equivalent to the art of narrative means that, when combining it with the practice of drawing, the illustrator is not only creating a spatial story but also documenting the practices that surround him or her.

The cultural constructions created by spatial stories draw meshes of trajectories between physical objects in the city, superimposing patterns of mobility over the urban grid. These trajectories between spatial elements disregard the urban grid, highlighting the fact that a line between physical objects is not an unspecified, blank space but rather a movement full of social and cultural significance that embeds space with meaning. In consequence, if an embodied illustrative practice makes the relationship between walking and

drawing apparent, it means that urban space — practiced placed — can be captured in the illustration. In this type of illustration, the path taken (the invisible action) transcends the two-dimensional pictorial grid and gives visibility to the urban space as seen by the artist. Thus, by interacting with the urban grid in this way, both the illustrator and the wanderer also resist or re-appropriate it. This interaction, therefore, "transforms each spatial signifier into something else" (de Certeau 98), building a fragmented perception of the city, shadowing everyday stories as projections of the human body in urban space. In this sense, the invisible path is revealed through the representation of the lived experience of the city, unlike the restricting view of the pictorial grid determined by the totalizing view of a god's eye perspective.

Departing from Certeau's claim that pedestrian movements are actions that spatialize the city and give agency to their dwellers, I suggest that the practice of drawing and walking the urban grid returns agency to the illustrator. Similarly, both my artistic practice and *The Soft Atlas*, which I will analyse in detail in the next section, reflect the embodiment of the illustrator in interaction with urban space and with other bodies. Consequently, the observed metaphors are combined in a complex composition of juxtaposed information that breaks from the urban grid and its rigid pictorial format. These illustrations are layers of juxtaposed information which directly communicate urban space. As

metaphorical practices, they build up from collective action and experience in the city, based on the connections between people and how they respond to urban space.(4)

As a first example of such practice, consider my drawing in Fig. 1. The illustration does not aim to convey an accurate image of urban space, but rather to enrich its representation with contextual and qualitative information, thus personalizing space at a specific time and through a specific body. My aim here was to discover a complex path, interacting with culturally diverse inhabitants and collecting fragments of my own experience of the city: interruptions and setbacks, architecture, empty spaces, non-places, and fluid zones. In other words, the creative process of the illustrator that emerges according to the uses, needs and experiences of urban space extracts different meanings from it, and directly impacts the illustration. This disturbs the urban grid laid out by the city planner, giving visibility to the blank spaces and invisible lines in the pictorial grid.

Drawing in situ is an immersive act which emphasizes embodied and temporal perceptions of space. As my analysis below suggests, this practice attends to

(4) See also the procedure of walking as dérive (Debord). For a contemporary reading of walking as collective and aesthetic practice, see Careri.

the specific place, position and body of the illustrator, combining aspects otherwise alienated by the pictorial grid. In my artistic practice, I envision walking and drawing as similar elements that influence each other in the process of creating space. Drawing in situ, more specifically, is the act by which ordinary activities and unusual situations feed my practice. This process departs from a walk influenced by the space I find myself in and that dictates each movement and pause, in turn influencing my drawing.

My autoethnographic reflection on drawing in situ shows that the practice emphasizes how urban experiences are interpreted and visualized through the movement of the body in the meshes of trajectories. It orients the illustrator in space and conveys the immediate emotional expressions of this interaction in the lines and brushstrokes of the illustration. The recognition of space through walking feeds my drawing practice as I note interesting elements in quick sketches. Later on, these sketches and annotations can be combined into bigger illustrations or small picture books that can be read together or separately. Fig. 2 is an example taken from one of my city sketchbooks that shows how the dynamic between urban space and drawing is a process in which the illustrator-subject and city engage reciprocally. In this case, I was collectively claiming space both by practicing yoga in the square and by drawing it. As I was receiving the information about

my surroundings and the inhabitants' practices through my senses (of gravity, balance, distance, direction, speed and duration), I was also documenting them in my sketchbook. My artistic expression changes not only due to different inspirations in space but also due to physical impacts, such as the traces left by rain falling on my illustration. Thus, this dynamic develops the metaphorical illustrative practice from my subjective approach and from the impact of space.

The uses of daily life and spatial stories, as well as my own practice of drawing in situ, are part of a metaphorical city that creates urban space. The illustrations, as result of this process, are testimonies to those practices that diverge from the official urban grid. Unlike *The Soft Atlas*, which will be discussed in the next section, my practice is not geographically bound to the pictorial grid. Instead, it focuses on non-sequential stills of space that allow me to make sense of and to take part in the immediate city that surrounds me. As I will show through the unpacking of the *The Soft Atlas of Amsterdam*, hybrid city illustration comes together in the communication of the cultural practices of the city, making them visible and emphasizing the appropriations and claims of its dwellers (including the illustrator) in urban space. It puts them on the map, shadowing the strictness of the pictorial grid and using it for alternative purposes.

2. Illustrated city, in and off the grid

As mentioned in the previous section, while walking through geographical place, the body inscribes a path in the environment, outlining different meshes of trajectories that create space and that tie together movement, experience and spatial stories: metaphors. Similarly, drawing is an inherently physical act involving the coordination between different parts of the body. As shown earlier in my own artistic practice, when drawing in situ I use the active qualities of walking to be aware of my surroundings and of drawing to be immersed in them and to claim the urban grid as my own.

The case study I am presenting in this section, *The Soft Atlas of Amsterdam*, not only presents an embodied, idiosyncratic urban perspective, but also documents the illustrator's process within the illustrations themselves. Here, unlike in my own drawings, Rothuizen builds his illustrations from a gridded, geographical perspective, while also defying the urban grid by recording his own practice within it. As a result, by creating and claiming space as his own in his embodied experience, the artist simultaneously breaks, distorts, and ignores the corresponding pictorial grid in his illustrations, according to his appropriation and interpretation of the urban grid. Rothuizen's illustrations shadow — or closely follow — the aesthetic expression of his mobile practices within the city, via a topographical representation. The specific, map-like features of his

illustrations are combined with iconographic and symbolic figures to communicate urban meaning and to subvert traditional mapping.

In the *Soft Atlas*, Rothuizen explains that repetition and habit make what is familiar seem invisible and how this, in turn, may affect our perception of space. Realizing that the Amsterdam he knew was limited by his immediate experience of family and daily-life, the artist decided to walk through certain routes (old and new) with a different mindset and, thus, to create new experiences in the city he thought he knew so well. The specific routes created by walking and meeting people are described by the artist as "written maps or graphic reportages" (Rothuizen 9), highlighting his desire to gain a new perspective on the city through what he observes. The book is a hybrid, non-sequential picture book that combines illustrated axonometric maps with sketchbook pages. The illustrations have as a starting point the urban grid, but the artist focuses on urban metaphors — *soft* experiences — rather than on the physicality of place.

Recalling Rothuizen's quote in the epigraph to Section 1, *Soft Atlas* is a word play contrasting the hard, physical aspect of cities with the soft side of the subjective experience of city dwellers. The book, faithful to its title, showcases several embodied experiences in the city of Amsterdam (9). The result is a combination of a general subjective perspective on the artist's practice with specific fragments in a synthesis of his

interpretation of urban space. His illustrative practice not only focuses on the relation between the metaphors and the urban grid of the city of Amsterdam (activities, stories, icons and symbols) but also transposes the pictorial grid by documenting his own practice. While his movements in space are not clearly defined, the reader gets a sense of the time when the artist indicates the start and end of his practice, and his encounters with certain people or places (fig. 3). The notation of the walking route is spread geographically through the illustration, emphasizing the relationship between his temporal embodiment and space. Rather than just focusing on the drawing of his route through the urban grid – the line that de Certeau critiques as missing the action (97) — the artist conveys his situatedness through small details such as the time or bodily sensations — occasionally even by drawing himself.

It is implied in the book that these final illustrations were drawn in situ, and — besides Rothuizen's metaphorical practices — there is also reference to other inhabitants' own spatial stories. Therefore, I understand that his illustrations were created on site and directly impacted by the metaphors in space during their creation. In certain illustrations, such as sketchbook spread "Air Traffic Control" (22-23), space is observed directly through the eyes of the artist, much like my own illustrative practice in Section 1. While these illustrations are the results of the practice of

the illustrator, they are not documentations of the metaphorical practice itself. By contrast, Rothuizen's drawings map the presence and mobility of the artist. The axonometric bird eye's view perspective of Rothuizen's map-like illustrations show the city at a distance in order to place it geographically and to establish a wide shot of urban space, meaning that these were not completely drawn from observation but also from his imaginary and memory. Nonetheless, while these illustrations are put at a distance, this is not a totalizing view of the city because the geometric, pictorial grid is overshadowed by other layers of information in different scales that highlight embodied experiences instead.

