This reader is the outcome of a year-long program of events, workshops, pedagogical experiments, and field investigations initiated by the Centre of Research Architecture under the umbrella of the project *Logistical Nightmares*, which explores the increasing ubiquity and prominence of logistics as a mode for organising social life and politics.

FutureLand: Stories from the Global Supply Chain

This Reader is to accompany the film *FutureLand* made by students of the Conflicts and Negotiations class at the Centre for Research Architecture, Goldsmiths University of London 2017 – 2018

Content

Introduction – Susan Schuppli

The experimental documentary *FutureLand* produced by the MA students in Conflicts & Negotiations (2017–18) emerges out of fieldwork they conducted in the Port of Rotterdam, Europe's largest cargo and container port, as well as individual research and collaborative writing that delved into the politics of our contemporary logistical condition. Organised by an elliptical structure, the documentary cross-cuts between temporalities and geographies to explore the ways in which the Port is deeply entangled with the histories of colonialism, the legacies of maritime labour, the advent of automation, the speculative fictions of global finance, the threat of sea level rise, and the ecological consequences of an infrastructural imagination that have carved a trading zone out of the liquid architecture of the sea. The documentary utilises a wide range of source material from webcam streams to archival documents in addition to footage, animations, field recordings, and voiceover narration produced by the students themselves.

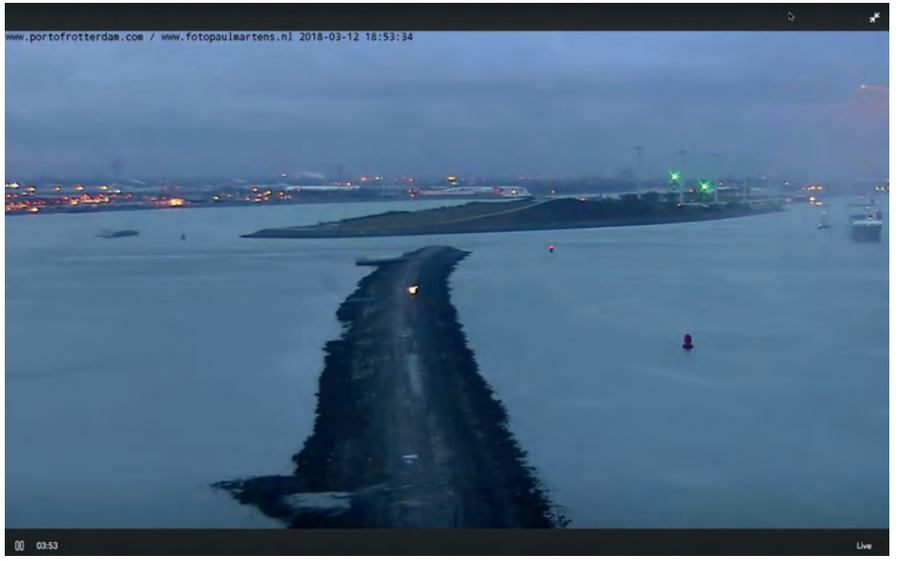
Its title – *FutureLand* – derives from the main public entry point into the Port of Rotterdam where visitors depart on scheduled bus and boat tours. We too began our day on water touring the docked ships and observing the cranes as they manoeuvred their containers. 'Ask me anything,' our guide enjoined us... when we paused to take pictures from our vantage point on the upper deck he resumed his running commentary. It was a recital scripted entirely in superlatives: the biggest, the tallest, the deepest, the heaviest, the largest, the greenest. Throughout the *FutureLand* video echoes of his speech come to act as a refrain that the various chapters utilise to call into question the official public narratives of the Port, which are ultimately countered by the students' own insights and approach to their research materials.

In addition to exploring the logistical operations of the Port itself, students also bicycled around the adjacent industrial park documenting its petro-chemical storage, which constitutes some of the primary cargo that transits through the Port. Other students were able to interview Filipino mariners on shore-leave as well as dockworkers in a local pub. A representative from the labour union, who was deeply concerned about the loss of jobs both at sea and on land as a consequence of automation, was interviewed later in Amsterdam. The MA students were joined by our PhDs as well as invited guests: Stefan Helmreich, Heather Paxson, Giorgio Grappi, Víctor Muñoz Sanz, Evelina Gambino, and Oscar Pedraza. Christina Sharpe kindly agreed to act as a respondent to the first public screening of the documentary at Goldsmiths on 23 May 2018. Our work in the Netherlands was generously supported by the organisation and staff at the Sonic Acts Academy, Amsterdam 2018.

As a collaborative project, the resulting video documentary and companion reader exemplifies the spirit of peer-to-peer learning and stands as a significant set of documents to have emerged out of this year's MA programme in Research Architecture.

Scales of Vision

From the distance, from the top,
from the surface, from above
the waterline, from resolution,
from details, what can we see?
Which scales of visibility
does our vision travel through?



Distant images of efficiency
shape our perception. Mechanised
movements repeatedly, and eternally
inscribe the rhythms of capitalism.
Silently and without interruption,
flows of goods are illegible: expanding,
registering, identifying, anonymising,
optimising, automating. What lays
below the opacity produced by sterile
repetition? Do seamless images obscure
logistical operations?

Do the pixels register processes
and violent histories of extraction,
of production, of over production,
of cheap labour, of cheap lives, lives
snatched, registered, identified,
anonymised, containerised,
relocated, optimised?

These slow hypnotic images
and the frenetic pace of the world
move past one another, producing
an incapacity to see beyond.

SEMIOTEXT(E) INTERVENTION SERIES

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The Invisible Committee

To Our Friends

Translated by Robert Hurley

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intervention
series □ 18

Turin, January 28, 2012.

3

POWER IS LOGISTIC.
BLOCK EVERYTHING!

1. *Power Now Resides in Infrastructures.* 2. *On the Difference Between Organizing and Organizing Oneself.* 3. *On Blockage.* 4. *On Investigation.*

1. Occupation of the Kasbah in Tunis and of the Syntagma Square in Athens, siege of Westminster in London during the student movement of 2011, encirclement of the parliament in Madrid on September 25, 2012 or in Barcelona on June 15, 2011, riots all around the Chamber of Deputies in Rome on December 14, 2010, attempt on October 15, 2011 in Lisbon to invade the Assembleia da Republica, burning of the Bosnian presidential residence in February of 2014: the places of institutional power exert a magnetic attraction on revolutionaries. But when the insurgents manage to penetrate parliaments, presidential palaces, and other headquarters of institutions,

as in Ukraine, in Libya or in Wisconsin, it's only to discover empty places, that is, empty of power, and furnished without any taste. It's not to prevent the "people" from "taking power" that they are so fiercely kept from invading such places, but to prevent them from realizing that power *no longer resides in the institutions*. There are only deserted temples there, decommissioned fortresses, nothing but stage sets—real traps for revolutionaries. The popular impulse to rush onto the stage to find out what is happening in the wings is bound to be disappointed. If they got inside, even the most fervent conspiracy freaks would find nothing arcane there; the truth is that power is simply no longer that theatrical reality to which modernity accustomed us.

Yet the truth about the actual localization of power is not hidden at all; it's only we who refuse to see it for fear of having our comfortable certainties doused with cold water. For confirmation of this, one only has to look for a moment at the banknotes issued by the European Union. Neither the Marxists nor the neoclassical economists have ever been able to admit that money is not essentially an economic instrument but a political reality. We have never seen any money that was not attached to a political order capable of backing it. That is also why the bills of the different countries bear the personal images of emperors and great statesmen, of founding fathers or personified

allegories of the nation. But what is it that appears on euro banknotes? Not human figures, not emblems of a personal sovereignty, but bridges, aqueducts, arches—pieces of impersonal architecture, cold as stone. As to the truth about the present nature of power, every European has a printed exemplar of it in their pocket. It can be stated in this way: *power now resides in the infrastructures of this world*. Contemporary power is of an architectural and impersonal, and not a representative or personal, nature. Traditional power was representative: the pope was the representation of Christ on Earth, the king, of God, the President, of the people, and the General Secretary of the Party, of the proletariat. This whole personal politics is dead, and that is why the small number of orators that survive on the surface of the globe amuse more than they govern. The cast of politicians is actually composed of clowns with varying degrees of talent—whence the phenomenal success of the wretched Beppe Grillo in Italy or the sinister Dieudonné in France. All in all, at least they know how to *entertain* you, which is their profession of course. So, in addition to stating the obvious, reproaching politicians for "not representing us" only maintains a nostalgia. The politicians are not there for that, they're there to distract us, since power is elsewhere. And this correct intuition is what turns nutty in all the contemporary conspiracisms.

Power is indeed somewhere else, somewhere other than in the institutions, but it's not hidden for all that. Or if it is, it's hidden like Poe's "purloined letter." No one sees it because everyone has it in plain sight, all the time—in the form of a high-voltage line, a freeway, a traffic circle, a supermarket, or a computer program. And if it is, it's hidden like a sewage system, an undersea cable, a fiber optic line running the length of a railway, or a data center in the middle of a forest. Power is the very organization of this world, this engineered, configured, *purposed* world. That is the secret, *and it's that there isn't one*.

Power is now immanent in life as it is technologically organized and commodified. It has the neutral appearance of facilities or of Google's blank page. Whoever determines the organization of space, whoever governs the social environments and atmospheres, whoever administers things, whoever manages the accesses—governs men. Contemporary power has made itself the heir, on the one hand, of the old science of policing, which consists in looking after "the well-being and security of the citizens," and, on the other, of the logistic science of militaries, the "art of moving armies," having become an art of maintaining communication networks and ensuring strategic mobility. Absorbed in our language-bound conception of the public thing, of politics, we have continued

debating while the real decisions were being implemented *right before our eyes*. Contemporary laws are written in steel structures and not with words. All the citizens' indignation can only end up butting its dazed forehead against the reinforced concrete of this world. The great merit of the struggle against the TAV in Italy is in having firmly grasped all that is involved politically in a simple public works project. Symmetrically, this is something that no politician can acknowledge. Like that Bersani who snapped back one day at the No TAV militants: "After all, we're talking here about a train line, not a bomber." But "a construction site is worth a battalion," in the estimation of Marshal Lyautey, who had no rival in the business of "pacifying" the colonies. If struggles against big infrastructure projects are multiplying all over the world, from Romania to Brazil, it's because this intuition itself is becoming widespread.

Anyone who means to undertake anything whatsoever against the existing world must start from there: the real power structure is the material, technological, physical organization of this world. *Government is no longer in the government*. The "power vacuum" that lasted in Belgium for more than a year is a clear example in point. The country was able to function with no government, elected representatives, parliament, political debate, or electoral issues, without any part of its normal

operation being affected. Same thing in Italy, which has been going from "technical government" to "technical government" for years now, and it doesn't bother anyone that this expression goes back to the Manifesto-program of the Futurist Party of 1918, which incubated the first fascists.

Power, henceforth, is the very order of things, and the police charged with defending it. It's not simple to think about a power that consists in infrastructures, in the means to make them function, to control them and to build them. How do we contest an order that isn't articulated in language, that is constructed step by step and wordlessly? An order that is embodied in the very objects of everyday life. An order whose political constitution is its material constitution. An order that is revealed less in the President's words than in the silence of optimal performance. In the age when power manifested itself through edicts, laws, and regulations, it was vulnerable to critical attack. But there's no criticizing a wall, one destroys it or tags it. A government that *arranges* life through its instruments and its layouts, whose statements take the form of a street lined with traffic cones and surveilled by overhead cameras, may only invite a destruction that is wordless itself. Aggression against the setting of everyday life has become sacrilegious, consequently; it's something like violating its constitution. Indiscriminate

smashing in urban riots expresses both an awareness of this state of things, and a relative powerlessness in the face of it. The mute and unquestionable order which the existence of a bus shelter embodies will not lie shattered on the ground, unfortunately, once the shelter is demolished. The theory of broken panes will still stand after all the shop windows have been smashed. All the hypocritical proclamations about the sacred character of the "environment," the holy crusade for its defense, can only be understood in light of this mutation: *power has become environmental itself,* has *merged into the surroundings.* It is power that we're asked to defend in all the official appeals to "preserve the environment," and not the little fish.

2. Everyday life has not always been *organized.* For that to be accomplished, it was necessary first to dismantle life, starting with the city. Life and the city have been broken down into *functions,* corresponding to "social needs." The office district, the factory district, the residential district, the spaces for relaxation, the entertainment district, the place where one eats, the place where one works, the place where one cruises, and the car or bus for tying all that together are the result of a prolonged reconfiguration of life that devastated every form of life. It was carried out methodically, for more than a century, by a whole caste of *organizers,* a

We would have liked to be brief. To forgo genealogies, etymologies, quotations. That a poem, a song, would suffice.

We wished it would be enough to write "revolution" on a wall for the street to catch fire.

But it was necessary to untangle the skein of the present, and in places to settle accounts with ancient falsehoods.

It was necessary to try and digest seven years of historical convulsions. And decipher a world in which confusion has blossomed on a tree of misunderstanding.

We've taken the time to write with the hope that others would take the time to read.

Writing is a vanity, unless it's for the friend. Including the friend one doesn't know yet.

In the coming years, we'll be wherever the fires are lit.

During the periods of respite, we're not that hard to find.

We'll continue the effort of clarification we've begun here.

There will be dates and places where we can mass our forces against logical targets.

There will be dates and places for meeting up and debating.

We don't know if the insurrection will have the look of a heroic assault, or if it will be a planetary fit of crying, a sudden expression of feeling after decades of anesthesia, misery, and stupidity.

Nothing guarantees that the fascist option won't be preferred to revolution.

We'll do what there is to be done.

Thinking, attacking, building—such is our fabulous agenda.

This text is the beginning of a plan.