Rothuizen's illustrations document his metaphorical appropriation of the city of Amsterdam. Not confined to the boundaries of the pictorial grid, the illustrations go through and under buildings, showcasing what lies beyond walls and different layers. More concretely, they encourage a different kind of city exploration: a path that intersects the invisible trajectories of metaphorical practices that create space. This type of exploring can lead to unexpected situations, due to the liberty each dweller has in appropriating the urban grid. Consequently, it changes the perception from an absolute grid to something constantly in motion. The movement created in these practices shifts the focus onto the questions that a city formulates rather than the

ones it answers.

In Rothuizen's work, the illustrations are a combination of multiple elements: drawings and words, past and present, autobiographic memory, historical knowledge, and political urban commentary. It is interesting to pair the almost chaotic illustrations of the *Soft Atlas* — hard to read and disorienting in spatial terms — to the experience of walking in the city of Amsterdam. In my perspective, and following my experience in Amsterdam as a foreigner, this choice of composition mirrors the series of simultaneous events and lives that compose the city, rather than being a simple aesthetic decision. In stark contrast to traditional maps and in advertised map-like images of the city of Amsterdam — in which the prominent factors are the physical, built architectural objects — the pictorial grid in Rothuizen's illustrations is put in the shadows by the lived experience of urban space; in certain illustrations it even appears broken or completely non-existent (fig.4).

The incredibly detailed illustrations derive from Rothuizen's interaction with space and with others, creating spatial encounters and stories that become permanently registered by his practice. Through these encounters, urban space is created and modified. Tim Ingold critiques map-making as a cartographic illusion: "the assumption that the structure of the world, and so also that of the map which purports to represent it, is fixed without regard to the movement of its inhabitants

[... the map] appears deserted, devoid of life" (234). The documentation of metaphorical practices, as shown in Rothuizen's work, aims to produce a different plane in the representation of the city. His illustrations defy the pictorial grid to claim these inhabitants' movements as important parts of the city's complexity.

In conclusion, I would like to highlight two points about *The Soft Atlas of Amsterdam*. First, the illustrations are infused with reflections about urban space as it was at the moment the artist worked there.(5) This means that the illustration is not only the result of Rothuizen's illustrative practice but also documents this practice; doing so it is seen as a testimony of that particular interactive moment. The fact that Rothuizen's illustrations give visibility to his own immediate perception of the urban grid reaffirms his drawing in situ practice as a tactic of resistance. In addition, by distorting, breaking, overlaying and altering the pictorial grid in his topographical, map-like illustrations, he accentuates certain sensations produced by urban space.

(5) There are four books available with drawings that range from 2009 to 2016: *De Zachte Atlas van Amsterdam* (2009), *De Zachte Atlas van Nederland* (2011); Veranderstad Amsterdam: *De Zachte Atlas II* (2017); and *The Soft Atlas of Amsterdam* (2014). The latter is the only book in English and gathers a selection of illustrations from the first two books.

In this sense, he disregards the traditional totalizing view of the urban grid, overshadowing it by following the metaphorical practices and stories that occur in urban space. When giving visibility to the metaphorical practices of the city of Amsterdam, Rothuizen's illustrations emphasize his appropriations and claims of the urban grid which might bring out meaning and identification (or a lack thereof) to its inhabitants.

Second, I suggest that these city illustrations shift the attention from the traditional constructs of the pictorial grid that is assumed to geographically guide and clarify space. By focusing on the sayings, stories and interactions of the artist, the illustrations expand the scope of the representation and expression of urban space by documenting Rothuizen's illustrative practice. Reflections such as these highlight the constant movement, stories and practices that create and represent urban knowledge, disregarding the urban grid as a stable, physical entity. Metaphorical practices, including drawing in situ, create space by appropriating place, and their results give way to hybrid illustrations that reflect on these practices.

Conclusion

I started this article by asking how we breathe life into a map, arguing that the acts of walking and of drawing in the city are not reducible to the urban planner's mapping logic. In the case of drawing in situ, the practices may

even be even considered as tactics of resistance to the urban grid by making important contributions to the creation of qualitative knowledge and urban imaginaries of the city. This analysis claims that human experience in the city is that of a body in motion through an ever-changing environment and its resulting interactions. These experiences are described by de Certeau as examples of metaphors; they carry in them moments of everyday life, trajectories and spatial stories that are active elements in the resistance and appropriation of the urban grid by creating unique uses of and perspectives on space (115). Moreover, the process of capturing urban space in illustration highlights this embodiment through the artist's expression, revealing the lines of spatial stories as expressive movements full of social and cultural significance and intention.

Throughout this paper, I have highlighted the similarities of walking and drawing, particularly as combined practices: drawing in situ. I began by discussing my own artistic practice, in order to show how the artist can be immersed, creating space through metaphorical practice. Building on de Certeau's writings, I emphasized the productive interactions between both practices as embodied performances that transform the signifiers of space and shed light on the paths and movements otherwise invisible in its pictorial grid — revealing the appropriation of space through the perspective of the artist. My practice of drawing in situ is

part of these movements as an active performance in my interaction with urban space, and, consequently, the illustration's focus and expressivity are results of the direct impact of space on my experience.

Rothuizen's written maps or graphical reportages are documentations of his metaphorical practices, as the artist represents himself and the literal path he took rather than just what he perceives. His illustrations contrast the urban grid with how space is used and transformed by its dwellers, and distort its pictorial counterpart according to his subjective experience of space (9). This process, analysed in Rothuizen's illustrations, shows that an illustrated city — by being interpreted and documented through the artist's experience in the concrete city — can ask questions about urban space. More specifically, it reflects on how resisting the official urban grid through walking, observing and drawing is an active source of creative production for urban imaginaries as it interacts with urban space and with others in space. These are creative processes to generate spatial stories that alter our perception of the urban grid — not as something stable, but instead as a space in constant movement. This instability blurs the lines between the illustrator's perception of the urban and pictorial grids by creating unique depictions of the city attending to its complexity at the ground level.

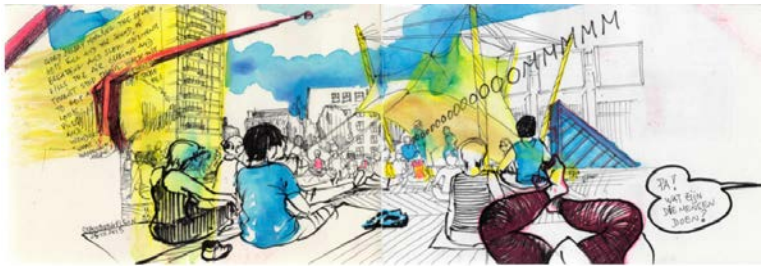
Finally, such illustration can embody a set of careful, specific observations revealing differences in

space across time and through shifts in perspective. Thus, like walking, the act of drawing in situ can be used by the artist to reinforce the embodied and temporal nature of spatial experience beyond the urban grid. As shown in the case-studies, these illustrations accentuate the articulation of city fragments to convey the artist's subjective perception of the urban grid. Therefore, they offer versions of the city that do not aspire to a totalizing view, replacing this with a complex multiplicity of open-ended stories and fragmented spatial experiences. In addition, this argument also emphasizes that aesthetic practices are heavily impacted by the urban experience of space and do not only reflect the impositions of the strictly designed urban grid. Instead, they are affected by the combination of the metaphorical and topological layers of the city in which urban space emerges.

fig. 1

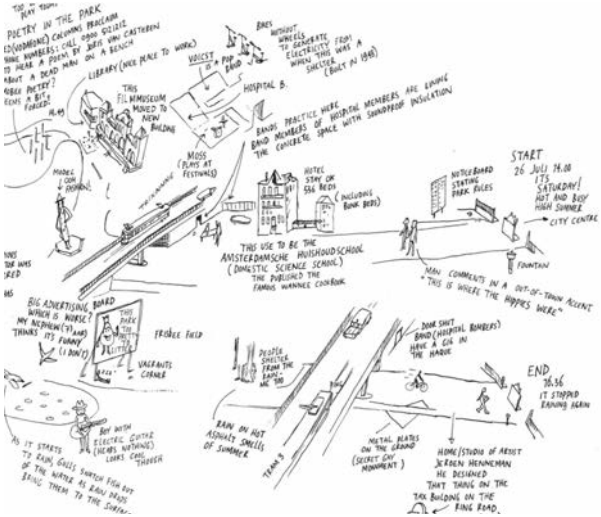
Drawing in situ from the author's sketchbook, 2013.

fig. 2



Drawing in situ from the author's sketchbook, 2018.

fig. 3



"Vondelpark" (detail), from *The Soft Atlas of Amsterdam*, 2014.

fig. 4

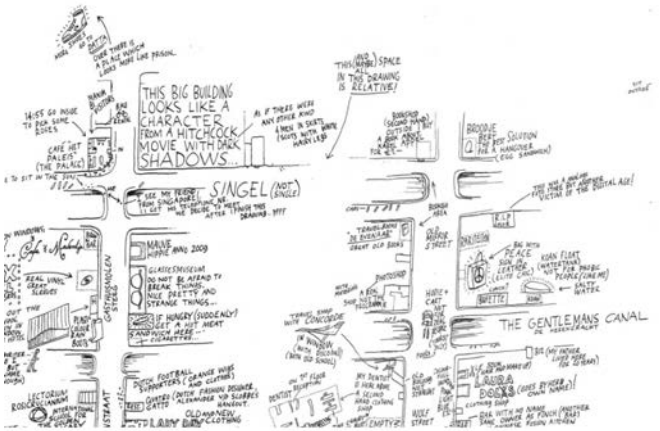


Fig.4. "Shopping Streets" (detail), from *The Soft Atlas of Amsterdam*, 2014.