See you soon,

Invisible Committee
October 2014

Ditto + Ditto
Take a Trip
to Port Authority

ONE

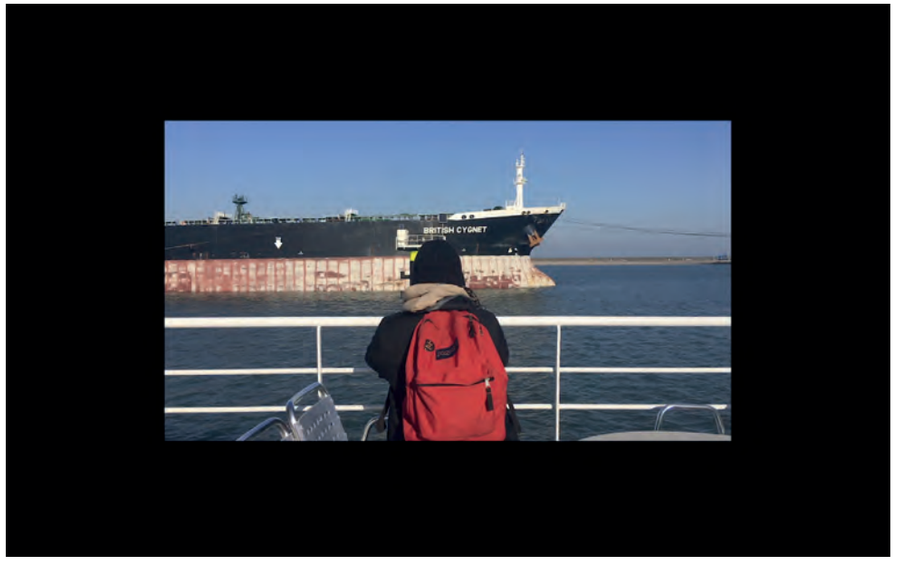
'Water is the first thing in my imagination. [...] All beginning in water, all ending in water. Turquoise, aquamarine, deep green, deep blue, ink blue, navy, blue-black cerulean water... [...] Water is the first thing in my memory.'[1] – 'I, and my lesbian sisters and gay brothers... are not a new fashion... We return to the sea and the shores and once upon a time, which transposes into this time, which it always was... the past simultaneously forever embedded in the present, in the pain and inevitable horrors confronted by conscientious unblinking memory, in the tragedies and occasional triumphs of history always raveled by so much needless suffering, by the unbearable human misery that we must not, for our collective sakes and the continued growth of this body we call 'humanity,' ever be denied.'[2] – 'Never being on the right side of the Atlantic is an unsettled feeling, the feeling of a thing that unsettles with others. It's a feeling, if you ride with it, that produces a certain distance from the settled, from those who determine themselves in space and time, who locate themselves in a determined history. To have been shipped is to have been moved by others, with others. It is to feel at home with the homeless, at ease with the fugitive, at peace with the pursued, at rest with the ones who consent not to be one. Outlawed, interdicted, intimate things of the hold, containerized contagion, logistics externalises logic itself to reach you, but this is not enough to get at the social logics, the social poesis, running through logisticality.'[3] – 'How would you recognize the antiphonal accompaniment to gratuitous violence – the sound that can be heard as if it were in response to that violence, the sound that must be heard as that to which such violence responds?'[4]

[1] Dionne Brand, *A Map to the Door of No Return* (Toronto: Vintage Canada, 2001) quoted in Omise'eke Natasha Tinsley, "Black Atlantic, Queer Atlantic:Queer Imaginings of the Middle Passage," GLQ: A *Journal of Lesbian and Gay Studies 14*, no 2-3 (2008).

[2] Thomas Glave, *Words to Our Now: Imagination And Dissent* (Minneapolis: University of Minnesota Press, 2005) quoted in Omise'eke Natasha Tinsley, "Black Atlantic, Queer Atlantic:Queer Imaginings of the Middle Passage," GLQ: *A Journal of Lesbian and Gay Studies 14*, no 2-3 (2008).

[3] Stefano Harney and Fred Moten, *The Undercommons: Fugitive Planning & Black Study* (New York: Minor Compositions, 2013), 97.

[4] Stefano Harney and Fred Moten, *The Undercommons: Fugitive Planning & Black Study* (New York: Minor Compositions, 2013), 95-6.



TWO

Have you been to the Slavery Museum? Who among you have ever been to the Middle Passage? Who has been confronted with the water? Have you heard the retching? Sharpe says 'How does one account for surviving the ship when the ship and the un/survival repeat?' How do we reckon with this re/membering?[5] –'[...] vio– lence and blackness is (always already and only) cast inside the mathematics of unlivingness (data/scientifically proven/ certified violation/asterisk) where black comes to be (a bit). Indeed, if blackness originates and emerges in violence and death, black futures are foreclosed by the dead and dying asterisks. And if the dead and dying are the archival and asterisked cosmogonies of blackness, within our present system of knowledge – a system, [...] where the subhuman is invited to become human on terms that require anti-black sentiment – scraps and bits of black Iife and death and narrative are guaranteed to move toward, to progress into, unliving-ness and anti-blackness.'[6] – '[...]think the violence of transatlantic slavery as a numerical moment through which anti-blackness was engendered and came to underwrite post-slave emancipation promises, [...] The post-slave system, its emancipatory terms, guarantees and profits from and repeats anti-black violence.'[7] – '[...] dwell on the archival display of the violated body, the corpse, the death sentences, the economic inventories of cargo, the whip as the tool that writes blackness into existence. How might we take this evidence and venture toward another mode of human being – so that when we encounter the lists, the ledgers, the commodities of slavery, we notice that our collective unbearable past, which is unrepresentable except for the archival mechanics that usher in blackness vis-a-vis violence, is about something else altogether.' How does one account for surviving the future when the zong repeats?[8] – 'Hapticality, the capacity to feel though others, for others to feel through you, for you to feel them feeling you, this feel of the shipped is not regulated, at least not successfully, by a state, a religion, a people, an empire, a piece of land, a totem. Or perhaps we could say these are now recomposed in the wake of the shipped. [...] Refused these things, we first refuse them, in the contained, amongst the contained, lying together in the ship, the boxcar, the prison, the hostel. Skin, against epidermalisation, senses touching. Thrown together touching each other we were denied all sentiment, denied all the things that were supposed to produce sentiment, family, nation, language, religion, place, home. Though forced to touch and be touched, to sense and be sensed in that space of no space, though refused sentiment, history and home, we feel (for) each other.'[9] – 'The most universal definition of the slave is a stranger'.[10] – MATI. SHIPMATE. 'She who survived the middle passage with me' [11] – 'Queer not in the sense of a 'gay' or same-sex loving identity waiting to be excavated from the ocean floor but as a praxis of resistance. Queer in the sense of marking disruption to the violence of normative order and powerfully so: connecting in ways that commodified flesh was never supposed to, loving your own kind when your kind was supposed to cease to exist, forging interpersonal connections that counteract imperial desires for Africans' living deaths. [...] Perhaps, as Brand writes, black queers really have no ancestry except the black water.'[12] 'We have no ancestry except the black water and the Door of No Return'[13] – Ditto + Ditto Take a Trip To Port Authority.

[5] Christina Sharpe, *In the Wake: On Blackness and Being* (Durham: Duke University Press, 2016), 38.

[6] Katherine McKittrick, "Mathematics of Black Life," *The Black Scholar 44*, no 2 (Summer 2014): 20.

[7] Katherine McKittrick, "Mathematics of Black Life," *The Black Scholar 44*, no 2 (Summer 2014): 22.

[8] Katherine McKittrick, "Mathematics of Black Life," *The Black Scholar 44*, no 2 (Summer 2014): 18.

[9] Stefano Harney and Fred Moten, *The Undercommons: Fugitive Planning & Black Study* (New York: Minor Compositions, 2013), 98.

[10] Saidiya Hartman, *Lose Your Mother: A Journey Along the Atlantic Slave Route* (New York: Farrar, Straus and Giroux, 2007), 5.

[11] Omise'eke Natasha Tinsley, "Black Atlantic, Queer Atlantic:Queer Imaginings of the Middle Passage," GLQ: *A Journal of Lesbian and Gay Studies 14*, no 2-3 (2008): 192.

[12] Omise'eke Natasha Tinsley, "Black Atlantic, Queer Atlantic:Queer Imaginings of the Middle Passage," GLQ: *A Journal of Lesbian and Gay Studies 14*, no 2-3 (2008): 199.

[13] Dionne Brand, *A Map to the Door of No Return* (Toronto: Vintage Canada, 2001), 61.


Are there any questions yet?


EVERGREEN

THREE

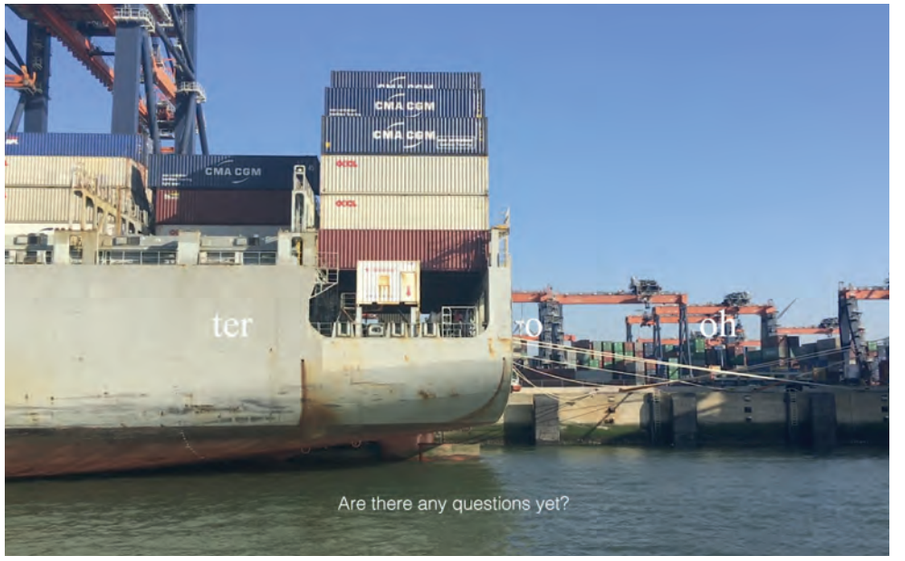
'Where did logistics get this ambition to connect bodies, objects, affects, information, without subjects, without the formality of subjects, as if it could reign sovereign over the informal, the concrete and generative indeterminacy of material life? The truth is, modern logistics was born that way. Or more precisely it was born in resistance to, given as the acquisition of, this ambition, this desire and this practice of the informal. Modern logistics is founded with the first great movement of commodities, the ones that could speak. It was founded in the Atlantic slave trade, founded against the Atlantic slave. Breaking from the plundering accumulation of armies to the primitive accumulation of capital, modern logistics was marked, branded, seared with the transportation of the commodity labor that was not, and ever after would not be, no matter who was in that hold or containerized in that ship. [...] logistics was always the transport of slavery, not 'free' labor. Logistics remains, as ever, the transport of objects that is held in the movement of things. And the transport of things remains, as ever, logistics' unrealizable ambition.'[14] – 'An image, like many other images, requires our emotive interaction and response of and to it to invoke empathy. Skin in too close proximity, hard metal handcuffs, chains, bondage tools, slicing strips away and eating into flesh, the harsh cradling of the ship by the sea turning floor boards into sanding devices, grinding away the flesh from black elbows, hips and knees till white bones are seen, of eventually losing singular identities, merging into large cargoes, shackled in pairs, transported, marked, branded, sold... ultimate expressions of a final delineation of self-ownership'.[15] – I am that cargo / And I / Is the cargo / And I was am is still / I was am is and / Cargo still[16] – 'And so it is we remain in the hold, in the break, as if entering again and again the broken world, to trace the visionary company and join it. This contrapuntal island, where we are marooned in search of marronage, where we linger in stateless emergency, in our our lysed cell and held dislocation, our blown standpoint and lyred chapel, in (the) study of our sea-born variance, sent by its prehistory into arrivance without arrival, as a poetics of lore, of abnormal articulation, where the relation between joint and flesh is the folded distance of a musical moment that is emphatically, palpably imperceptible and, therefore, difficult to describe.'[17]

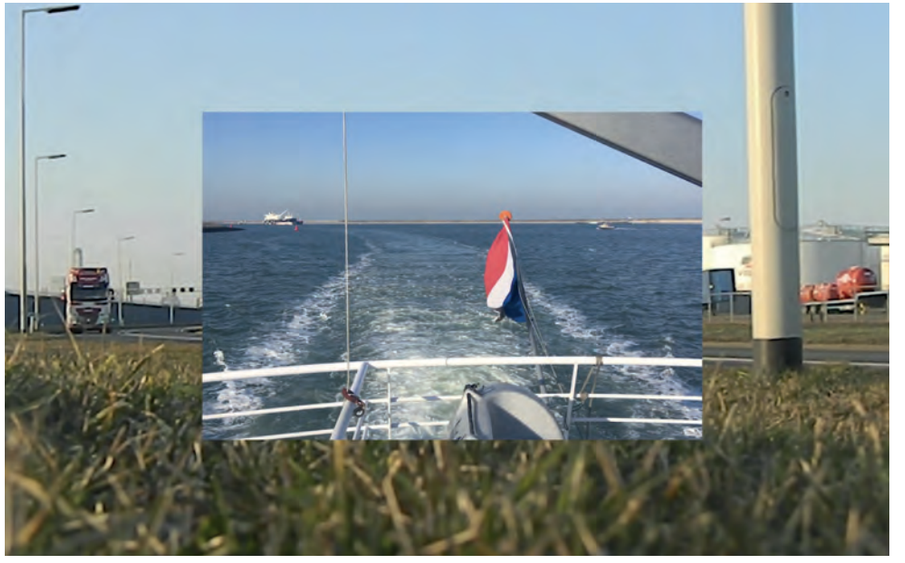
[14] Stefano Harney and Fred Moten, *The Undercommons: Fugitive Planning & Black Study* (New York: Minor Compositions, 2013), 92.

[15] Eze Imade Eribo and Rasheeda Phillips, "Slave Ships: Human Commodities, Floating Dungeons and Chimeral Manifestations," *The Funambolist*, no5 (May/June 2016): 5-6.

[16] Courtesy of Imani Robinson, "Still Life"

[17] Stefano Harney and Fred Moten, *The Undercommons: Fugitive Planning & Black Study* (New York: Minor Compositions, 2013), 94.





'We are a little bit out of the wind again so it's – the temperature is a little bit better, we can warm up... how about any more questions so far, ladies and gentlemen? Because I'm here for you today and so, I – I tell my story but basically of course I'm here to answer your questions so, are there any questions yet?'

Zong! #9

slaves

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Zong! #1

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These ships, they have to pay money to the Port of Rotterdam to do that. You have to pay seaport dues and for such a ship of this size, it can easily be something like fifty to one hundred thousand euros, per visit that it has to pay to us, to the Port Authority. And that is the money with which we-, operate our port and maintenance our port. So we make money with the visits of ships.