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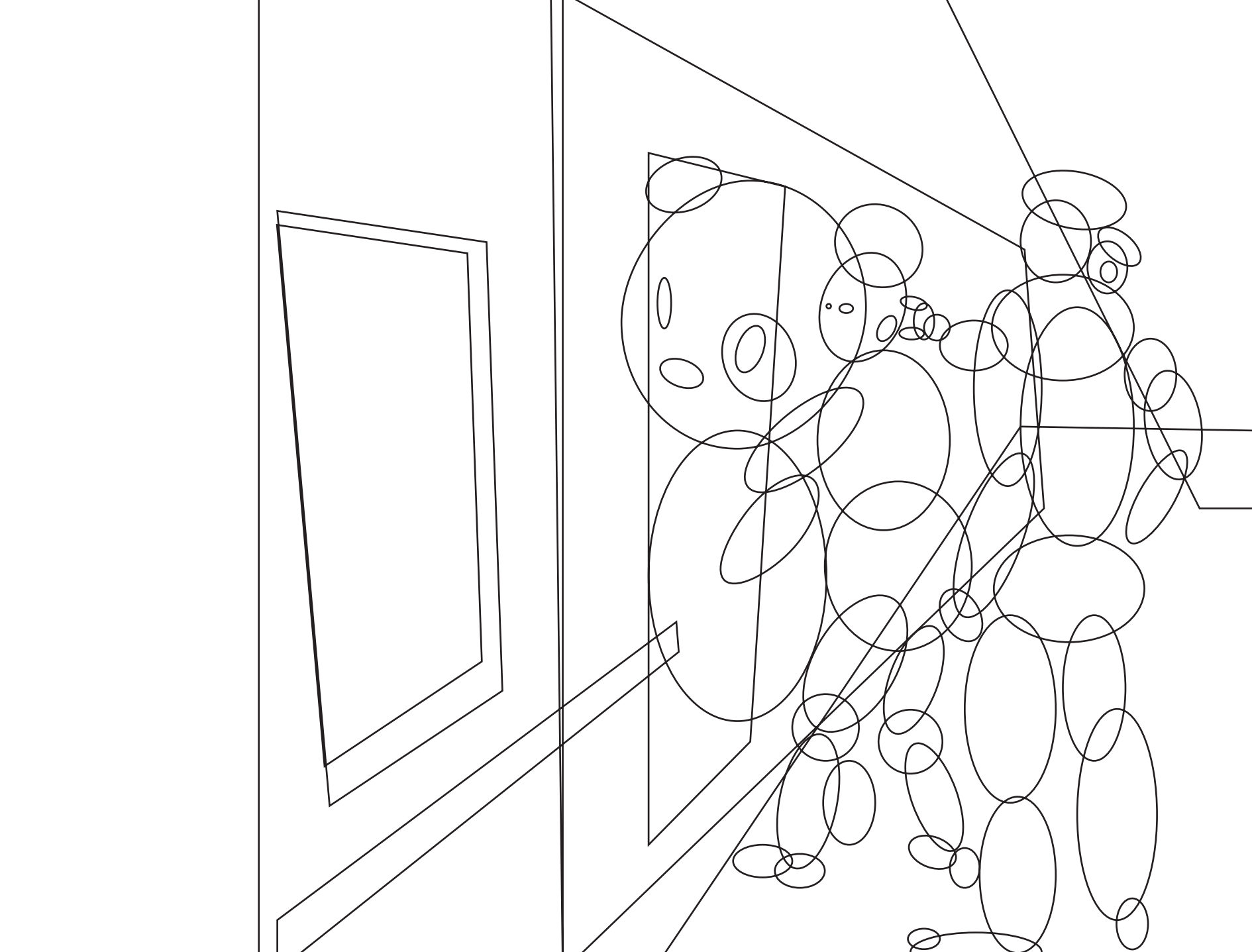


Aaron Dowdy

The Form of Affinity: Line and Landscape in Four Shadows

abstract This essay considers the ways in which lines are integral to how the concept of affinity is formalized in Larry Gottheim's structuralist film *Four Shadows* (1978). The film presents a number of landscapes, references to nineteenth-century Romanticism, and a rigid formal structure shaped as a grid. This essay explores how these facets interrelate and asks whether the structural grid

functions to enclose the visual landscapes, or whether the role of the grid is emphasized so that these various parts, along with the film's sonic and formal operations, instead work to open it up. Against a purely Romantic reading, this essay offers an analysis of how the film employs lines to account for this balance between confinement and opening, which, this paper argues, is the definition of affinity.

I. Introduction

AFFINITY is the affect or sensation of connection or forming a connection ("Affinity, n"). It is a force of attraction between two entities, mutually imbricating them and creating a common ground on which they are drawn together. At the same time, the word's root is in the Latin *finis*, or *ad finis*: to border. The concept then not only refers to the force of connection between two entities, but also the overcoming of a boundary that separates the two entities. This boundary is necessary for the entities to be understood as separate, but its

suspension or opening is necessary for the common ground between them to be formed. For affinity to occur, its force of attraction must traverse an enclosure, a border — whatever it may be — in order to connect.

Larry Gottheim's 1978 structuralist film *Four Shadows* engages with this definition of affinity in its rigorous formal structure. This is to say that the film both structures itself as an enclosure and formalizes connections and interrelations that open it up, making it less rigid. In this way, affinity is not something represented in the film, but the principle of its formal logic.

In the tradition of structuralist films, where structure takes critical precedence over content, *Four Shadows* presents its content in service of rendering its structural shape evident. *Four Shadows*' shape is a grid or quadrant, evinced through repetitive imagery and measured sequencings. In one sense, this suggests that its structure is meant to enclose or bound its content. In another sense, the film arguably foregrounds its structural grid in order to be opened or suspended by either its content or by the film's own processes. This is what is at stake in considering affinity in this film.

While this argument is what this essay explores, nothing within the film's content signals that it is about affinity, or really that it is about anything specific at all. It has no narrative, no characters, and no clear motivating premise. It is an hour-long film consisting entirely of

documentary imagery of various landscapes presented as personally shot, often handheld 16mm footage. Further, it features neither a title card nor credit text, making it appear closer to a home movie than a feature film. With largely unmotivated imagery, the repetition of imagery becomes the guiding signal that it is this film's structuring shape that motivates it.

What draws this analysis specifically to the concept of affinity is the film's subtitle: "Elective Affinities," a reference to Goethe's 1809 Romantic novel of the same name. In the novel, a couple is narrated as having their marital bonds overturned and transformed by the introduction of new characters that bring with them a different set of passions and thus bring forth new affinities in the couple that they did not have with each other. Literary theorist J. Hillis Miller suggests that the logic of *elective affinity* conceptualizes a world "stitched together" by "lines of force [that] pull things or persons which have an affinity strongly toward one another" (167). This definition aligns with the one with which I set out, suggesting both the more Romantic aspect of affinity as a force drawing entities together, as well as drawing attention to the form of affinity as lines. As I will show, these two dimensions are central to *Four Shadows*. However, the film itself makes no reference to Goethe or the novel otherwise. Thus, this essay takes up this phrase as a password, a tool, or opening to think with the otherwise self-concealing and repetitive imagery

of landscapes it offers. What are the elective affinities of *Four Shadows*? While this essay primarily answers this through a close reading of the film and an insistence on affinity as having to do with its structural interplay, I want to first map out the tensions between the line as structural device and visual form, and between a Romanticist imaginary and formal abstraction within the film that guide my analysis.