Zong! #8

the good of overboard

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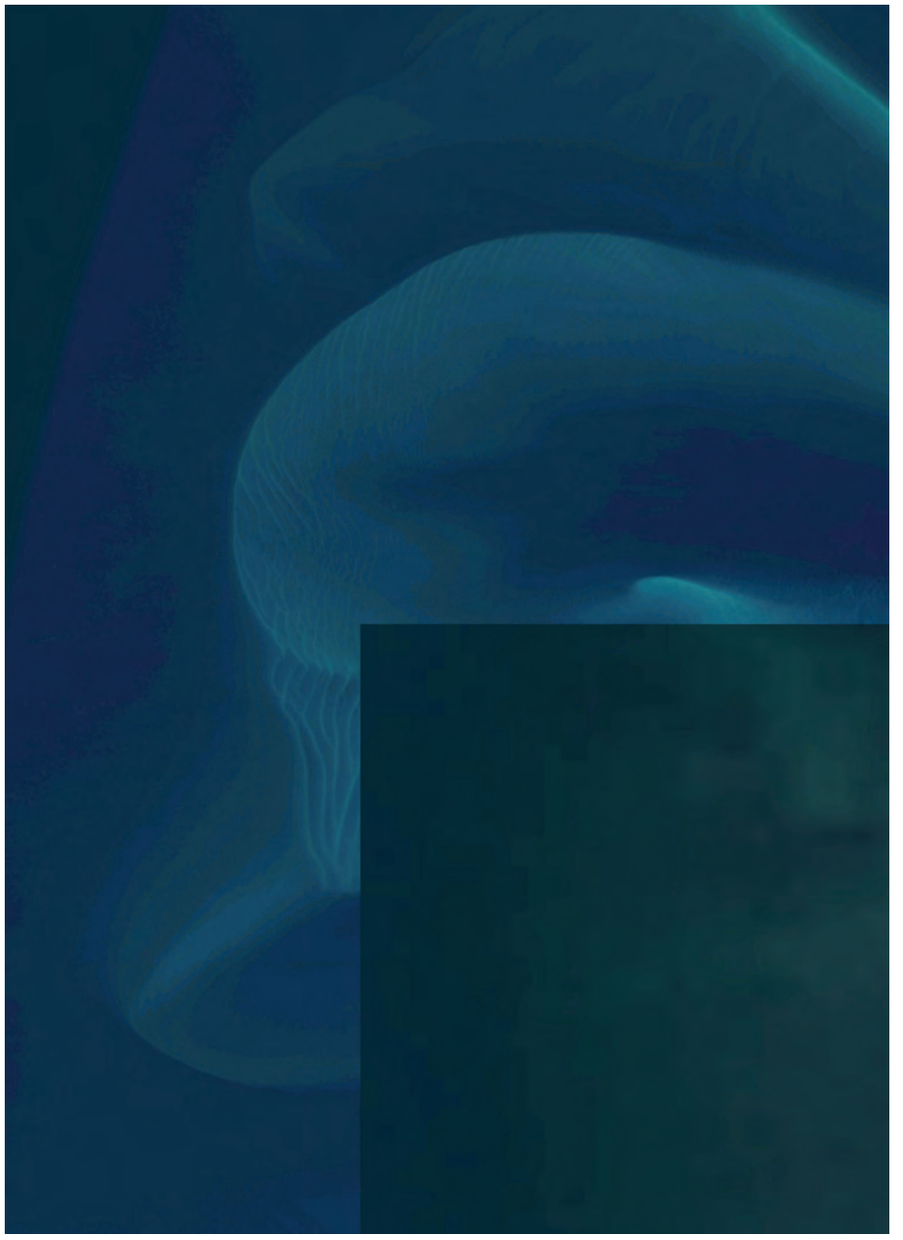
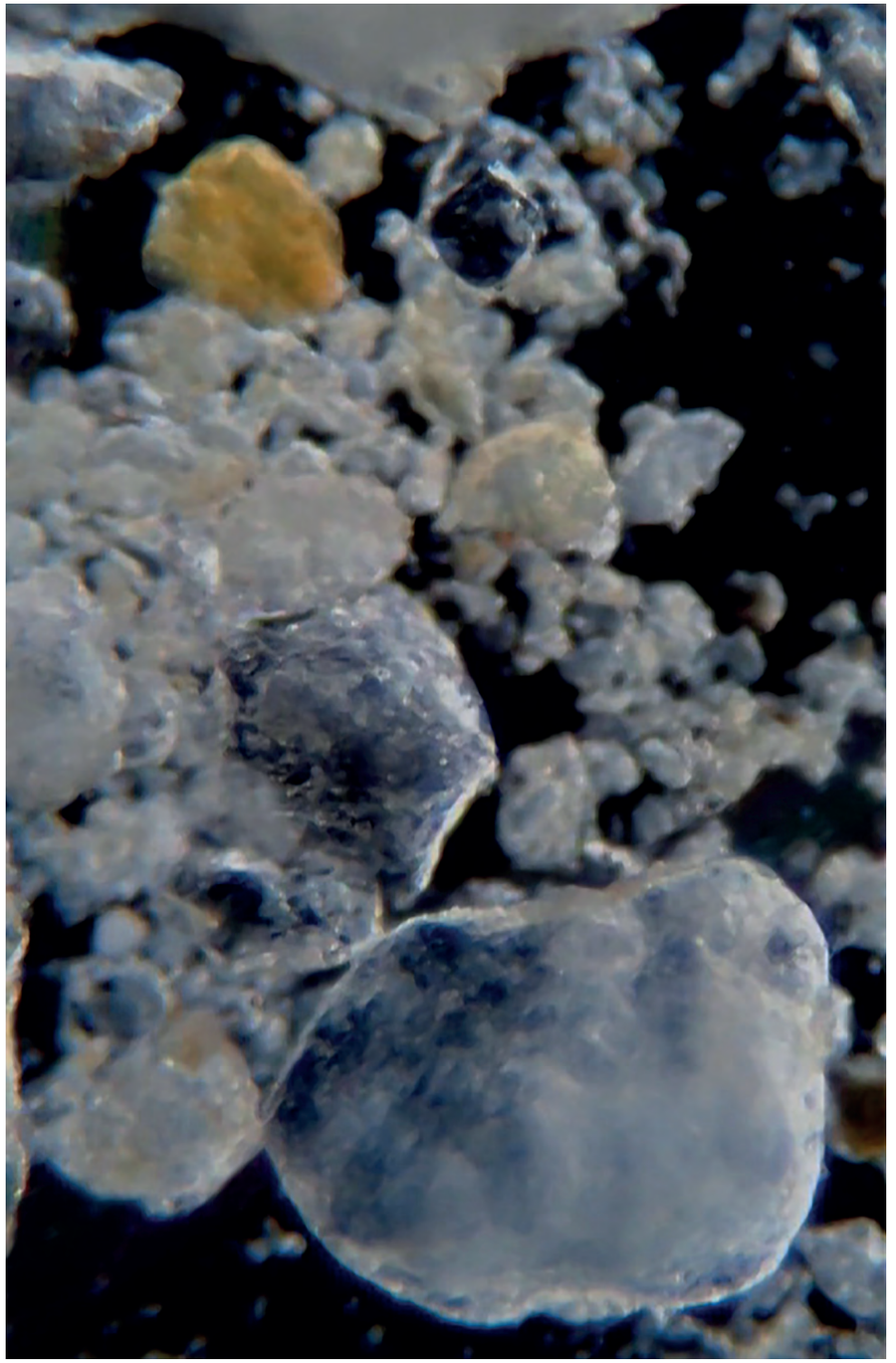
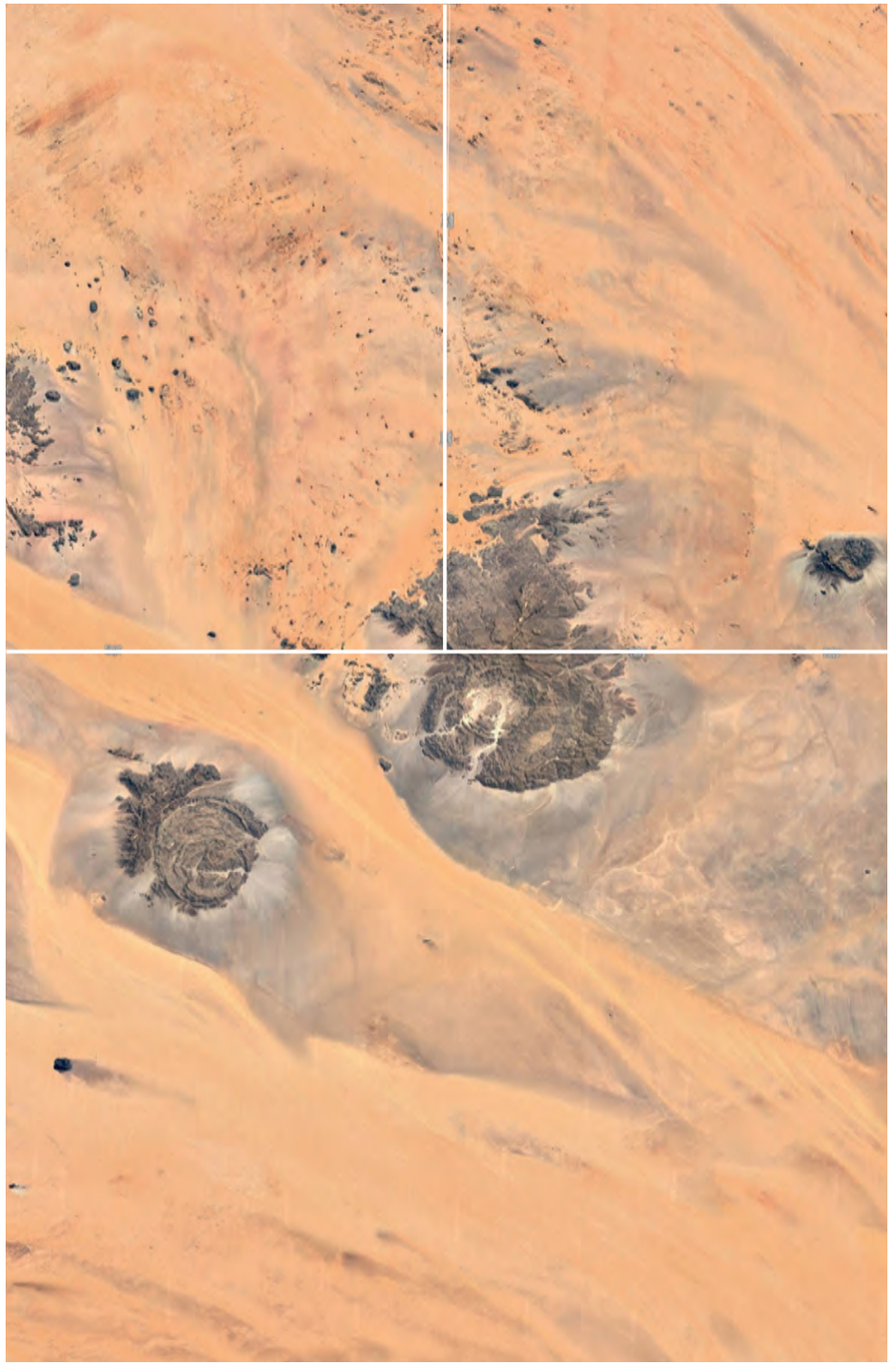
Infranature





Sand leaves a trace, though this spectre isn't always visible it can still be read, it can still be mapped. Sand's gritty particality and sensational lingering do not lend itself to the image of the gleaming, animate portscape, however, it is the theater that makes it possible. If we are proposing to map the granular phantom sand, then we become *harenaeologists*. Latin harenae does mean sand, but perhaps more importantly it means a space of contest, arena. Nothing captures logistical competition better. Maersk barely conceals it's phallic references as they vye for the biggest boat, and port-space morphs to accommodate conjuring up new land where there once was water.

Looking across the ocean and fantasizing about expansion is obviously not a new phenomenon. Four hundred years ago this new territory came in the form of 'unconquered' supine lands awaiting European exploitation. Now the territory can be created closer to home, not over the horizon-line but at the wave-break. To build a new island, one elsewhere has to disappear. This is false alchemy, making light of a heavy earth. The disappearance of islands, for the augmentation of port-space, has created a new, unprecedented geologic process in which, rocks, minerals, and shells that have taken millenia to breakdown, are rapidly extracted, causing a global sand crisis. What does it take to separate sand from water, and water from sand? As we redraw our maps we enforce fluid matter to obey its new geometry,



through a method of vigorous, violent maintenance. To build a new island, one elsewhere has to disappear. This is false alchemy, the art of political harenaology. The most dramatic impact of ocean sand mining is surely felt in Indonesia, where sand miners have completely erased at least two dozen islands since 2005. The sand making up these former islands was mostly shipped to Singapore, which needs titanic amounts to continue its programme of artificially adding territory by reclaiming land from the sea.

What is new about the modern land reclamation project is that in transporting sand to neighbouring countries, it quite literally steals territory from them. Rather than do this through the art of warfare, through territorial occupation, or settler colonialism, this theft of land is practically untraceable. Islands that might have once been mapped by coordinates, now disappear or rather disintegrate into fragmentary fungible particles ... sand from a disappearing island in Indonesia, practically indistinguishable from sand from the sea bed off the coast of the Philippines.

'Infrastructures are matter that enable the movement of other matter. Their peculiar ontology lies in the fact that they are things and also the relation between things. As things they are present to the senses, yet they are also displaced in the focus on the matter they move around. We often see computers not cables, light not electricity, taps and water but not pipes and sewers.'

‘There are souls beneath that water. Fixed in slime, they speak their piece, end it, and start again: ‘Sullen were we in the air made sweet by the Sun; in the glory of his shining our hearts poured a bitter smoke. Sullen were we begun; sullen we lie forever in this ditch.’ This litany they gargle in their throats as if they sand, but lacked the words and pitch.’ (Dante)

To build a new island, one elsewhere has to disappear.
This is false alchemy,
making light of a heavy earth
In *FutureLand*
The cities we live are cannibals
Devouring their bellies in concrete and asphalt.
Island disappearance = city appearance
curving on a violent moebial
Time is compressed
The ancients: rocks, minerals and shells are
removed and reformed
into
cement, roads, buildings, ports, infrastructure
This is false alchemy
Heavy earth made light on the promise of a shimmer

How do we mourn our lost islands
these souls beneath the water
To begin with the depths of space and the remotest
nebulae, and thence gradually to descend through
the starry region to which our solar system belongs,
To the consideration of the terrestrial spheroid with its
aerial and liquid coverings, its form, its temperature and
magnetic tension, and the fullness of organic life expanding
and moving over its surface under the vivifying influence
of light.’

To build a new island, one elsewhere has to disappear.
This is false alchemy,
This is the art of political harenaeology
This is War by other means
War by means of terraforming

Built on Sand: Singapore and the New State of Risk

Joshua Comaroff

In June 2014, drivers crossing the Acauseway between Singapore and Johor, Malaysia, began to notice something strange. A slender sandbar, which had long stood in the middle of the narrow straits, had started to grow, and was slowly inching toward Singapore. Construction vehicles had arrived, and small barges passed continuously, dumping load after load of sand into the water. Newspapers soon reported that this expanding mound was to become the site of Forest City, a 2,000–hectare high-rise housing development jutting out from the Malaysian port of Tanjung Pelepas. As this privately funded project crept toward Singapore's national border, the security state doubtlessly felt violated. In response, Prime Minister Lee Hsien Loong requested that the Malaysian government halt work on the project, and threatened to file a complaint with the International Tribunal for the Law of the Sea in Hamburg.

Forest City and its backstory are emblematic of an emerging issue of a transnational order. Less obvious than the increased capital flows across territories is the flow of territory itself. That is, land. Or, more accurately, sand.

With the rise of sand trading, the nation-state has entered a dangerously fluid phase. With the coastal earthworks that are under way throughout Southeast Asia and the Middle East – a series of reclamations so large that they nearly encroach on sovereign borders – territory has acquired an unprecedented liquidity. The malleability of sand makes it a uniquely volatile substance. Its softness and scalability distinguish it from other modes of infrastructure. As journalist Chris Milton pointed out in a 2010 essay in Foreign Affairs, sand is a medium by which massive environmental change can be effected via incremental processes.[1] It is granular – neither liquid nor solid – which means that it can be transported by the boatload or by the handful. In large quantities, it can be engineered into the most fundamental of all infrastructures: landitself. In contrast to the materiality of other 'fixed' infrastructures, however, sand is removed and sold by a great number of agents, and is brokered by governing authorities at local and national levels. Many dealers are illicit, and allegedly trade without genuine receipts.[2] As such, the transnational drift of sand leaves only the most fragmentary of traces. Disappearances are difficult tomap and nearly impossible to quantify.

A number of importers, including Singapore, consider the details of their sourcing to be confidential and a matter of national security. In this context, the physical basis of the state can be incrementally eroded or expanded, legally or otherwise, through the work of private actors – much to the benefit of expanding nations. It is a form of appropriation that differs rather dramatically from traditional seizures of territory, through war or colonial expansion.

Nowhere is Milton's observation more true than in Singapore, where access to sand has become a matter of national security; it is the key currency in a new geopolitics of risk. The 'Little Red Dot' has, since 1965, dilated from 224.5 to 276.5 square miles. The target of a 30 percent (or three square mile) increase of the country's original land area has been set for 2030. Much of this city's Central Business District, and its showpiece Gardens by the Bay, occupy what were the straits separating Singapore and Indonesia at the time of independence from Britain. Singapore's sand works, geographical in scale, have exceeded even the figural archipelagos of Dubai's trophy housing boom.

The island's expansion has been a colossal undertaking. It is not merely a matter of coastal reclamation: Singapore is growing vertically as well as horizontally. This means that the nation's market needs fine river sand – used for beaches and concrete – as well as coarse sea sand to create new ground.

And the ground must be solid, as the lion's share of Singapore's architecture is high-rise. Foreign sand and aggregate, along with foreign labor, are essential in replicating the island's ground in the sky. Both supply a burgeoning condo market and the ongoing rollout of a public housing program that serves more than 80 percent of the population. For Singapore's government, sand security is a safeguard of the state's right to development. It is a precondition of fiscal and political survival. Sand, like money, must remain liquid for the economy to keep moving. The vulnerability of the island, its entropic tendency toward general decline, has long been imagined as a byproduct of its physical limits. The ruling People's Action Party, which lays claim to the success of the housing initiative, has asserted time and again that the endurance of the nation depends upon a continual expansion of its market and its population. Both require Lebensraum. For this reason, sand and aggregate are stored in vast stockpiles in the areas of Seletar and Tampines, and are sold to contractors when regional disputes threaten the availability of the material. Paradoxically, the management of coastal risk comes to greatly affect the territory's interior. The large tracts of land dedicated to storing sand and gravel aggregate become securitized sites – their dedicated to storing sand and gravel aggregate become securitized sites – their area is taken 'off the map.' The interior is leveraged such that the coast may grow.

The need for sand, then, is a kind of original debt: for the territorial state to survive, land must continually be introduced. Milton notes that .6 miles of new ground requires 37.5 million cubic meters of fill – around 1.4 million dump trucks' worth. This translates into a de facto transfer of territory from other countries. Despite the accepted terminology, earth cannot be 'reclaimed' from the ocean by the magic of sovereign right; it needs to be brought from somewhere.

Unsurprisingly, this process of expansion has become a regional sore point – whetting old tensions between the island republic and its neighbors. The geopolitical narrative is that Singapore, in an undiscriminating fever of consumption, has begun to absorb surrounding territory.

In a climate of heated diplomatic exchanges, fewer options for legal imports remain. Malaysia ceased shipments of sand to Singapore as early as 1997; Indonesia instituted a similar ban after claims that several of its Riau Islands had vanished, only to reappear as part of the Singapore coastline; and Vietnam suspended dredging in 2009. In turn, Myanmar and the Philippines have become principal sources. Cambodia also announced a freeze on river sand in 2009, but so much continued to disappear that locals joked of traveling to Singapore to plant the Cambodian flag.

Recently, nationalistic outrage has been joined by environmental concern, most pointedly the loss of fragile coastal habitat and sea-grass colonies. Many accusations allege ongoing smuggling from embargoed nations, as well as dredging at both seaside and river locations. Singapore, in keeping with its policy of transparency, has replied that it pursues its imports through lawful channels.

The island nation is hardly alone in its addiction. Sand has been called the 'most wanted raw material on the planet.'[3] Not only is it essential for construction, it is a key ingredient in the microprocessors and memory chips used in nearly all computer technology. Its legal trade is estimated at $70 billion per year. Environmental consultant Kiran Pereira figures the global annual sand consumption to be in excess of 15 billion tons.[4]

Even Dubai imports sand for construction, as do most other regions that build chiefly in concrete. Many of the nations that export sand to Singapore also require immense quantities for their own domestic projects. Diplomacy is thus burdened with negotiating the flow of sand, and territory, at multiple sites and scales.

To make matters more turbid, the nightmare of coastal reclamation occupies an imaginary and regulatory space created by several misunderstandings about territory itself. These become urgent against both the backdrop of our 'oceanic' moment and the apparent dissolution of that idyll of 19th – and 20th – century geopolitical thought, the grounded state.

First among these misconceptions is that territory is a finite and intransigent thing. A longstanding myth of the state, propagated by realist and idealist schools of international relations alike, is the solidity of physical boundaries. In these traditions, the geo-body of the developed nation is thought to be, in the words of geographers John Agnew and Stuart Corbridge, a 'set or fixed units of sovereign space.'[5] Its peoples and economies were thought to be discrete and independent, its form and extents unchanging. Stranger still, cultures and countries were considered naturally isomorphic. At its conceptual extreme, this involved the conflation,

on maps and in cartoons, of the shape of the nation with cultural icons or founding fathers. In Thailand, it was the person of the king, fending off rapacious foreigners.[6] In Italy, it was Garibaldi with a sword. This ignored an untidy fact: that the form of the state has been highly fluid, its edges in particular. Since its invention, the borders of the global map have been continually redrawn. This is clearest, perhaps, in postcolonial contexts such as Singapore, where the reapportioning of territory, and the development of the coastline, had much to do with the play of regional geopolitical strategies.[7]

Sand in Singapore is sourced from throughout the region, despite export moratoriums. The difficulty of sand likewise relies on a second error of territorial thought: the reified belief in the state as a unitary actor with sole control over its own space.[8] That is, the state is mistaken for an object, rather than a web of processes. Part of the failure of diplomacy, here, is precisely that it occurs at the 'official' level. In reality, the problem ramifies through the myriad actions of substate and supranational actors: dredgers, contractors, developers, ecological activists, overseas investors and property speculators, and politicians at every scale.

Accounts of sand trading, by journalists and advocates alike, articulate terrors arising from the apparent dissolution of national integrity. Milton, for one, relates claims of seedy exchanges between foreign and local elements throughout Southeast Asia. Likewise, a damning 2010 report by environmental watchdog Global Witness describes clandestine dredging of rivers and coastlines, and flotillas of tiny barges carrying stolen ground to undisclosed locations.[9] Erosion, as the undermining of both natural and human ecologies, plays a key symbolic role – it is the geophysical analogue of the 'haze,' an annual pollution crisis forced on Singapore and Malaysia by Indonesian slash – and – burn farming. As sociologist Ulrich Beck noted many years ago, these are influences that 'add up to an unknown residual risk [...] for everyone everywhere.'[10] In the immediate wake of Chernobyl, Beck was quick to point out that the mobility of vectors such as wind-born radiation and pollution – not to mention the contagion of financial disasters – dramatically undermines the notion of an impervious sovereignty. National borders cannot repel such invasions, particularly when the very materiality of those borders is itself in flux.

The complexity of this issue is exemplified by Johor's Forest City project, the latest episode in the Asian 'sand wars.' Clearly, this is a situation in which conditions at a national boundary are changing – much to Singapore's chagrin. But the controversy also shows how inchoate such works are with respect to the position of the state itself. The venture involves myriad actors, most of them above or below the level of formal governance. The investor, Country Garden Holdings, is a company majority – owned

by China's richest woman, Yang Huiyan. Country Garden's minority partner is none other than the Sultan of Johor, a regional hereditary ruler. The contractors and sand suppliers are a constellation of private companies. The presumed buyers are global expatriates expected to migrate to Malaysia's new Iskandar special economic zone, which is currently being built around the existing city of Johor Bahru. In particular, Forest City is positioned to cater to those priced out of Singapore's condominium market, where high-rise prices rarely fall below 1,000 Singapore dollars per square foot. It is not quite clear who is realizing this new territory; it is almost certainly not 'Malaysia' itself.

The challenge of sand is shifting and particular to each site. It articulates a nightmare both old and new: a radically liberated state, free of stabilizing ideologies such as soil and ground. Sand is an unstable and promiscuous alternative, quickly drained of historical and geographical traces. Perhaps it is telling that in Hebrew 'sand' and 'secular' are homonyms. It holds allegiances to no nation, no religion. Its form is transience. The fear goes: there is no more land; there is only sand.

[1] See Chris Milton, 'The Sand Smugglers,' Foreign Affairs, August 4, 2010, http://www.foreignpolicy.com/articles/2010/08/04/the_sand_smugglers.

[2] In fact, Geoff Manaugh of BLDGBLOG and Alexander Trevi of Pruned have suggested a 'forensic geology' to trace sand back to its origin. See http://bldgblog.blogspot.sg/2011/09/caverns–of–singapore.html.

[3] Peter Dupont, 'Sand Wars,' trans. Rafael Njotea, working grant proposal for the Pascal Decroos Fund, 2013/995, http://www.fondspascaldecroos.org/en/inhoud/werkbeurs/sand–wars.

[4] See ibid.

[5] John Agnew and Stuart Corbridge, Mastering Space: Hegemony, Territory, and International Political Economy (London: Routledge, 1995), 83.

[6] This was associated with numerous individual kings, but most famously with Mongkut. Likewise, the propaganda method of maps as human figures had a negative version. Like the famous Nazi 'octopus' of American newsreels, Thai political cartoons often pictured Vietnam as an imperialist aggressor with a voracious, open mouth. This is shown in Thongchai Winichakul, Siam Mapped: A History of the Geo–Body of a Nation (Honolulu: University of Hawaii Press, 1994), 113.

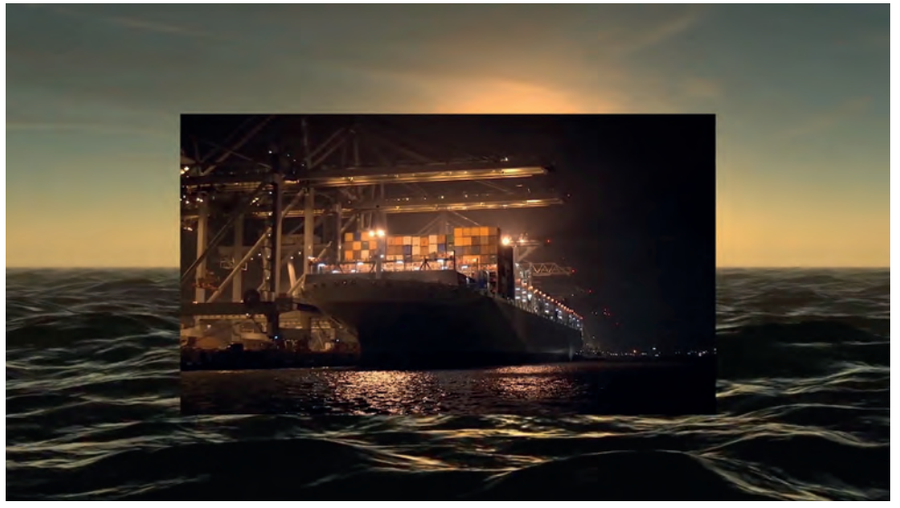
[7] This had to do with the imperial tactics of large regions in the classically geopolitical tradition, for example in the influence of thinkers such as Alfred Mahan –especially where water power was understood to be the key to military superiority. It also had lasting influence on British planning schools that emphasized the development of the coast, such as Otto Königsberger. See Vandana Baweja, 'A Pre–History of Green Architecture: Otto Königsberger and Tropical Architecture, from Princely Mysore to Post–Colonial London' (PhD diss., University of Michigan, 2008), http://deepblue.lib.umich.edu/bitstream/handle/2027.42/60709/vbaweja_1.pdf?sequence=1.

[8] See Agnew and Corbridge, Mastering Space, 81–82.

[9] See Global Witness, 'Shifting Sand: How Singapore's Demand for Cambodian Sand Threatens Ecosystems and Undermines Good Governance' (May 2010), http://www.globalwitness.org/library/shifting–sand–how–singapore%E2%80%99s–demand–cambodian–sand–threatens–ecosystems–and–undermines–good.

[10] A much–debated argument, presented in Ulrich Beck, Risk Society: Towards a New Modernity, trans. Mark Ritter (London: Sage Publications, 1992), 29.