II. Overview

With *Four Shadows*' gridded structural shape foregrounded, its relation to the footage of landscapes is brought into question: is this film trying to present the structural domestication of these landscapes? If this becomes the guiding representational question of the film, it becomes evident that every image of its landscapes actually has to do with measuring, gridding, containing, diagramming, or simply proliferating them with lines. That its imagery shows landscapes being lined or gridded in some way, and that the film itself structures this imagery of landscapes within a lining or grid structure, suggests a critical dimension to the project.

This essay's analysis hinges on the role of and interrelation between the film's visual and structural lines: its *visual gridding* and *structural gridding*. On the one hand, it can be read as a Romanticist complaint against the over-rationalization and domestication of natural

landscapes. On the other hand, the film presents landscapes pervaded with both visible and abstract lines that can be said not to enclose its space but rather to express something abundant and untamable within those landscapes: lines of direction, relation, trajectory. This film, I argue, is situated between these two readings.

Both readings are given critical depth with the film's many references to Romantic period figures: William Wordsworth, Paul Cézanne, Claude Debussy, and, as mentioned, Goethe. With each of these references, however, there is a tension between Romanticism and formal abstraction. Each reference can be read in terms of the former as presenting an encounter with nature that is transformative, affective, and affinitive. Following the Romantic tradition, this encounter narrates a self, shaken but ultimately expanded by the experience of nature, giving it a more complex sense of being, and ultimately affirming a subjective individualized viewpoint in some deeper way. Here, to domesticate, rationalize, or delimit a landscape is to abandon the possibility of this kind of overpowering encounter with it. At the same time, every reference made here also brings with it either a nineteenth-century tendency toward modernism or a description of nature full of abstract lines that potentiate the environment rather than contain it. Instead of the lines in these landscapes being the cause of its enclosure, in this reading they present the form of something at play within

the landscape *despite* its enclosure.

This tension between a Romanticist heritage and abstraction is a recurring debate in structural films. The argument is between whether the emphasis on structure in these films works to uphold a Romantic viewpoint or instead works with principles of abstraction in order to draw attention to the processes of the film playing out. In the case of *Four Shadows*, the former suggests that it structurally domesticates its visual landscapes but uses Romantic references to generate an affinity for more sublime or less-gridded, less-rational landscapes. The latter suggests, alternatively, that the film's repetition of unmotivated images signaling the film's shape is sufficient, as it brings attention to the film's formal processes — to the film itself instead of to the illusions of representation. My argument combines these two perspectives in several ways. I hold that the diegesis and references are indeed important to this film, but that they are not necessarily there to represent affinity through Romantic ideals. This also means that the film is not simply about marking its own presence through abstraction. This essay focuses on the lines of the landscape in order to develop the lines of its structure. Going back to my initial claim, it is with the interrelation of these lines — visual and structural — that *Four Shadows* formalizes affinity.

My argument centers around one theoretical claim: the affect of affinity, the force traversing

boundaries to connect two entities, is sensed and formalized as a line. Thus, if *Four Shadows*, as I hold, formalizes affinity, then to traverse its gridded structural enclosure requires the drawing of a line. Again, affinity is the boundary *and* the drawn connection across it. The film, in this sense, does not offer its meditation on lines in order to name the source of enclosure; rather, it realizes an abundant form at play in these confined spaces that offer the shape of fleeing it. It is in bringing into relation or drawing a line between the shared form of the various lines in the film — visible, structural, referential — and in making and sensing connections across, through, and beyond the rigid structure that I argue affinity is formalized.

I will now offer a close reading of how this plays out both structurally and in terms of the content of the film. The structural section reads the formal logic of the film, and also takes up the aforementioned debate within the discourse on structuralist films. The content analysis reads the imagery of the film as well as the implications of its references in relation to the structure. Further, this section takes up the task of explaining how lines can be understood not as delimiting but rather as the shape of affinity itself.

III. Structure

Four Shadows is an hour-long film consisting of four equal-length segments. The shape of the film is then a

grid, made up of a coordinate plane of quadrants, and each region itself contains another quadrant. Taking further the point that this film presents a structured metric, these four parts, visually, are exactly the same. The film is ostensibly, then, the same sixteen-minute sequence of four segments repeated four times. As the sequence repeats its second and third and fourth times, its order appears ever more enclosed, predetermined, and certain. This filmic obsession with fours, and this increasingly predetermined structure, gives clarity to the title's reference to *foreshadowing*, or the indication of a future condition, here substituting the "fore" with the number of repetitions it will offer, "four."

The structure of the film works to evince the fact that its content works within a grid, while the repeated sequence itself becomes the visibly recognizable grid of the film. *Four Shadow*s works against the dominance of this grid primarily through sound. Similarly, with its visual grid, the sound plays out over the length of the film in four equal-length parts, each part consisting of four equal-length segments. However, instead of sequencing like the visual grid (ABCDx4), the sound permutes sequentially: ABCD, BCDA, CDAB, DABC. The result is that every four-minute sound segment matches with every four-minute visual segment once, without repeating.

The distributed sound atop the stable visual grid forces new affinities to emerge. In other words,

within the quadrants of this self-similar and recursive visual grid, the film suggests an incessant presence of difference by matching them with other sounds upon each iteration. The sound forces upon the stultifying visuality the sense of difference, the sense of possible relations, new bonds, new potentialities within the self-similar.

That the film can be said to concretize this grid structure and at the same time modulate it with sound suggests that, in drawing out the grid, there is another kind of drawing out that has to be taken into account. When the visual grid, which begins when the sequence first repeats itself, emerges, so too does a deviation: Sound B, which was first sounded with Visual B, now sounds alongside Visual A. This necessarily changes this sequence formally. Whether or not the content of the affinity is stronger between Sound B and Visual B versus Visual A is beside the point. What this permutation requires is that from this point on lines are necessarily redrawn between sound and image as they are also reiterated by the unrelenting linear order of the visual sequences.

This is the image of affinity: a boundary line traversed by a line connecting two parts. Here, affinity is formalized through the always-different interlines drawn between sound and image, despite the stable, bounded relations of the image sequence. The visual grid opens its structure when introduced to differentiating

sonorities. In this understanding, the film creates a structural grid by foregrounding its shape through repetition, while at the same time creating a counter-grid through sound in order to destabilize the visual grid. While interesting in its own right, one way of understanding what is at stake in this structuring of affinity is by asking how the film figures in the debate around the function of structure in structuralist films. Two poles of this debate are given by American film historian P. Adams Sitney and British film theorist Peter Gidal.

Sitney argues in *Visionary Film* (1974) that structural films work to "trace the heritage of Romanticism" (xiii). Following this argument, Four Shadows would present its non-narrative, unmotivated landscapes in order to somehow restore or establish an affinity with them, to be moved by them, or register that they are in danger of being rationalized to the point of precluding affinity altogether. To structure affinity, then, would service to remind and emphasize the role of affinity, of being moved and affected by landscapes. That affinity is what is structured suggests that it is the driving element of the film, as for Sitney structural film "insists on its shape, and what content it has is minimal and subsidiary to the outline" (348). Here, it is not landscape that restores a deeper sense of self, but rather an affinity with it. While an affinity with a landscape cannot be filmed or indexed, if affinity is structured and

sensed by the spectator or the director, then the film achieves its Romantic heritage.

A counterargument to Sitney's for understanding why *Four Shadows* structures affinity through rigid grids and supple counter-grids is given by Gidal in his essay "Theory and Definition of Structural/Materialist Film." In this essay, Gidal similarly suggests the primacy of structure over content. He argues, however, for the predominance of *abstraction* at play in the structure and content, rather than its enacting a Romantic heritage. Here, the aim with structural film is to demonstrate and draw attention to the shape of the film's structure without resorting to representation or illusory intent. This means that a structural film should perform structurally what it offers visually, namely what Gidal calls low-level signification (8). This is an important concept for painting: denoting marks without associative content such that they end up signaling instead a record of their being produced or drawn out. Landscape, in the case of *Four Shadows*, would not be registered as a space that affirms a history of what natural perception assumes a landscape is. Rather, Gidal argues that landscape, or whatever the content consists of, should be primarily a "foregrounded fabric of the complex system of markings itself" (7). The visual content of this fabric should signal, then, the shape that the film's own structural duration draws out. In the case of *Four Shadows*, we can consider the lines of the structure, the lines drawn between image and sound, and the lines that I will argue

proliferate the landscapes as low-level signification. Lines, low-dimensional and highly general, render visible not the qualities of entities and relations between them, but rather their being drawn out in time. If the film structures affinity, it is an affinity between content and structure, an affinity with which the film signals using the bare minimum means.

With *Four Shadows*, Sitney's claim emphasizes structural shape as a way to unlock a purposive and subjective sensibility with which the content can be approached, here being structural affinity and visual landscapes. Gidal's claim, on the other hand, suggests that the structural shape is evinced in order to draw attention to the material presence of the film's own processes, here being a process of drawing lines, forming grids. Moving into the next section, which offers a close reading of the film's content, I want to keep these in mind not as separate theoretical approaches but rather as thought together.

IV. Content

I set out defining affinity as a force on which common ground is established between two disparities. One of the principles of *Four Shadows*' content is that it presents four highly different visual landscapes that require a common ground to be rendered visible between them. What will become clear is that what is common between the passages is their presentation of landscape in relation

to lines. Following the last section, not only are there interlines drawn between sound and image, there are interlines drawn between visual passages. What is interesting here is that these lines of common ground are drawn between passages whose common likeness are themselves lines. The common ground, the affinity between these landscapes, is not their scenography, then, but their linealogy: not their landscape-ness but their lines.

In this section, I will read each visual passage and each sound passage for its presentation of lines and landscapes, asking how each offers their interrelation both in the Romantic tradition and as presenting a world in which lines abound, despite being structured or concealed.

The first visual segment consists of shaky, obstructed footage of two surveyors on a hillside with a measuring rope, itself a visible line, shot from a distant remove. This passage not only shows these two men holding a line, traversing the land in an attempt to measure it, but also insists on the presence of rhumb lines, of a landscape potentiating invisible lines. On the one hand, these invisible lines can be used to grid the landscape, which the structural grid of the film itself might affirm. On the other hand, these invisible lines of the landscape can be said to elide such measurement, which the camera itself surveys at a distance: lines of relation between the surveyors and their movements across the hillside. The former understanding upholds the sense that this is a landscape that the Land Ordinance of 1785 demanded

become "lined, gridded, numbered, and known" through the "imposition of human will on natural landscape" as American surveyor and poet John Hales notes in his memoir *Shooting Polaris* (13; 27). Here, this opening passage can be said either to deride this imposition or to simply document an attention to the landscape approached for its lines. In *The Garden in the Machine*, film Scholar Scott MacDonald calls this lined landscape throughout Gottheim's oeuvre a "techno-pastoral" grid (41). However, this pejorative understanding of a line as intrusive to the purity of nature is highly problematic, least of all because it assumes that these surveyors are in fact working to impose their will.

Formally, this passage presents two men pointing, holding a line, and traipsing the landscape. If we do take them to be surveyors, they equally measure the land as they do assume a hidden logic of lines within it. That these men are measuring a possibly sublime landscape and marking it for modernity is a limiting trope of structural films that overrides the latter reading. David Melbye argues in *Landscape Allegory* in Cinema that what the American avant-garde takes from Romanticism is the trope of "man's struggle with nature" and its growing modernization or rationalization by seeking to "spiritualize" an encounter with the sublime "uncharted American wilderness" (60; 39). This passage undoes this trope as it upholds it by drawing attention to two ambiguous kinds of line: lines that measure and

those proliferating an environment left unmeasured.

The second visual passage is a close up of a book: Erle Loran's *Cézanne's Compositions*. This book, in general, finds Loran rendering Cézanne's spatial logics into diagrams or line drawings. Here, the shot begins on a page that renders the painting *Road at Pontoise* (1875). In one sense, this passage reestablishes the trope of a landscape reduced to lines found in the first passage. However, I want to argue that this segment also sustains the search for unseen lines in a landscape — here as an art-theoretical project that pays attention to how Cézanne figures landscapes formally. As art theorist Rosalind Krauss argues in *The Optical Unconscious*, Loran's diagrammatic conception of Cézanne's landscapes moves to chart their "inner dynamic" (103). Finding common ground with the footage of the surveyors, there is the sense that Loran is surveying the lines of relation within the painting, marking their secret and inner dynamic. If the painting remarks on the inner dynamic of Pontoise, and Loran remarks on the inner dynamic of Cézanne's painting, then *Four Shadows* remarks on the inner dynamics of this very interplay. On the one hand, this can be read as staging an immense distancing from natural landscape, again purporting the Romantic notion of a nature in danger of being rationalized and figured out: diagrammed and gridded. However, I want to suggest instead that this segment looks at Loran as surveyor, searching Cézanne's landscapes for invisible

lines, diagramming and marking not to reduce them but rather to draw attention to lines within the landscapes that are overpowered by its imagery.

This aspect is key to Cézanne as a reference in the film. While this painting is situated in his early career when he was still somewhat indebted to Romanticism, it marks a turn away from realism and begins to leave the brushstroke itself visible. Going back to Gidal's fabric of markings, we can find in this particular image an attention to drawn lines that are free from representative subordination. While Loran's diagramming can be said to investigate the schema of the painting, to better understand the grid it uses to spatialize the landscape, it can also be understood itself as a kind of attention to thinking the grid on which Cézanne's lines begin to move beyond the pictorial figure.

The third visual segment sequences various shots of a small industrial town in winter, with each falling spot of snow drawing its trajectory across the frame. Though the town seems ordinary, its space is fractured by the film's framing: buildings are cut off and reduced to their edges, pipes and electrical lines are foregrounded, railway lines bisect the town center, and cars pass along perpendicular roads and park in parallel spots. On the one hand, we see an eventuation of the surveyors' work from segment one, where the imaginary lines are now embodied and the gridding has been

realized or at least built upon. On the other hand, the film transposes an attention of lines potentiating within a landscape to those which are the landscape's central logic. The town's lines are made explicit. *Four Shadows* diagrams these lines as Loran diagrams Cézanne, foregrounding the inner logic of the town: gridded, edged, lined. This is not a lament, but a formal reading of lines composing the relations of a space.

By fragmenting the town to its topography of lines, *Four Shadows* asks the question: What kind of affinity does this town produce? Formally, the visual passage has a number of affinities with the first two, as I have described. How, though, is one to conceive of forces of attraction cutting through the grid of this town, in regard to my opening definition of affinity? In a town so rigidly and architectonically structured, what emerges are movements echoing those of the snowflakes: bodies cut through, across, behind, and between these environmental lines. Kids run or ride past on bikes, trains pull into town, cars drive by, puddles ripple, birds fly, workers cross the train tracks, headlights draw out a path. Every shot, amidst the static lines of the landscape, presents movement of some kind. Here, trajectories become forces, pulsive lines drawing themselves out despite the town's enclosure.

The fourth and final passage is situated in front of a cage at a zoo, behind which are siamang gibbons, and behind them, now in the barely visible background, a

green and watery landscape. The logic of the grid that the previous segments experiment with is now entirely foregrounded, the unmoving perpendicular lines of the cage cutting and fragmenting the action of the siamang gibbons. Whereas movement and landscape co-composed the rigid lines of the third passage, here they are pushed entirely to the background by the grid of the cage.

In one sense, this is the fully didactic conclusion to this cycle's Romanticist problematic, where gridding landscapes and the spaces of life are ultimately a form of encaging. However, the clear formalization here is the grid itself. Visually, this passage foregrounds grids above all else, thus affirming that it has been the common figure in the film thus far becoming more pronounced with each passage. What this represents is largely beside the point, as the passage so unrelentingly commits to these gridlines. At this point, *Four Shadows* inverts its logic, committing to these gridlines *despite* the teeming life and landscape it frames. The ontology of this passage *is* a grid: everything is gridded.

The four sound passages in *Four Shadows*, as I have suggested, work to destabilize the rigidity of the structural grid. The first segment is a quiet field recording of a typical rural creek with insects and flowing water. The second is a reading of the opening to William Wordsworth's Romantic magnum opus *The Prelude* (1850). The third is a field recording of the siamang gibbons screeching and moving about in their

cage along with the sound of passersby. Notably, this is the only synchronous sound of the film, aligning with its visual in the final four minutes of the film. This suggests perhaps a conclusory alignment of the visual grid with the sound grid, freeing the structural grid in the end from its own rigid combinatory game. The fourth passage is a recording of the tragic climax of Claude Debussy's *Pelléas et Mélisande* (1898). The narrative of the story describes a prince who discovers the mysterious Mélisande in nature, and brings her home to marry her. However, she falls in love with the prince's brother Pelléas, and when the prince finds them kissing, he murders Pelléas. This is a narrative of affinity, of coming into contact with a natural force that changes the entire order of relations. Like Cézanne, Debussy's harmonic work is generally understood as demonstrating a tendency that links Romanticism with modernist composition. The recording in *Four Shadows* demonstrates the force of the voices winding their way through the open, shifting harmonics of the score. The quiet creek, the screeching of the siamang gibbons, and the polyphony of the opera constitute three increasing degrees of sonic density. The effects of this create differing degrees for how affinity between sound and image is formed. For example, the combination of the surveyors with the quiet creek suggests a low-intensity, harmless and idyllic activity that when paired with the opera renders a sense of urgency and tragedy. Again, the differentiation of sound and image

causes different affinities to be formalized and different expressions and sensations to be drawn. The density of each passage affects the drama of the visual passage.