Cybergonomics



If looked at in a certain way, etymologies can be insightful on the origin of words, and of the way they have changed throughout history. Ergos... is the greek word for... work. Nomos... Is the greek word for... order... or... Lahw. Simultaneously, both evolved into a single word... that... of... Ergonomics. Cyber... comes from cybernetics which itself originates from the verb... to steer... or... the noun... steersman... kubernan... kuhber... naan... kubernētēs... kuhber... nehtays organism... is a word that has developed from the early 18th century originally as... organised... the instrument... the tool... the organ... an assemblage of tools that create a whole... an organism. Cyborg... is then derived from the word... organism... and... cyber... which together form a new meaning... that... of uneasily identifiable nature... nevertheless, it seems to me that the combination of words has been an apparatus that has been used for thousand of years... words descend of trends... and these trends shape our world when it is at the end tip of history... therefore, if we combined the word... cyber... with the word ergonomics... it would sound something like... cybergonomics... or cyber-ergonomics... or orgonomics... orgo... cyber... cyberism... nomo... work... order... lahw... steer... steersman... eco... age of eco... organ... tool... instrument... that creates a better organism... a better law of the organism... a better organism of the law... a better law of the work...

a better work of the law... a better... a better... a better...
a better... there is no such thing as new words but there
are new words... i mean new trends... that shape the
words... new words... that shape the trends... if assembled...
like blocs... like blocs... like containers... containers of
meaning... a steersman of law... a law for the steersman...
another bloc is added... yet another one is forgotten...
nomos... nomos... nomos...

ergos...
work...
nomos...
eco...
lahw...
cyber...
cyborg...

All three jump over their shadow.

The shadow of capital is value. The shadow of power is representation. The shadow of the system is reality. They respectively move beyond Value, Representation and Reality—in a hyperspace that is no longer economic, political or real but rather the hegemonic sphere.

Capital is both the total realization of Value and its liquidation. Power is now the final form of representation: it only represents itself. The system is the total version of the Real and at the same time its liquidation through the Virtual. This is the hegemonic form.

The Economic Illusion

In any event, the question of "capital" must be reconfigured. Does something like capital still exist, and, if there is a crisis, what is the essence of this crisis? We must try to pass "through the looking glass," beyond the mirror of production.

Does exploitation still exist? Can we still talk about alienation? Have we become the hostages (not the slaves, but the hostages) of a global market under the definitive sign of globalization? But can we still talk of a "market"? And hasn't capitalism reached the point of destroying the conditions of its own existence?

One of the problems of generalized exchange is that the market is both its ideal and its strategic location. It may be the fatal destiny of capital to go to the limit of exchange—to the total consumption of reality. In its historical (and Marxist) definition, capitalism presided over the multiplication of exchanges in the name of value. The market obeys the law of value and equivalency. The limit here is the limit of classic capitalism. And the crises of capital can always be resolved by regulating value.

This is no longer true for the financial flows and international speculation that far surpass the laws of the market. Can we still speak of capital? Do we keep the term and the concept and therefore acknowledge the exponential strategy that pushes capital beyond its own limits, into a whirlwind of exchanges where capital loses its very essence which is the essence of the market—and self-destructs in an unbridled circulation that brings the very concept of exchange to an end? Or do we consider that it is no longer capital at all but something radically different, an exchange that is not only general but total—completely freed from value and markets—an exchange that, having lost its rational principle, the principle of value, becomes integral just as reality, having lost its reality principle, becomes integral reality, from which there is no salvation?

In this light, capital in its historical form appears to be a lesser evil. In relation to a virtual universe, reality appears to be a lesser evil. In view of hegemony, domination itself appears to be a lesser evil. Take the example of the Web, the Internet, networks, blogs, etc. It is all free, "liberally" deployed without economic constraints, beyond markets, in a frenzy of total communication. This is a virtual catastrophe, the catastrophe of total exchange that is not even protected by money or the market. We find ourselves wanting it all to be subject to the law of value, taken in hand by capitalist power, to slow its exponential development, to escape the ecstasy of (free, secular and obligatory) communication—because it is leading to the dictatorship of forced exchange—but no one will escape.

The next stage, which can be seen in these mysteriously free networks, is much worse than anything that was stigmatized as the mercantilization of exchange, where everything is assigned a price and a market. This influence (which is not strictly speaking the influence of a person, a "capitalist" power or any political power) is the ascendancy of total, integral free exchange, universal wiring, universal connection. Capital, markets, surplus value, merchandise and prices seem like a lesser evil or protection against something worse. This is the virtual dimension of hegemony—

it is different from the domination of capital and different from the dimension of power in its strictly political definition.

The Democratic Illusion

One might wonder, however, if hegemony is a direct continuation or perpetuation of domination. Is it the same form deployed to its ultimate consequences? Or is there a moment where there is a shift to a noncritical form—beyond internal crises but not exempt from internal catastrophe or self-dissolution through saturation (like any system at the limit of its possibilities). A world of total, instantaneous, perpetual communication is unthinkable and, in any case, intolerable.

Hegemony corresponds to a phase of the saturation of power (political, financial, military and even cultural power) pushed by its own logic but unable to accomplish its possibilities fully—a dire fate indeed (the story of the umbrella—maybe the dire fate of realizing possibilities fully is the fate of humankind?). Yet any action that tries to slow capital or power, that tries to keep them from accomplishing all of their possibilities is their last hope, their last chance to survive "just short of their end." And if we let them, they will rush headlong to their end (taking us with them).

the dream of revolution would have disappeared long ago). Intelligence cannot, can never be in power because intelligence consists of this double refusal. "If I could think that there were a few people without any power in the world, then I would know that all is not lost" (Elias Canetti).

The Metaphysical Illusion

The reabsorption of critical negativity is echoed by an even more radical form of denial: the denial of reality.

In simulation, you move beyond true and false through parody, masquerade, derision to form an immense enterprise of deterrence. Deterrence from every historical reference, from all reality in the passage into signs. This strategy of destabilization, of discrediting, of divestment from reality in the form of parody, mockery, or masquerade becomes the very principle of government, is also a depreciation of all value.

The question is no longer of a power or a "political" power connected to a history, to forms of representation, to contradictions and a critical alternative. Representation has lost its principle and the democratic illusion is complete—not as much by the violation of rights as by the simulation

of values, general uncertainty and the derealization of all reality. Everyone is caught in the signs of power that occupy the entire space—and that are shared by everyone communally (take for example the resigned, embarrassed complicity in the rigged workings of the political sphere and polls).

From there, the system works exponentially:

—not starting from value, but from the liquidation of value.
—not through representation, but through the liquidation of representation.
—not from reality but from the liquidation of reality.

Everything in the name of which domination was exercised is terminated, sacrificed, which should logically lead to the end of domination. This is indeed the case, but for the sake of hegemony.

The system doesn't care a fig for laws; it unleashes deregulation in every domain.

—Deregulation of value in speculation.
—Deregulation of representation in the various forms of manipulation and parallel networks.
—Deregulation of reality through information, the media and virtual reality.

From that point on: total immunity—one can no longer counter the system in the name of one's own principles since the system has abolished them. The end of all critical negativity. Closure of every account and all history. The reign of hegemony. On the contrary, since it is no longer regulated by representation, or its own concept, or the image of itself, the system succumbs to the final temptation: it becomes hypersensitive to its final conditions and casts itself beyond its own end according to the inflexible decrease of the rates of reality.

The most serious of all forms of self-denial—not only economically or politically but metaphysically—is the denial of reality. This immense enterprise of deterrence from every historical reference, this strategy of discrediting, of divesting from reality in the form of parody, mockery, or masquerade, becomes the very principle of government. The new strategy—and it truly is a mutation—is the self-immolation of value, of every system of value, of self-denial, indifferentiation, rejection and nullity as the triumphant command.

Moreover, the concept of the universal is the specific product, within the human race, of a certain civilization called Western, and within that culture, of a privileged minority, a modern

intelligentsia that has dedicated itself to the philosophical and technical edification of humanity. But what can this concept mean, not only outside the human race (it is irrelevant for the animal, plant or cosmic realms, the inhuman in general) but also in the major cultures other than our own (archaic, traditional or Eastern or Far-Eastern that do not even have a term for it) or even in our own societies outside the civilized and cultivated classes where humanism and universal principles have become hereditary. What does the universal mean in the eyes of immigrants, populations left fallow, entire zones of fracture and exclusion in our own "overdeveloped" societies? And even in the privileged fringe, the high-tech globality, what does the universal mean for all the "corporate people," all the high performance groups or individuals according to both a global and an increasingly corporate, isolationist, protectionist evolution?

Contrary to what Immanuel Kant said, the starry sky laughs at this universal law, but so does the heart of humankind: not only living beings but the vast majority of humans never obeyed it. And those who claim to obey it happily put their singular passions before any other ideal finality—this is no doubt, despite the concept, a more authentic way to be "human." Do they themselves believe in this ideal finality? No one

knows; the only sure thing is that they claim to make others obey.

The discourse of the universal describes a tautological spiral: it is held by the species that considers itself superior to all others and within this species, by a minority that considers itself the holder of moral and universal ends, forming a veritable, "democratic" feudality.

Whatever the case may be, there is a major inconsistency in continuing to use a discourse of the universal as a discourse of reference when it has no meaning or effect anywhere—neither with global power nor in opposition to it.

To relativize our concept of the universal: with the increasing globalization of the world, discrimination becomes more ferocious.

The cartography should not confuse these zones beyond reality with those that still give signs of reality in the same hegemonic system of globalization, even though they do not function in the same way. We could even say that the gap separating them is growing and something that was only a cultural singularity in a non-unified world becomes real discrimination in a globalized universe. The more the world is globalized, the worst the discrimination.

The two universes, the hyperreal and the infrareal, seem to interpenetrate but are light years away from each other. The deepest misery and

enclaves of luxury coexist in the same geographic space (take, for example the oil condominiums in Saudi Arabia and the favelas of Rio, but these are extreme cases). In fact, the entire planet is organized on the principle of definitive discrimination between two universes—which no longer have any knowledge of each other. Global power keeps its integral control over the other world, and has all the means necessary for its extermination. It is the tear in the universal. As for the consequences of this tear, the upheaval it can create, we have no idea—except for what is already present today (although it is only the beginning): the only response to this increasingly violent discrimination is an equally violent form, terrorism. An extreme reaction to this situation of impossible exchange.

Which leads us to Europe. In its current form, Europe is a nonevent. It was first an idea (maybe starting in the Middle Ages, a reality before an idea?). Now it is no longer an idea or a reality but a virtual reality referring to a model of simulation to which it must adapt. From the perspective of projection at any price, the will of the people is an obstacle or at least an indifferent parameter or an alibi. The "yes" vote comes from on high, and we can now see that the people are Europe's skeleton in the closet.

This virtual Europe is a caricature of global power. It wants to find its niche in the world order, to represent an economic power that rivals the ridiculous image of its American Big Brother. Europe is organized according to the same liberal principles, and other than a few last gasps of sentimental socialism, is aligned with the model of flux and global deregulation. It is incapable of inventing a new rule for the game (which is also the struggle of the Left on the national level).

Without its own political structure or historical reason, Europe can only desire expansion and proliferation into the void through indefinite "democratic" annexation, just like global power. Of course, all of the peripheral countries want to join this by-product of globalization, just as Europeans dream of reaching the global level.

Europeans have the same relationship to American global power as other countries (like Turkey, for example) have to Europe. Turkey's entry into Europe, outside any political considerations, may be revealing in terms of this paradox: Europeans "from birth" are not really modern either; they have not truly entered hyper-modernity. They are in fact resisting it, and in every country there is something that resists generalized exchange, the vertigo of universal exchange.

Is it good or bad? Does Europe have to be

resolutely modern? Should it resist the grasp of hegemony, while being its best accomplices?

Turkey wanting to enter Europe is not the least of the paradoxes at a time when France is giving signs of wanting to leave. The sudden rise of the "No" vote during the referendum was significant in this regard. It is the best example of a vital or visceral reaction in defense against the consensual blackmail of the "Yes," against the referendum's ultimatum in disguise. There is no need to have a political conscience to have this reflex: it is the automatic rekindling of negativity in the face of excessive positivity, to the coalition of "divine" Europe, the Europe of good conscience, the one on the right side of universality—with all others cast into the shadows of history.

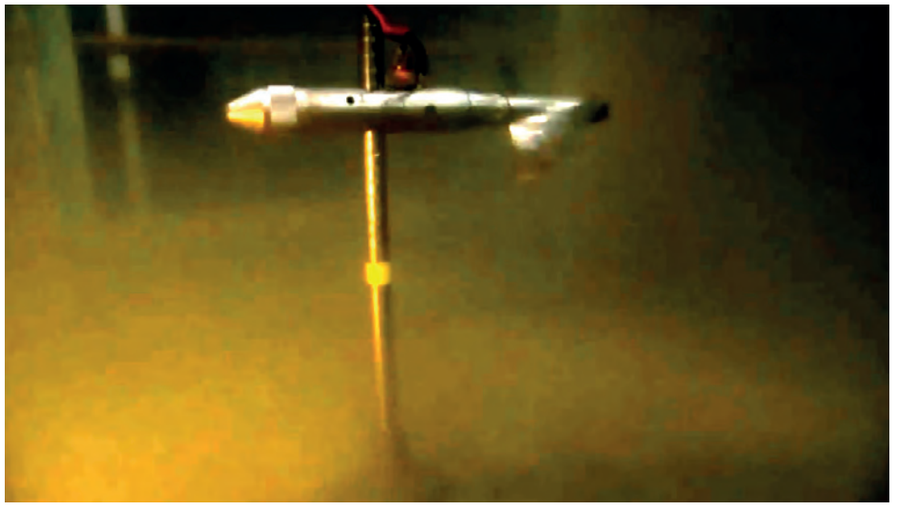
The forces of Good were completely wrong about the perverse effects of an excess of Good and the unconscious lucidity that tells us to "never side with those who are already right." A good example of a response to hegemony that is not the work of the negative or the result of critical thought (the political reasons of the "No" are no better than those of the "Yes"). It is a response in the form of a pure and simple challenge to the saturation of the system, the implementation (once again, beyond political considerations) of a principle of reversion, of reversibility against the hegemonic principle. A good example of the "parallax of Evil."

We have here the profile of the new type of confrontation characterizing the era of Hegemony. It is not a class struggle or a fight for liberation on the global level (since the "liberation" of exchange and democracy, which were the counterpoint to domination, are the strategies of hegemony. Take, for example, England's presence in Zanzibar: by freeing the slaves in the late nineteenth century, England was able to take control of East Africa). It is an irreducibility, an irreducible antagonism to the global principle of generalized exchange.

In other words, a confrontation that is no longer precisely political but metaphysical and symbolic in the strong sense. It is a confrontation, a divide that exists not only at the heart of the dominant power, but at the heart of our individual existence.