The second sound passage, however, holds the thesis for the film's own referencing of a double reading of line and landscape, and thus of abstraction and Romanticism. In this passage, sixteen non-native English speakers take turns reading an opening passage from Wordsworth's *The Prelude* (1850). Formally, this sound passage, repeated four times throughout the film, is a microcosm of the film itself. Each iteration has four new readers read a fourth of the passage in sequence. While the script remains the same, the voices slowly mutate upon last iteration. Furthermore, these voices — belonging to Jonas Mekas, Taka Iimura, Peter Kubelka, among others — are not speaking their native language, giving the sense that they are, like the surveyors, in less-charted territory, reading lines that aren't as clear yet as they would be elsewhere, in this case in another language.

The Prelude passage itself narrates an attempt to commandeer a small rowboat for a joy ride that leads to a confrontation with the sublimity of a natural limit that thereafter distorts the protagonist's sense of the world. The passage read is worth quoting (almost) in full:

> I *unloosed* her *chain* … pushed from the shore … small circles glittering idly in the moon, until

> *they melted all into one track* of sparkling light. But now, like one who rows, proud of his skill, to reach a chosen point with an *unswerving line*, I fixed my view upon the summit of a craggy ridge, *the horizon's utmost boundary* … when, from behind that craggy steep … a huge peak, black and huge … and growing still in stature the grim shape towered up *between me and the stars*, and still … with trembling oars I turned, and through the silent water stole my way … but after I had seen that spectacle … my brain worked with a dim and undetermined sense of unknown modes of being … *no familiar shapes* remained … (my emphases)

While this passage demonstrates the Romantic position of encountering nature in a way that opens subjectivity to new modes of being, it also suggests a linealogy of space: lines as chains, lines in the water, lines at the horizon, lines between the protagonist and the world. Secondly, it presents temporal lines of leaving, fleeing, and returning. On the way out, the line is "unswerving," but on the return the line is trembling and of an unfamiliar shape. In short, this describes an encounter with a landscape, an event where inside (the stable unswerving protagonist) and outside (nature) fold into one another, distorting and rippling their stable perception of the world. This is the force of affinity, of a

border being suspended such that an inside can open onto an outside.

I consider this the thesis of the film because it demonstrates the two lines I've been presenting. On one hand, it offers a Romanticist affinity with nature formalized as unswerving lines that stabilize being. On the other hand, it offers an affinity with some unknown mode of being formalized by "unfamiliar" lines. Like the invisible lines of the landscape that the surveyors investigate, like the lines that Loran and Cézanne are after in their own ways, like the flows interpenetrating the still lines of the town grid, and like the presence of anything that emanates through the ontological grid at the zoo, what this passage's linealogy suggests is an attention to those undetermined radiations that beam once the grid is weakened, once the grid's unswerving form is made supple. Like Gidal's fabric of markings, these lines draw attention to the incessancy of a landscape being drawn out — not one marked for measurement but one teeming with lines that mark its emergence.

V. Conclusion

I began this essay with a definition of affinity as a two-part process of being drawn to something and the traversing of a boundary that this force requires. I suggest that affinity, in this definition, is a line: a line emanating between two attractors, opening them onto

one another. The film's subtitle is "Elective Affinities," which invites the question of what this might mean considering that the film makes no reference to affinities, the concept, or to Goethe's novel. In this way, I asked: what are the elective affinities of *Four Shadows*? What are the film's drawn lines? As this is a structural film, affinity is the logic of the film's formal interplay. The film reveals that its structural shape is a grid, or lines of sequences that repeat in such a way as to form quadrants of the same imagery. While this visual grid is rigid and stultifying, it is permutated by a sounding counter-grid atop it, whose differentiating effects on the visual grid open it. This opening occurs as interlines of affinity redraw the certain bounding of the visual grid.

This is one way of understanding how *Four Shadows* structures affinity. For Sitney, a possible explanation for this is that by foregrounding the structural shape as affinity, the film restores a Romantic sense of affinity as a force that can help to better understand subjective experience. For Gidal, the film can be said to structure affinity in such a way as to reveal the processes of the film itself: an affinity between the visual fabric and the structural fabric of the film. My argument is that the film structures affinity in order to draw attention to the shape, or the form of affinity itself.

The film's visuals support this as every passage features prominently a landscape composed of lines, which I argue is the form of affinity. That every passage

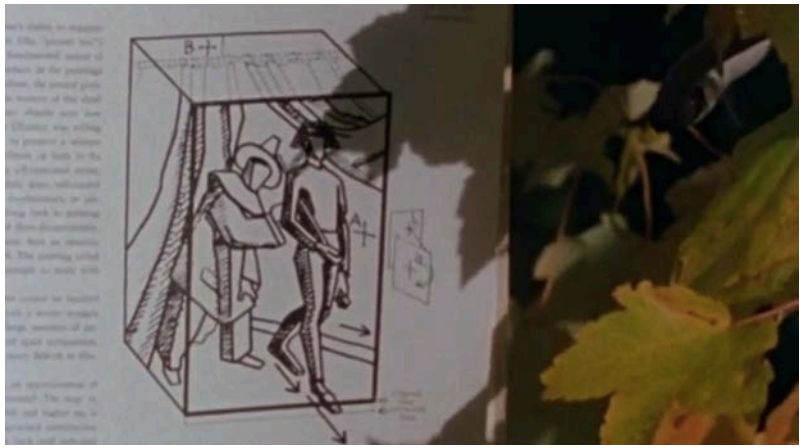
ambiguously features ways that lines can be taken either in a Romantic tradition or in a more abstract tradition draws attention to the role of lines in each passage. Drawing lines between these lines is, I maintain, the film's remarkable formalization of affinity by means of its content, its diegeses.

Four Shadows is an ambiguous film. It can be read as fully supporting a Romantic notion of a landscape in danger. Yet, at the same time, it formalizes the proliferation of something in these landscapes that even the most enclosed grid cannot tame. What the film ultimately considers to be the meaning of these lines of affinity abound in these landscapes is beside the point. Here, the importance lies in the film's linealogy: its willingness to formalize and draw attention to the unwieldy lines of landscapes and of film itself.

fig. 1

The first passage from *Four Shadows*: surveyors on a hillside

fig. 2



The second passage from *Four Shadows*: rendering of Cézanne's *Road at Pontoise*

fig. 3

The third passage from *Four Shadows*: an industrial town

fig. 4

The fourth passage from *Four Shadows*: siamang gibbons at a zoo

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Jeff Diamanti

Afterword

It is mid-afternoon on a cloudy Thursday in Amsterdam, and I'm trying to think about what it means for humanists like those of us in cultural analysis to take infrastructure seriously. The Singel canal is full of cranes and barges, temporarily assembled in front of the P.C. Hoofthuis to repair this or that, shaping a scene which appears charming from my office window because the annual release of a billion floating seeds from the city's most populous tree, the Elm, collects like snow (or more idiomatically, the *lentesneeuw*) around the edges of the barges, locking them into a kind of embrace that is both cute and curious. Curious because this landscape concentrates into focus a multitude of infrastructures that cross paths and purposes but is a rather minor moment in the planetary scale of infrastructure — a barge with a crane floating in a canal built in the seventeenth century, embraced by the botanical promise of trees seeking out new grounds for growth, on a road full of tourists, blocking students from getting to class on

time to study cultural analysis (so they say, fifteen minutes late). Minor, but not without its vistas onto the shape of things.

The scene is calm and colloquial. But then there is the familiar (though not calm) sound of drums and chants coming up from the street, and I look back down to see what it is all about. Hundreds of bodies move gradually up the opposite bank of the Singel chanting for "climate justice" holding all number of placards coloured by the phrases that have come to coordinate environmental politics in the twenty-first century. Infrastructure is designed to recede into the fabric of everyday life — in fact it takes its definition from the in-betweenness that provides everyday life with its *everydayness* — but that does not mean that it is far off. It is, in fact, ubiquitous, and that ubiquity is important for the kinds of concepts, concerns, and critiques that cultural analysis can bring to the study of infrastructure. A lot happens in and through infrastructure — economic trade; interconnectivity; physical capacity; social reproduction; feelings of freedom and mobility; experiences of impasse and stuckness; carbon emissions; unequal access; the global; planetarity — which is another way of saying that abstractions weighing on the present are at their most concrete and material in and as infrastructure.