—April 2005

Climate Change



The ocean, accommodated the expansion of the logistical system, a vast basin of imagined spaces, that holds multiple heterotopias. It seems very unlikely that they will be able to subdue its wrath by romantic gestures of sustainability, or by methodologies of architectural protection. The waves are coming to engulf the same foundation it had created.

The Netherlands is an exemplary model for future spatial prototypes, that attempt to deal with adaptation to flood control, as a result of the unpredictability of rising sea levels. These prototypes are vital for the building of logistical spaces, such as trading ports, port cities and new logistical islands, that need the potential to survive longer periods of time.

As unpredictability accelerates and obscures the ability to foresee the future, it is becoming more unrealistic to build structures that can withstand the rapid change.

Instead we see temporary structures with shorter life spans. These architectures are representative of the deep psychosis of the logistical system in its attempt at dealing with its own destruction. In its masculine form, it builds and destroys in a paranoid state, and then builds bigger, in an attempt to feel secure.

What will these objects look like in the future?
Large influx of algorithms from feedback systems are derived from climatic variables, such as temperature, humidity, atmospheric pressure, etc. over time, produce large data accumulation. A complex system, that feeds

statistics but also large amounts of undefined data that do not respond to one another.

Halts are strengthening points for the system, they puncture these regularly in an attempt to form new relationships. They swarm across the surface of the earth and beyond, effortlessly, dissolving borders, forming new territories, halting and paving paths in order to maximise profits.

Climate change, on the other hand, is a different obstruction. The system mobilises architecture to halt any devastating effects from rising sea levels.

Therefore it works in reverse, it halts, in effect, to protect itself.

In 2017 we saw an attempt by the system to profit on the risk of its own collapse. The Netherlands held a roundtable, enticing private corporations to invest in future risk management projects that try to solve or overcome rising sea levels. Through this we understand a logic of survival.

These future projects can only halt sea levels rising in the short term, whilst capitalising on their risk. These multiple futures will not eliminate the strident forces of the sea.

We are building habitats for other forms of life. Climate change and logistical spaces, after all, form a symbiotic relationship.


Each barrier swings out into the river and locks into place.

Ports are facing a high pressure in relation to the environmental impact of port operations and port development. Climate change and rising sea level is in particular impacting the port of Rotterdam.

'For us, climate change is beyond ideology,' said Rotterdam's mayor in 2008. He continues: 'If the water comes in, from the rivers or the sea, we can evacuate maybe 15 out of 100 people. So evacuation isn't an option. We can escape only into high buildings. We have no choice. We must learn to live with water.' Rotterdam lies in the most vulnerable part of the Netherlands, both economically and geographically.

Flood risk management is becoming increasingly important. A possible flood poses not only a risk to the people and the environment in and around the port. It is also seen as dominant risk to the economy of the port.

In January 2018 the Chinese Government has implemented a ban on the import of low-quality plastic scrap. The ban has exposed that many western governments do not have a recycling policy for plastics. It's only greenwashing. Much of the plastic waste is simply reclassified and shipped to countries where it is used as raw material, with devastating environmental and social costs. Insofar, China has been the main market for plastic waste. After the ban, some are hoping that there is an opportunity to create a green economy, but many others are simply looking for new overseas markets, Vietnam, Malaysia, Indonesia, Philippines, India, Nigeria. In these countries, the plastic waste will be transformed into new products for the global market. And a lot of the plastic will flow into the sea, back to us, in the next episode of Blue Planet.

The Orchid Mantis of Sanzhi
Benjamin H. Bratton

Many of you are familiar I should think with the Sanzhi Pod City near New Taipei City in Taiwan. This future city was late for its own birth, which was in 1978. Originally planned as a vacation resort for US soldiers, the project was doomed by a series of mysterious car accidents, and abandoned in 1980. The future lasted only two years.

However, when demolition work began in 2008 it was discovered that not one but five species of Orchid Mantis, as yet unknown to science, had overtaken the ruins, and multiplied to a population of an estimated ten million insect inhabitants, above ground, underground, inside the structures, in between them. No one knows how or why.

Etymologists observe that the unintended orchid mantis civilization has developed an incredibly complex division of labor, not only within the same species but between different species as well. These include systems for food capture, nest construction, and stigmergic communication between individuals and groups that have never been observed anywhere else before.

The appearance of the mantis coincided with the proliferation of new subspecies of orchid flowers, which the insects resemble and from which they get their name. Orchids don't usually grow in this part of Taiwan, but today they thrive in the unusual labyrinthine cold and darkness provided by the mantis' own architecture. The Future City is not for us. The Anthropocene, the reframing of the Earth in the image of industrial modernity, will be short-lived, a geopolitical instant more than a slow geological era. Humans are vanishing even as their aggregate biomass continues to swell. Their cities are not their own. They are building habitats for other forms of life. Humans are the tools wielded by those other forms. We are the robots for future insects.

The extraordinary architecture of Sanzhi – that is, the systems built by the orchid mantis on top of and in between the UFO pods – has become in a short thirty years a precious future-archaeological resource. It is not a failed future, but a successful one. It is our future. We are already its present, we who are displaced by the orchid mantis.

The Netherlands, always
vulnerable to floods,
has a new approach to
water management.
Adam Wernick

'Much of the Netherlands is below sea level and major floods have occurred every generation or so for hundreds of years. In a warming world with increased rainfall and sea level rise, the threat from floods is increasing worldwide, and the Dutch are leading the way in water management engineering.'

Only 50 percent of the Netherlands is more than a few feet above sea level, so over the centuries the Dutch have become expert at water management. But even they were caught short by crippling floods in the 1990s and they quickly implemented vast flood prevention projects. As the country adapts to the reality of a warming planet, they are passing on their knowledge and expertise to other vulnerable nations.

'At the moment, we are in a transition. We had a strong belief that we could predict and control nature, and we're moving now into a period where we acknowledge that we cannot control nature,' says Chris Zevenbergen, a professor of flood resilience of urban systems at the IHE Delft Institute for Water Education in the Netherlands. 'We have to deal with uncertainties in terms of climate change and socioeconomic development.'

Ten years ago, the Netherlands developed the concept of 'room for the rivers,' which Zevenbergen calls a 'paradigm shift.' 'The room for the rivers concept is a turning point in our approach,' he explains. 'The old paradigm is confining rivers and building and strengthening the dikes along the rivers, but we decided to explore a new approach, in which we give more space to the water. We allow the river to expand when large volumes of water are entering our country. It's not fighting against water; it is living with water.'

Large parts of the Netherlands consist of what are called polders – low-lying areas of land that have been reclaimed from the sea and are protected by dikes. These polders contain some of the country's biggest cities. The country is considering ways to dampen the development process in those low-lying areas and develop better early warning systems so the public and local officials are fully prepared in the event of a real flood.

'We call it protection, prevention and preparedness,' Zevenbergen says.

Cities now use parks and public spaces as emergency reservoirs for floodwaters created by severe rainfall. For storm surges from the ocean, they are changing their approach from a purely defensive system to one that prepares for the failure of these systems – what Zevenbergen calls 'multilevel protection.'

'The first level is our flood protection systems, the primary dike systems. The second level is, for instance, spatial planning,' he explains.

The Netherlands have built their flood protection systems to the point that the chance of failure in any given year is one in 10,000, which Zevenbergen says is the most stringent system on the planet. Although this probability may sound low, 'the consequences are huge,' he points out. 'Two-thirds of our economy is in those low-lying areas.'

As always, funding massive projects presents challenges, even when the stakes are so high. Recently, the Organization for Economic Cooperation and Development (OECD) held a conference which directly addressed how to engage the finance sector and the water sector.

The World Bank estimates that investing a dollar in flood protection saves $7 to $10 in flood damage, but, 'for some reason,' Zevenbergen says, 'there is an investment gap. ... The money cannot find the projects, and the projects cannot find the money.'

As Zevenbergen travels the world, consulting with cities about how to address threats from flooding, he sees two major challenges. First, how to protect existing highly-populated cities. For example, in China, while newly built-up areas all face flooding problems, they can expand in 'water-sensitive ways,' whereas transforming flood resilience in established urban areas could take at least a generation.

The second challenge lies in the small and medium-sized cities of Africa and Asia. 'Those cities are rapidly growing, but don't have the capacity to [develop] in a sustainable way that takes into account the threats from the rivers, storm surges and rainfall.'

Zevenbergen's best advice for cities facing the threat of flood from rain or storm surge is this: 'Don't wait until the next flood disaster is coming to have a really serious look at your current situation and protection system.'

'In the Netherlands, we are not responding to flood disaster, we are anticipating a flood disaster,' Zevenbergen says. 'That means we have time to see what is the best strategy for our country. That is a process where we are involving all the different stakeholders. It's a very time-consuming process, but I think we are there now. We are about to implement our new strategy, but it took 10 years to accomplish that.'

Adaptation to Climate Change: A Framework for Analysis with Examples from the Netherlands

Vv.Aa.

'Climate change will have a considerable effect on the level of services provided by housing and infrastructure. In the coming decades interventions will be necessary to maintain these services at an adequate level. Such interventions can be incremental or radical, depending on the physical and societal context. This paper presents a framework for analysis of adaptation policies. The use of this framework is illustrated for sea level rise and the level of services provided by flood protection works in the Netherlands.....'

'50–100 years rapidly urbanising populations will be severely threatened with a complex array of changes (population growth, resource depletion, increasing waste streams) at different time and spatial scales.'

'...infrastructures for flood protection and water management are designed and built to provide protection for a range of climatic conditions. If they are exposed to forces beyond the range, flooding occurs.'

'As climate change is expected to alter the frequency of the occurrence of these events, the assumption that the historical records could be used for long-term planning purposes will no longer be valid.'

'All climate models predict changes in mean temperatures and rainfall, storminess and changes in the occurrence of extreme weather conditions.'

'Accurate prediction of the future climate is constrained, however, by the complex nature of climatic variables and by the existence of many feedbacks in the climate system.'

'Moreover, these complex changes will unfold unevenly across different spatial and time scales.'

'The ability to predict climate change at a scale or to a precision relevant for built environment and infrastructure is limited, given the long life span of 50–100 years and beyond of the structures and regional or local scale or interest.'

'As a rule, the longer and more localised the predictions required, the greater the degree of uncertainty.'

'Implementation at a later stage will be much more costly.'

Sea Level: Over the period 1901–2010, global mean sea level rose by 0.19 [0.17 to 0.21] m. The rate of sea level rise since the mid–19th century has been larger than the mean rate during the previous two millennia (high confidence).

Since the early 1970s, glacier mass loss and ocean thermal expansion from warming together explain about 75% of the observed global mean sea level rise (high confidence). Over the period 1993–2010, global mean sea level rise is, with high confidence, consistent with the sum of the observed contributions from ocean thermal expansion, due to warming, from changes in glaciers, the Greenland ice sheet, the Antarctic ice sheet and land water storage.

Rates of sea level rise over broad regions can be several times larger or smaller than the global mean sea level rise for periods of several decades, due to fluctuations in ocean circulation. Since 1993, the regional rates for the Western Pacific are up to three times larger than the global mean, while those for much of the Eastern Pacific are near zero or negative.

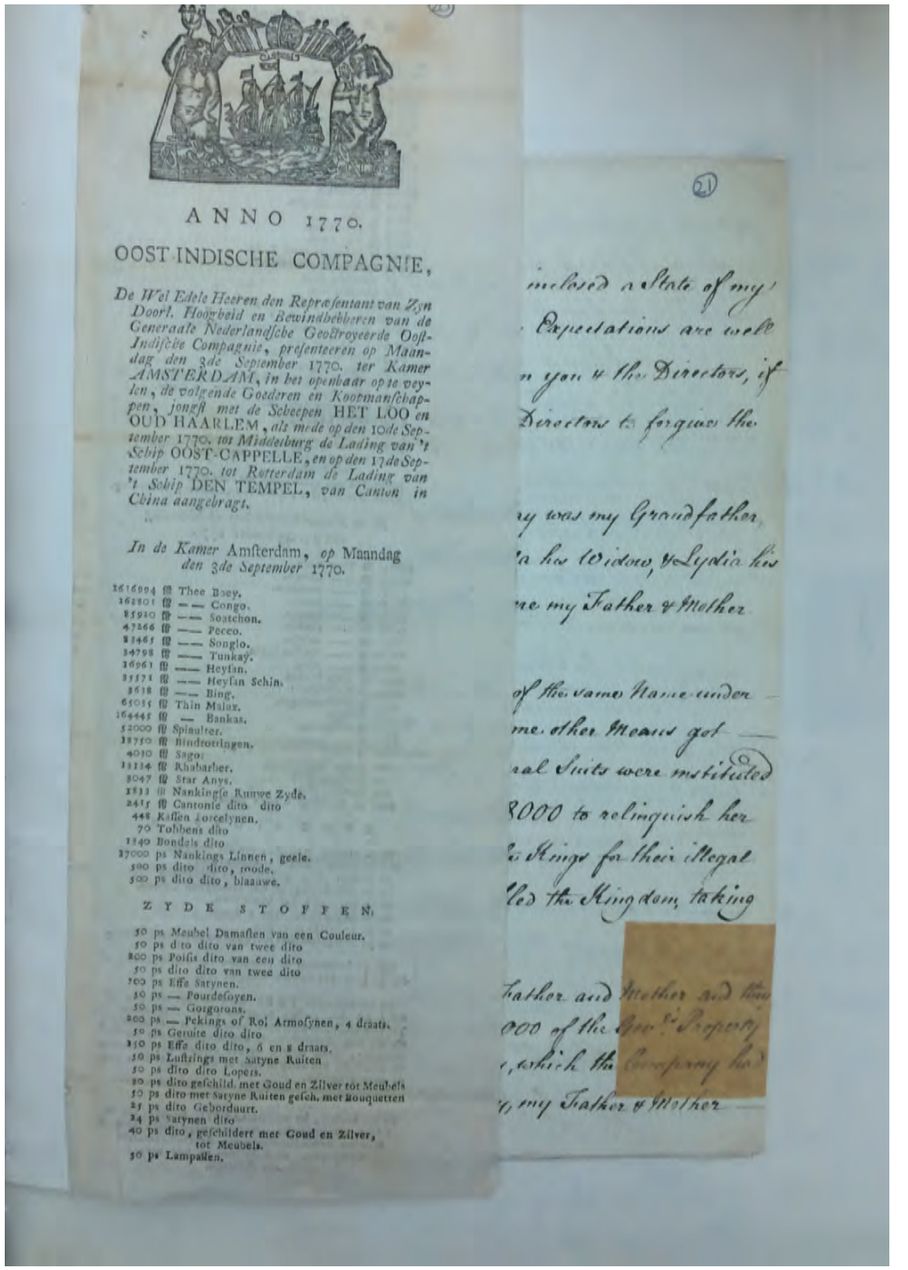
There is very high confidence that maximum global mean sea level during the last interglacial period (129,000 to 116,000 years ago) was, for several thousand years, at least 5 m higher than present and high confidence that it did not exceed 10 m above present. During the last interglacial period, the Greenland ice sheet very likely contributed between 1.4 and 4.3 m to the higher global mean sea level, implying with medium confidence an additional contribution from the Antarctic ice sheet. This change in sea level occurred in the context of different orbital forcing and with high-latitude surface temperature, averaged over several thousand years, at least 2°C warmer than present (high confidence).