I am caught a little off guard by one sign in particular, held out like a banner across multiple bodies,

written in the imperative: "S.O.S – Save Our Species." Calling out into the void, the S.O.S. is a plea for help and a warning of imminent catastrophe: someone is about to die, or something is about to get destroyed. The S.O.S. is also a plea *to an addressee or listener*, in this case the same collective subject as the addressor. The language is not immediately new, of course. With climate change comes a whole cascade of extinctions, threatening not just to nonhumans but humans too; there is a "we" that can be put in both biophysical and historical terms, a species that speaks recursively to itself in its own voice: save our species. But it is nevertheless striking, since for all the promise of transition on the horizon sketched by climate strategies, long-term scenarios, and ecological tipping points, there is also an equally audible imperative unnerving the coherence of the us and the *we*. Save the human species? Well yes, of course; but, to be frank, not the human figured in the imperative to regard itself in the future tense of a present buckling under the nightmare of four hundred years of colonialism, carbonization, and capitalization. That is the same human simultaneously promised and weighed down by the energy infrastructures drawn into focus by so many climate marches, policies, and discourses. Save the species under what conditions? The historical and material terms that laid down these canals in the first place, with wealth wrestled from an imagined elsewhere and otherwise to the originary structures of capitalism

— the slave trade, the conditions of colonialism, and the incision these make into the fabric of modernity — what concept and costs of the species figure in the S.O.S.? Or the ethno-nationalists draping 1933 social politics with the reactionary fabric of 2019 boreal pride? Does the *we are all in this together* of climate discourse also mean that the future for which we are compelled to fight includes the given of what we are as a historically conditioned "we"?

The S.O.S. seems right — there is an enormous need for help and care in the growing shadow of catastrophe — but the very conditions for climate change are the impossible conditions under which something like a universal plea to save the human species simply cannot make sense: there is no such thing as the human species as such. The Anthropos supposedly responsible for global warming is a figure recursive to a certain relation to infrastructure, while the position most in need of resources for protection is not the species as such, but the part of the whole most exposed to the costs of modernity's infrastructural asymmetries. The collision of infrastructures both colonial and modern with the politicization of streets for climate justice is a beautiful disarticulation of the given from the collective struggle for an otherwise. But what else needs to happen to uproot the given from the very ground upon which we walk and march, from the Anthropos nominated in the collective pronoun "we" and the possessive "our"? What

would it mean to take infrastructure seriously in the demand to "save our species"?

Doxa dictates that infrastructure remain inoculated against social contest because it is only plotted into the landscape when it goes under the banner of the common interest, of a civil engineering of the technical and the necessary. Every pipeline blocked and every freeway called into question blocks and questions more than that pipeline and that freeway. Infrastructure is invariably necessary, but we know in the humanities and social sciences painfully well that the realization and naturalization of the necessary is always the expression of a strained and traumatic duration to social politics — a duration discursively forgotten once the ground is broken for construction. Fossil fuels are certainly not going anywhere anytime soon, because in truth they are both socially and materially intertwined with the most basic forms of freedom, mobility, and care that we take as necessary, as the given. So the point is not to turn off the switch in order to prevent the delivery of plastic prosthesis, the functioning of coal-powered hospitals, and the diesel-fueled containers from reaching port in places hungry for its contents (which is not that same as saying that the rhetoric of "keep it in the ground" is unimportant or ineffectual). Critical theory is about generating a *longview of the given*, so that the soft and quiet violences (and the loud and hard ones as well) that its infrastructures lace through landscape — the

displacements, genocides, and environmental racisms that it both historically and presently reproduces — dent what we understand as the given.(1) If we are serious about transition, it will be a transition to an otherwise of the given.

The turn to infrastructure in the social sciences and humanities has been a long time in the making, first going under the rubric of the sociology of technology in the work of Susan Leigh Star and Geoffrey C. Bowker in the 1990s and 2000s, coinciding more recently with what Imre Szeman and Dominic Boyer term the rise of the "energy humanities" in *Energy Humanities: An Anthology*. Anthropology has itself been long interested in studying the material and discursive infrastructures for their capacities to generate cultural practises, while the formative work of Bruno Latour in science and technology studies has for decades provided the terms of reference to study networks of actors that move through, but also include, the materiality of infrastructure. In the humanities, both historical materialism and new materialism find something like a common cause in the forces and relations embedded in infrastructure, so that, for someone like Jane Bennett in *Vibrant Matter*, the grid evidences the vibrancy of nonhuman actors like

(1) I'm leaning on the language of the given and the givenness of infrastructure provided by Lauren Berlant in "The commons: Infrastructures for troubling times."

"electrons, trees, wind, fire, electromagnetic fields," while the motif of infrastructure has served a variety of Marxisms for the purpose of digging down beneath the surface appearance of social relations (for instance, Louis Althusser in *For Marx*). Media and communications studies, too, have from their formative moments in the 1960s provided an analytic framework for studying information and communication technologies as infrastructure and energy systems, including works such as Marshall McLuhan's *Understanding Media* and Norbert Wiener's *Cybernetics: Or Control and Communication in the Animal and the Machine*. What brings all of these threads together, Dominic Boyer suggests, is a shared sense of the need to index the material substrata of experience, an "anti-anthropocentric turn ... in the deepening shadow of the Anthropocene, an era in which one species — for the first time since cyanobacteria oxygenated the earth's atmosphere some 2.3 billion years ago — has proven itself capable of transforming the lifeworld of all species" (225). A turn to infrastructure puts pressure on what we mean by the species responsible for the ecological catastrophes of the present, at the same time that it perhaps paradoxically pulls the historicity of the human into clearer view. These canals didn't build themselves. And the coal plant I see from my window is not the work of seals. A specific version of the human built these infrastructures at different times, and these infrastructures in turn reproduce the conditions for that

version of the human to flourish.

If we are serious about transitioning to a renewable and equitable relation to energy, and by extension, serious, too, about reshaping the social relations recursive to the forms of extraction, circulation, and consumption that underwrite that relation to the grid's energy, we have no choice but to focalize our critiques, attachments, and desires through the infrastructural. This is the opposite of saying that base trumps superstructure, of saying that so many cultural and ideological expressions (or delusions) amount to a veil draped over the real material conditions that *condition* our continued pull through the otherwise obfuscated and obstinate logic of fossil-fueled capitalism.

No doubt there is more than enough ideological and cultural delusion to go around. But unveiling is not what making infrastructure primary to a praxis of social and ecological justice makes available. Unveiling presupposes that seeing things for what they are, as opposed to what they appear to be, disposes with the sedimentation of material and discursive histories in bodies and landscape: a debunking, rather than a sifting through. A critical theory attentive to the historicity and materiality of energy sifts through infrastructure because it is there that one encounters the dusty, bloody, and sedimented archive of capitalism's long durée over the bodies and resources of the planet. The cultural analysis of infrastructure makes available a presentism that

refuses the terms of the present. Epochal shifts have been dug into the depths of the earth on the back of capitalism's drives and liberalism's attendant forms of reason. Entire geographies, cultures, and relations to the earth have been upended, eviscerated, or shackled to the tides of a history written in the language of infrastructure. Plainly we ought to be deeply critical of the ongoing violence that grids infrastructure in the present and future, but a critique of infrastructure also needs to be an *infrastructuralization* of critique: not more of the same — self-satisfying claims regarding the civil engineer's racism or investors who talk like Descartes — but a materialism both new and historical, intimate to what makes infrastructure dizzying and dazzling.

If infrastructure emplots a story in the language of capacity and circulation, flow and futurity, then whose story does it emplot? And under what conditions of erasure, amnesia, and memory? And what is the materiality of that discursive and narratological piping through landscape? Kathryn Yusoff argues that colonialism was always a geosocial formation dependent on pressing certain kinds of bodies up against the threshold of life and nonlife otherwise sorted according to the rationale of geology, pressed against the raw stuff of the earth in order to buffer what she calls, in the Black studies tradition of Saidiya Hartman, Édouard Glissant, and Sylvia Wynter, the racial displacements coded by the nomenclature of the present (today, the Anthropocene).

These displacements,

> pertain to the question of how matter is understood and organized, as both extractable resource and energy, mobilized through dehumanizing modes of subjection and conjoining the property and properties of matter in such a way that it collapses the body politic of Blackness into the inhuman — wherein a codification in law and labor becomes an epidemiological signature, as Blackness is marked as property and Whiteness is marked as freedom (political and geographical). (Yusoff 67)

The afterlives of slavery and colonialism reverberate in the eardrums of what Elizabeth Povinelli has named the "carbon imaginary" of late liberal reason, which is both incipient to the urgency of climate change and utterly incapable of recognizing the violence it unleashes legally, socially, and materially under its predicates of a white, propertied self. Which is to say: ontologically incapable of being troubled by the inhuman knotting of the nonhuman properties of Indigeneity and Blackness with the category of nonlife, which has been taking place every day for centuries.

That "we are all in this together now" is a calming kind of abuse. The material and discursive constitution of the "we" at this threshold of life and

nonlife is more than a little anxious to calm its abuse into the necessary, the universal, the all-together-now attitude of transition jargon. Aimé Césaire was long ago clear as day about the costs of colonialism's incessant efforts to calm itself via the delusion of historical progress: liberalism's colonial needs bleed the bodies of others in order to plump up the self-certainty of the property bearing "I," and when the integrity of liberalism's pronouns feels the pressure of its constitution, another Hitler is just around the corner:

> I have talked a good deal about Hitler. Because he deserves it: he makes it possible to see things on a large scale and to grasp the fact that capitalist society, at its present stage, is incapable of establishing a concept of the rights of all men, just as it has proved incapable of establishing a system of individual ethics. Whether one likes it or not, at the end of the blind alley that is Europe, I mean the Europe of Adenauer, Schuman, Bidault, and a few others, there is Hitler. At the end of capitalism, which is eager to outlive its day, there is Hitler. At the end of formal humanism and philosophic renunciation, there is Hitler. (Césaire 37)

The infrastructures of this colonial mediation of bodies are layered, material, and policed, even if it is incumbent

upon us to follow the lead of Black and Indigenous studies in abolishing the geosocial taxonomy of late liberal reason at a discursive level.

I have been arguing here that a critical theory of infrastructure, like a critical theory of anything, is *critical* in the measure that it labours in the service of emancipation from that which we may not even fully recognize our desire or need to be emancipated from. But the conceptual scaling of infrastructure from the historical to the experiential, from the geological to the ecological, and from the aesthesis of everyday life to the aesthetics of capital's reason and rampage over the earth's human and nonhuman resources, means that what is at stake in a critical theory attuned to it is effervescent. This is a critical theory fundamental to the Venn diagramming of concerns animating so much radical thought today. These conjoin in the turn to infrastructure in the humanities and social sciences around three critical concerns that matter deeply to the shape of things to come: decarbonization, decapitalization, and decolonization. Making infrastructure primary means taking seriously the forms of experience, extension, and enmity that knot bodies past and present (and future too) to the habits and habitats formalized by cables, ports, pipelines, grids, roads, and refineries. Taking these forms seriously means tracking them, looking at them with bifocals, and eventually finding pressure points that allow us and those to whom we ally ourselves strategic points of theoretical and material intervention. It means

listening to those that know first-hand what infrastructural expansion means when the very grounds for a life lived get chewed up and fenced off, but also learning what pains and perturbs those that want to dig deeper into the earth.

Demystifying the spatial and temporal entanglements of infrastructure with a sharper attunement to carbon, colonial, and capitalist imaginaries is a good reason to gather collective resources for a critical theory of infrastructure. This issue of *Soapbox* is an impressive step in that direction.

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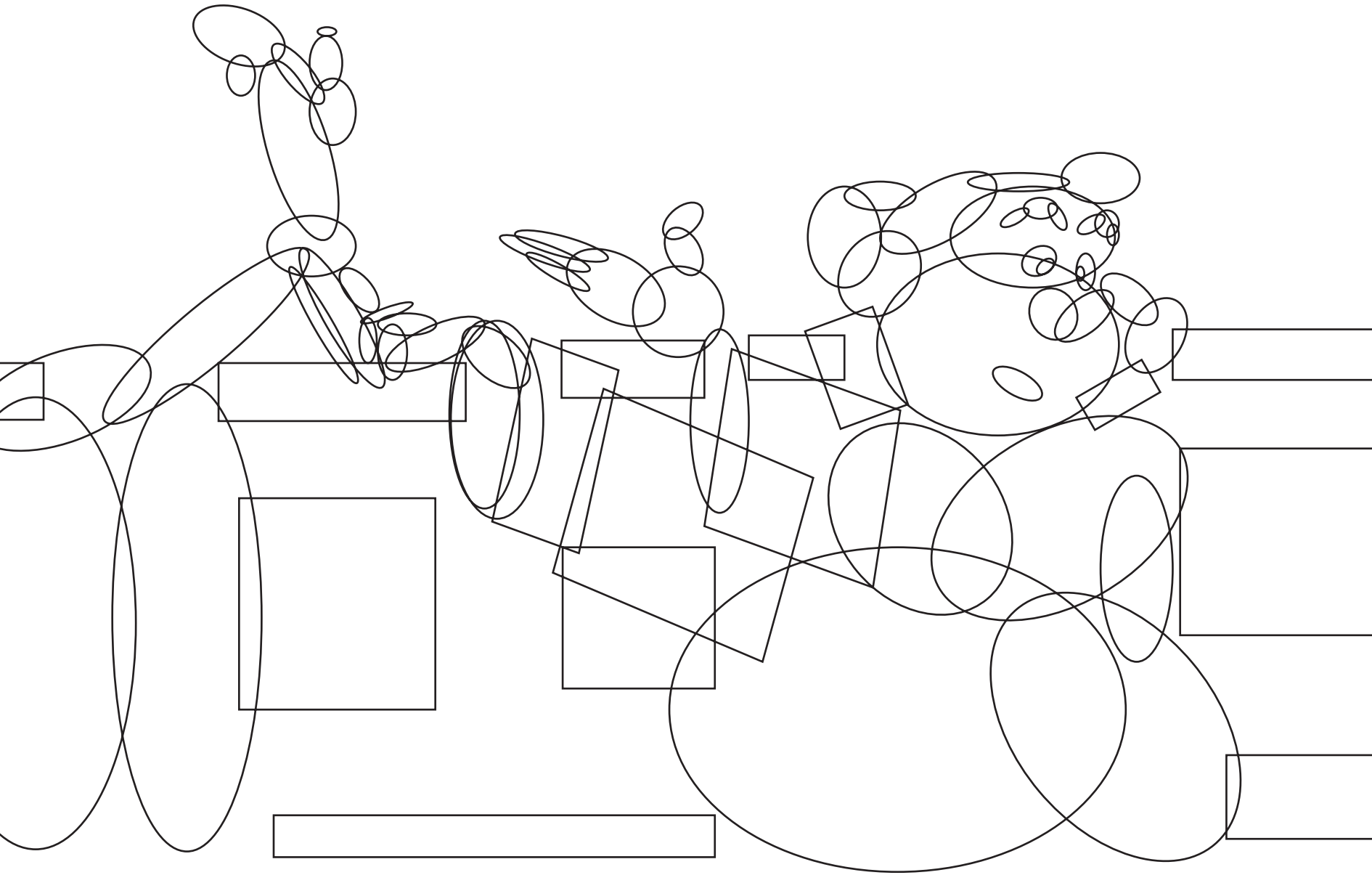

ring and finger

piano and window

couch and door

mascot and train

Winnie the Pooh and hole

koala and fence

glass shoe and foot

cheetah and container

Throughout the pages you have been encountering eight drawings from Squaring the circle, a series of illustrations based on a situation where size and format don't correspond. The expression 'squaring the circle' is sometimes used as a metaphor for trying to do the impossible and works as the visual theme for this issue of *Soapbox*. The illustrated elements are built on the limitation of only using squares and circles.

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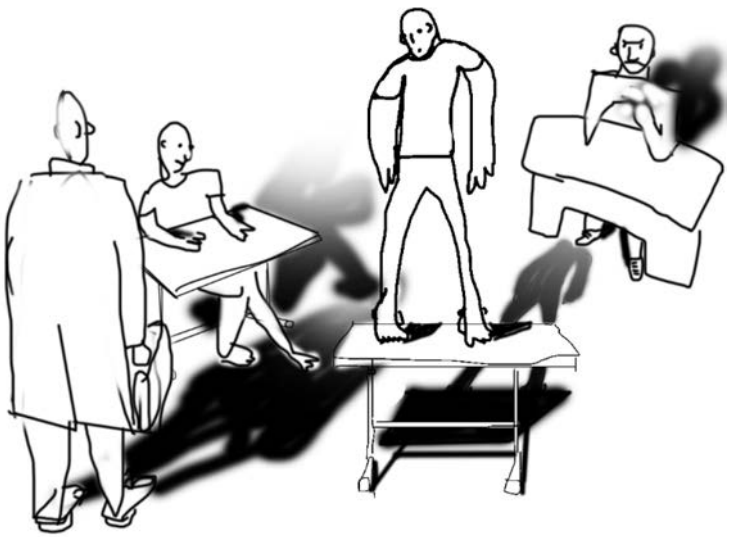

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