Ocean, Cryosphere and Sea Level: Global mean sea level will continue to rise during the 21st century. There

has been significant improvement in understanding and projection of sea level change since the AR4. Under all RCP scenarios, the rate of sea level rise will very likely exceed the observed rate of 2.0 [1.7–2.3] mm/yr during 1971–2010, with the rate of rise for RCP8.5 during 2081–2100 of 8 to 16 mm/yr (medium confidence).

Sea level rise will not be uniform across regions. By the end of the 21st century, it is very likely that sea level will rise in more than about 95% of the ocean area. Sea level rise depends on the pathway of CO^2 emissions, not only on the cumulative total; reducing emissions earlier rather than later, for the same cumulative total, leads to a larger mitigation of sea level rise. About 70% of the coastlines worldwide are projected to experience sea level change within ±20% of the global mean. It is very likely that there will be a significant increase in the occurrence of future sea level extremes in some regions by 2100.

Radioactivity



ANNO 1770.

OOST-INDISCHE COMPAGNIE,

De Wel Edele Heeren den Repræsentant van Zyn Doorl. Hoogheid en Bewindhebberen van de Generaale Nederlandsche Geoctroyeerde Oost-Indische Compagnie, presenteeren op Maandag den 3de September 1770. ter Kamer AMSTERDAM, in het openbaar op te veylen, de volgende Goederen en Koopmanschappen, jongst met de Scheepen HET LOO *en* OUD HAARLEM, *als mede op den 10de September 1770. tot Middelburg de Lading van 't Schip* OOST-CAPPELLE, *en op den 17de September 1770. tot Rotterdam de Lading van 't Schip* DEN TEMPEL, *van Canton in China aangebragt.*

In de Kamer Amsterdam, *op* Maandag *den 3de September 1770.*

2616004 ℔ Thee Boey.
162801 ℔ —— Congo.
85910 ℔ —— Souchon.
47366 ℔ —— Pecco.
81465 ℔ —— Songlo.
34798 ℔ —— Tunkay.
16961 ℔ —— Heyfan.
23571 ℔ —— Heyfan Schin.
3618 ℔ —— Bing.
65015 ℔ Thin Malax.
164445 ℔ —— Bankas.
52000 ℔ Spiauter.
18750 ℔ Bindrottingen.
4010 ℔ Sago.
13134 ℔ Rhabarber.
3047 ℔ Star Anys.
2833 ℔ Nankingſe Ruuwe Zyde.
2415 ℔ Cantonſe ditto ditto
448 Kiſſen Porcelynen.
70 Tobbens ditto
1340 Bordele ditto
37000 ps Nankings Linnen, geele.
500 ps ditto ditto, roode.
500 ps ditto ditto, blaauwe.

ZYDE STOFFEN.

50 ps Meubel Damaſten van een Couleur.
50 ps ditto ditto van twee ditto
800 ps Poiſs ditto van een ditto
50 ps ditto ditto van twee ditto
100 ps Effe Satynen.
50 ps — Poudeſoyen.
50 ps — Gorgorans.
800 ps — Pekings of Roi Armoſynen, 4 draats.
50 ps Geruite ditto ditto
250 ps Effe ditto ditto, 6 en 8 draats.
50 ps Luſtrings met Satyne Ruiten
50 ps ditto ditto Lopers.
50 ps ditto geſchild. met Goud en Zilver tot Meubels
50 ps ditto met Satyne Ruiten geſch. met Bouquetten
25 ps ditto Geborduurt.
24 ps Satynen ditto
40 ps ditto, geſchildert met Goud en Zilver, tot Meubels.
50 ps Lampaſſen.

(21)

inclosed a State of my
Expectations are wch
n you & the Directors, if
Directors to forgive the

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a his Widow, & Lydia his
re my Father & Mother

of the same Name under
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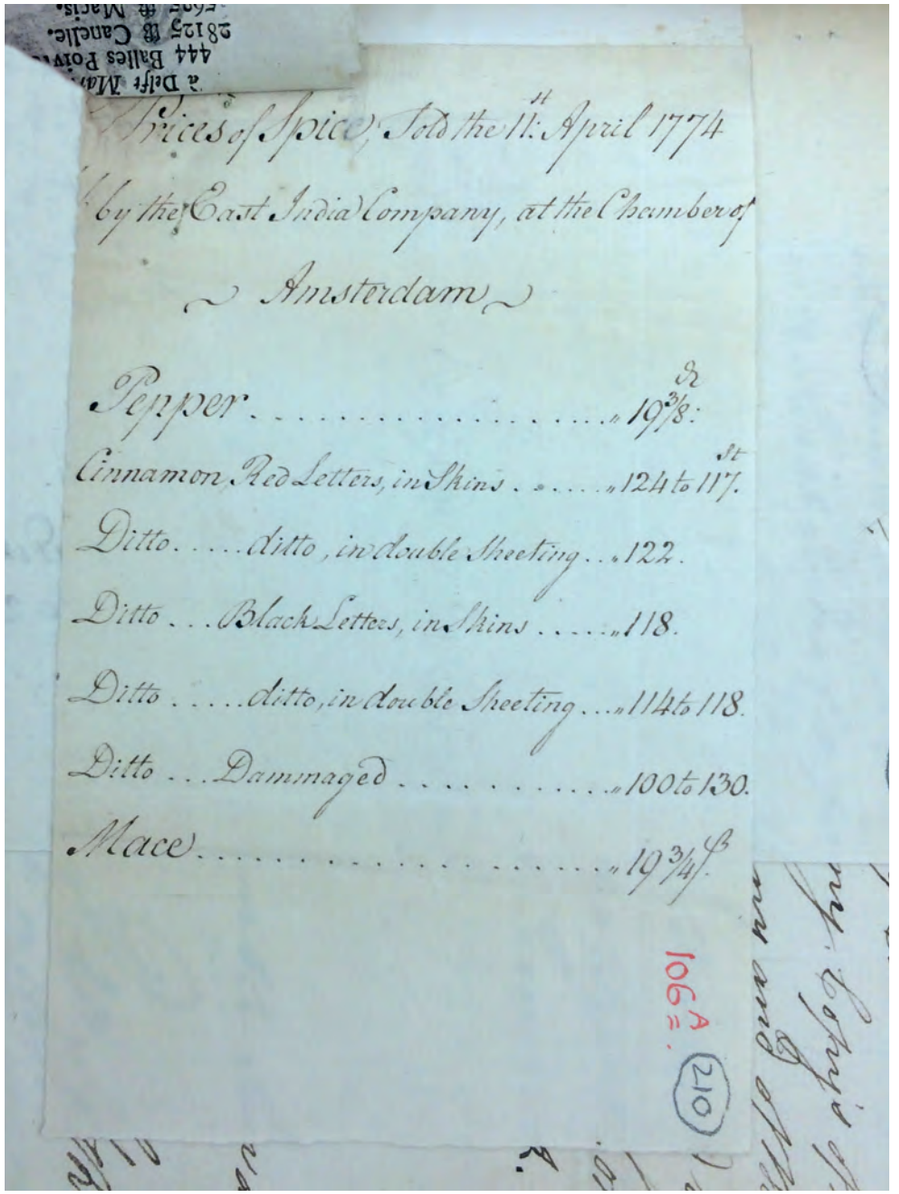
, my Father & Mother



Radioactive fossil: those strange and stubborn
images that arise from a reality that is at odds
with its surroundings, a past that is incommensurable
with the present the image depicts.
Laura U. Marks, ‘Skin of the Film’

The present is an instant in
the continuum of the past –
The future is an instant in
the continuum of the past –
The radioactive fossil illuminates the future.
Regulations obstruct flows.
But traces leak.
Their presence haunts
the edge of the frame.

‘In Meleku, East of Eden’
Amitav Ghosh

...It is because of the ocean that these seemingly remote islands have always been so closely tied to the currents of history. [...] It was the sea too that permitted the Melanesians, the greatest seafarers and navigators of antiquity, to settle on these islands as they spread across the oceans, from Madagascar to Easter Island. Perhaps it was they who first carried the cloves of Ternate and Tidore to the Asian mainland, where they became an essential element not just of many cuisines but also of innumerable indigenous medical systems. Such was the demand for them in the ancient world that a cycle of trade and travel came into being that linked the Spice Islands to east Africa, the Arabian Peninsula, Persia, India and, perhaps most importantly, to China, which remained for millennia the single-most important market for cloves.

In the 17th century, the Banda Islands were the main theatre of imperial rivalry in the East Indies, with the Dutch trying to enforce monopolies on the islanders and the English doing their best to thwart them. The islanders, for their part, were obstinate in their resistance and made every effort to preserve their ancient trading relations with merchants from China, India and elsewhere. They frequently disregarded the treaties that were thrust on them and in 1609 they ambushed a Dutch military contingent and killed its commander and some 27 others. The incident persuaded a merchant by the name of Jan Pieterszoon Coen that a monopoly of the islands’ spices could only be secured by doing away with the Bandanese and replacing them with Dutch burghers and freed slaves. [...] What followed was a systematic orgy of slaughter in which fourteen thousand of the islands’ estimated fifteen thousand original inhabitants, men, women and children, were killed or taken into slavery. [...] Coen’s genocidal plan achieved its aim. The Bandas, and the monopolies in nutmeg and mace, were to remain secure in Dutch hands for the next century and a half.

What the earth gives, it can also take away. This became shockingly clear to me at the first clove garden I visited in Ternate. Overlooked by Mt Gamalama, the garden was in a wonderfully scenic location. A few of the trees were in flower, their leaves dotted with clusters of yellowish-pink buds. But much of the garden was dead or dying; the clove trees’ branches were leafless, their trunks ashen. This was happening all over the island, I was told, and the farmers I spoke to were unanimous about the cause: the climate had changed in recent years, they said; there was less rain and it fell more erratically. This had facilitated outbreaks of blights and disease. The prolonged drought has also been accompanied by another unprecedented phenomenon: in March this year a wildfire raged for three days on the slopes of Mt Gamalama. A forest fire of this intensity was new to the islanders. In other words, the delicate balance of the islands’ environment has changed; no longer is their alignment well-suited for the clove. This is but one of the many ways in which the Spice Islands seem to be emblematic of a much larger predicament – for human civilisation too was able to flourish only when a great number of physical systems fell into alignment some 10,000 years ago, with the dawn of a period of relative climatic stability.

L'An 1770.

COMPAGNIE *des* INDE

CARGE de Deux Vaisseaux des Indes O
sçavoir Velzen, *pour la Chambre* d'Amst
& Zuydbeveland, *pour les Chambres* d'Am
& Zelande, *de Ceylon, desquel le Vaisseau*
est heureusement arrivé.

			Velzen pour la Chambre d'Amsterdam.	Zuidbeveland, pour la Chambre d'Amsterdam.	
438829	℔	Poivre Brun —	204692		
276400	℔	Canelle —	138240		
60000	℔	Bois de Sappan de Bima —	30000		
450000	℔	Caffé de Java	225000		225000
1800	℔	Cardamom de Ceylon			1800
134758	℔	Cauris —	30000		104758
6000	℔	Catchou —	4000		2000
2000	℔	Gomme Mirrhe	1000		1000
20000	℔	Fil de Cotton de Tutucoryn —	10000		10000
22000	℔	dito de Souratte	11000	3800	7200

NNO 1770.

DISCHE COMPAGNIE.

ding van Twee Ooft-Indiſche Re-
Velzen voor de Kamer *Amſterdam*,
d voor de Kameren *Amſterdam* en
Ceylon, waar van 't Schip *Velzen*
exel is gearriveert.

			Velſen voor de Kamer Amſterdam.	Zuydbeveland voor de Kamer Amſterdam.	Zuydbeveland voor de Kamer Zeeland.
		er	204692		234137
		—	138240		138160
		Bimaas	30000		30000
		s —	225000		225000
		n Ceylonſe			1800
			30000		104758
		—	4000		2000
		rhe	1000		1000
		Garens Tutucoryns —	10000		10000
		Garens Sourats —	11000	3800	7200

Absent histories and
absent images: photographs,
museums and the colonial past
Vv.Aa.

These photographs are important because they carry the inscriptions not only of the 'events' of colonial domination – from Dehli Durbars to punitive expeditions – but also of the banal traces of difficult histories, of asymmetries, of injustices and also of aspirations and affections, the ludic and the ridiculous. They are often understood, however, merely as documenting and giving context to other classes of object, rather than providing points of fracture and vertical incisions into the surfaces of other histories to reveal complex sets of relations. In the latter context, they can, following Stoler's analysis, bring to the surface 'what lies dormant', make 'weak traces' tenacious and even make visible 'the uneven durabilities of colonial constrictions' (Stoler 2008)

Then there is the question of whose history do photographs from a colonial past represent, for they are objects of cross-cultural inscription? In many instances this is appropriative, through the rubrics of the colonial gaze. But again, to reduce all photographs of the colonial encounter to so dichotomous a model, however asymmetrical their originating contexts, becomes another form of disavowal and aphasia, because it closes down both the possibility of analysis and the possibility of historical agency for colonial subjects.

30. Frame enlargement from *Who Needs a Heart?*

optical images that represent lost lives and vanished histories engender a cry to the heavens, a hymn to the ancestors, a memorial to all that was destroyed in the histories of colonial subjugation and official forgetting. And let us remember that rituals, including rituals of mourning, are not final acts but beginnings.

In *Lumumba,* Raoul Peck's wanderings through endless airport corridors seem to displace the deep grief about the murder of a great leader and the deferral of African democracy onto a bodily sensation of repetition and numbness. In *Bontoc Eulogy,* the grief of an anonymous mourner in an antique ethnographic film elicits a similar emotion in the body of the viewer. In *Calendar,* the protagonist's willful loss of contact with his beloved and his culture of origin are expressed in the tactile opacity of low-grade video. In *Who Needs a Heart?,* information about Black struggles in Britain is withheld only to re-emerge, like secrets whispered into ears of corn, in a susurration of music and color. In *History and Memory: For Akiko and Takashige,* the vivid sensory image of filling a canteen with cool water is all that remains of four years of imprisonment. These are not simple acts of displacement: they also reveal knowledge that has been stored only in the memory of the body. When the verbal and visual archives are silent, information is revealed that was never verbal or visual to begin with.

2

The memory of things

[The past is] somewhere beyond the reach of the intellect, and unmistakably present in some material object (or in the sensation which such an object arouses in us), though we have no idea which one it is. As for that object, it depends entirely on chance whether we come upon it before we die or whether we never encounter it.

—Marcel Proust, *Swann's Way*

This chapter examines films and videos that excavate memories from objects. Movements through space and time can be read in the image; movement among cultures, like the passage of time, creates disjunctive, illegible images. These images are all a particular kind of recollection-image, which I term the *recollection-object:* an irreducibly material object that encodes collective memory. They can in addition be variously considered fetishes, fossils, and transnational objects. What is important about all these object-images is that they condense time within themselves, and that in excavating them we expand outward in time. To continue to use Deleuzian terminology, when an image surfaces from another place, another culture, it disrupts the coherence of the plane of the present culture. When Deleuze writes, "The present itself exists only as an infinitely contracted past which is constituted at the extreme point of the already-there" (1989, 98), the words "infinitely contracted past" seem to describe the souvenir object, that stubborn survivor from another place-time that brings its volatile contents to the present. An object in a film or tape is a particular sort of recollection-image that calls up

different pasts for different people. Where Citizen Kane had Rosebud, Rea Tajiri has a wooden bird, Shauna Beharry a silk sari, Victor Masayesva a stolen kachina mask: objects whose incommensurable pasts are the product not only of personal history but of intercultural displacement. The heirloom, the souvenir, the mass-manufactured object contain different and incommensurable stories of ownership, fantasy, and labor depending on who looks at these objects. Intercultural cinema often takes things for its images, presents them in all their fossil-like strangeness, and sometimes, by reconnecting them with their past, neutralizes their disturbing power.

Objects that travel along paths of human diaspora and international trade encode cultural displacement. Even commodities, though they are subject to the deracinating flow of the transnational economy and the censoring process of official history, retain the power to tell the stories of where they have been. Intercultural cinema moves through space, gathering up histories and memories that are lost or covered over in the movement of displacement, and producing new knowledges out of the condition of being between cultures. To coin another term, by adapting D. W. Winnicott's theory of the transitional object, they can be considered *transnational objects.* The transitional object is any external object that a person partially incorporates in the process of reorganizing its subjectivity (Winnicott [1951] 1958). So it seems useful to suggest that "transnational object" might describe the objects that are created in cultural translation and transcultural movement. Many important films focus on the traffic in people. Some of these people may also be classified as "transnational objects," in that they are traded like commodities between nations as refugees, guest workers, "comfort women" and other sex workers, or the vast undocumented workforce that underpins international commerce.[1] Needless to say, films and tapes about traveling workers are themselves only a fraction of the vast numbers of works that trace the movement of immigrants and exiles, resulting in transformations at least as fundamental for the nation to which these people travel as for the people themselves. What I focus on in this chapter is a subgenre of what has been called transnational independent cinema (Naficy 1994; Zimmermann and Hess 1997). If that genre focuses primarily on the diasporic movements of immigrants and exiles, these works excavate the traces left by things that "emigrate" due to similar global flows of capital, power,

and desire. If the high-speed torrent of information and capital is a relentless tide, then most of the movements to which this chapter is devoted are undercurrents, carried with the tide but moving against it, or eddies created around idiosyncratic points in the flow.

As in the previous chapter, most of my examples in this chapter are documentary films and videos. Documentaries claim the privileged position of representing reality. Consequently, it is especially pressing for them to explain the transformations and disarticulations of reality under the pressures of intercultural movements. But more importantly for my purposes in this chapter, documentary's privileged relation to the real extends to the material connection to the profilmic event itself—a basically fetishistic relationship, in the anthropological sense. This material and fetishistic quality of documentary will be the focus of the second part of this chapter, in which I discuss the work of Shauna Beharry, an artist who uses video but whose encompassing medium is ritual and performance. Beharry is a third-generation Canadian of Indian descent whose work focuses on the loss of language and of cultural reference that happens with displacement, the paradox that she still carries cultural references in her body, and the sensuous or spiritual experiences that challenge translation. The stake of this exploration is to recognize the complexity of the fetishized objects that move between cultures, how they are created, how they serve memory, and how they may self-destruct when their usefulness is ended.

Postcolonial cinema responds to colonial fetishism, or the seizing upon aspects of the colonized culture in order to maintain a controlling distance from it, not only at the level of narrative content. These works also redeem fetishized objects by finding values in them that are unrecognized in the colonial context. They may show how the meaning of an object changes as it circulates in new contexts. They may restore the "radioactivity" of an object that has been sanitized or rendered inert through international trade. They may depict the object in such a way that it is protected from the fetishizing or commodifying gaze. Or they may propose a nonfetishizing form of looking, one that invites the "viewer" to experience the object not so much visually as through a bodily contact.

As well as the transnational object, I use models of the fetish and the fossil to describe how objects encode both the discursive shifts and the material conditions of displacement. Meaning, I will argue,

is encoded in objects not metaphorically but through physical contact. Following historians and theorists of gifts and commodities, I suggest that objects are not inert and mute but that they tell stories and describe trajectories. Cinema is capable not only of following this process chronologically but also of discovering the value that inheres in objects: the discursive layers that take material form in them, the unresolved traumas that become embedded in them, and the history of material interactions that they encode. I go on to argue that cinema may be considered not a simulacrum but a material artifact of transnational migration. This argument involves a reconsideration of the notion of *aura* as a way to talk about how objects encode social processes.

Of the many theories of the fetish that operate in anthropology, Marxist analysis, and psychoanalysis, I focus on those that explicitly attend to it in terms of a series of historical, intercultural displacements. All fetishes are translations into a material object of some sort of affect; the fetish described by psychoanalysis in only one of these. Some objects embody memory as well as labor: theories of fetishism describe how a value comes to inhere in objects that is not reducible to commodification. I will argue that intercultural relations are necessarily fetishistic, although clearly fetishes are not necessarily intercultural.

What I wish to gain by using both the terms *fetish* and *fossil* is to forge a meeting place between Deleuze's and Benjamin's particular recollection-objects, both of which trace part of their meaning to Bergson. In this chapter I will often use only the term *fetish*. But in fact I wish to argue that the two terms are functionally similiar: or, at least, that the fetish works in the same way as the "radioactive fossil," in Deleuze's casual term for a certain kind of cinematic image (1989, 113). To explain this, let me define that crucial Benjaminian term, *aura*.

Benjamin wrote that aura is the quality in an object that makes our relationship to it like a relationship with another human being. It seems to look back at us (1968a, 188). Marx, and following him reluctantly, Benjamin, attempted to demystify the fetishistic character of auratic objects by showing that they gained their power from the human presences and material practices that constructed them. I say "reluctantly" because Benjamin was unwilling to relinquish the power of the auratic object as an object. It cannot be reduced to a

narrative, as I will insist throughout this chapter. Aura is the sense an object gives that it can speak to us of the past, without ever letting us completely decipher it. It is a brush with involuntary memory, memory that can only be arrived at through a shock. We return again and again to the auratic object, still thirsty (187, referring to Paul Valéry), because it can never completely satisfy our desire to recover that memory. Hence the sense that an auratic object maintains its distance no matter how closely we embrace it: it is distant from us in time even as it is present in space. Benjamin remained a Marxist in his insistence that the auratic character of things was not simply their ability to awaken memories in an individual; not a "premature, merely private reconciliation with a fallen world" (Hansen 1987, 190), but the resonance of the reified social world in a fragment. Auratic objects, then, are fragments of the social world that cannot be read from on high but only in the witness of the object.

Benjamin's fetish and Deleuze's fossil have in common a disturbing light, an eerily beckoning luminosity. In the fetish it is called aura, in the fossil it is called radioactivity. Aura is what makes the fetish volatile, because it incites us to memory without ever bringing memory back completely. Similarly, when a fossil is "radioactive" that is because it hints that the past it represents is not over, it beckons the viewer to excavate the past, even at his or her peril.

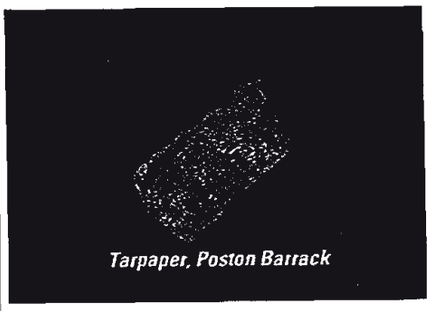
Recollection-objects

Cinema treats the recollection-object as an especially "hard," opaque recollection-image. It confronts such initially inscrutable objects and attempts to read them by connecting them to memory. The works I discuss in this chapter document the process of translation by decoding the displacements, and the social relations, that objects carry within them. Many more or less narrative intercultural films use recollection-objects as part of the mise-en-scène, where they appear as mute witnesses to a character's history. In Martine Attile's *Dreaming Rivers* (1988), for example, the British children of a Caribbean woman stand at her deathbed, reflecting upon their memories of her. Whispered voice-over gossip suggests that she emigrated for love, only to be abandoned to "England—it's *so cold*." They comment on the objects in her room, framed photographs, dried flowers, lace, shell necklaces. The son says, "I was ashamed of the things in

this house, this junk." The trendy, light-skinned daughter says disparagingly, "It's become quite fashionable: nouveau Negro." Their dark-skinned sister, who was obviously closer to her mother, defends her: "She cherished these things, she felt proud." In flashbacks we see their mother slowly combing and arranging her hair, bathing her feet with oil and rose petals, and emotionally looking over the photographs. But the whispered voice-over gossip in Creole and English does not allow her peace. In a bright, flowered dress recalling the warm country of her birth, the woman desperately lugs down a suitcase. Then, haunted by the whispering voices, she writhes in a dance of agony, crying, "Englaaand!" Yet finally she rests, bowing to the ground, palms facing up as though in renunciation. The film suggests that the intensified presence of ritualized objects could salve the woman's double heartbreak of exile and abandonment, but also they could become unbearable reminders in this cold country.

At other times a recollection-object is severed from the narrative in order to emphasize its witnessing quality. Such an object appears in Rea Tajiri's *History and Memory: For Akiko and Takashige* (1991). Having succeeded in locating the barracks at Poston where her family was quartered during the internment—in fact, having been led there by instinct—Tajiri brings back a piece of tar paper from the roof of the building. The worn, grayish object is displayed against a black background, like a jewel, even though it is not much at all to look at. A title reads "Tarpaper, Poston barrack." The tar paper's value is that it was on the scene of the events of the internment that Tajiri's mother cannot remember.[2] One could say the piece of tar paper, having been exposed to those events, "photographed" them and just needs to be developed: rectangular and gray, it even looks a bit like an old photograph. Tajiri's task, with this as with other mute objects in the tape, is to develop images from them.

A film may fail to connect a recollection-object to memory, so that the object remains illegible, a fossil trace of forgotten or inexplicable histories. These failures are just as informative as successful connections are, for by maintaining the "incompossibility" of different cultural discourses they demonstrate the unending struggle over meaning that characterizes intercultural life. Such a film is Gary Kibbins's *Finagnon* (1995), which begins its historical search with an odd artifact of postcolonial relations, a French-language reader for schoolchildren in the Republic of Benin. Kibbins approaches the



31. Still from *History and Memory: For Akiko and Takashige*

32. Frame enlargement from *Finagnon*. Courtesy of V Tape.

textbook from a number of angles to try to elicit its history, but the book remains mute. It hints at the colonial relations that engendered it, but it is unable to call up the experience of the African schoolchildren who read it.

Recollection-objects need not have a primarily visual relation to the originary event they represent. Consider Proust's *tisane* with dunked madeleine: a smell fetish, whose perfume unlocked volumes of memories. As in the previous chapter, in examining the histories contained in these images, I find that the meanings that are

lost and found in the course of (space or time) travel are often expressed in terms of nonaudiovisual sense knowledges. In chapters 3 and 4 I will develop the significance of these sense knowledges in cinema and their implications in an intercultural context.

Fossils

Fossils acquire their meaning by virtue of an originary contact. A fossil is the indexical trace of an object that once existed, its animal or vegetable tissue now become stone. Consider how similar this is to the photographic process. Fossils are created when an object makes contact with the witnessing material of earth. Photographs are created when light reflected by an object makes contact with the witnessing material of film. In both cases, this contact transforms the material's surface so that it becomes a witness to the life of the object, even after the latter has decayed. Created in one layer of history, the fossil witness is gradually covered with more sedimental layers. But instead of disintegrating it solidifies and becomes transformed. So when some earthquake happens years later or continents away, these objects surface, bearing witness to forgotten histories. As C. Nadia Seremetakis writes, objects invested with sensory memory "are expressions of non-synchronicity which become material encounters with cultural absence and possibility" (1994, 12). These objects are that special kind of recollection images, fossil images, discussed in the previous chapter. To summarize briefly, the metaphor of the "radioactive fossil" describes the unsettling quality of certain inexplicable but powerful cinematic images. This is how Deleuze describes a cinematic image that seems to embody a past that is incommensurable with the present the image depicts. By virtue of its indexical character, cinema allows unresolved pasts to surface in the present of the image. To Deleuze, fossils are not cold stone objects but rather live, dangerous things. Images are fossil beds, where the fossils are those strange and stubborn images that seem to arise from a reality that is at odds with its surroundings—"memory fragments that surface repeatedly to consciousness but are mysterious in their meaning" (Sternburg 1994, 178). These images refer to the power of recollection-images to embody different pasts. When an image is all that remains of a memory, when it cannot be "assigned a present" by an act of remembering but simply

stares up at one where it has been unearthed, then that image is a fossil of what has been forgotten. It is possible, though as Deleuze warned, dangerous, to examine these images and learn the histories they have witnessed.

Deleuze uses the term *fossil* only casually in the cinema books, but I have seized upon it because it indicates the material quality of the recollection-image. For Benjamin, *fossil* is much more complex. His unfinished *Passagen-Werk* reads the entire history of post-industrial Europe in the fragmentary and forgotten objects of the nineteenth-century shopping arcades of Paris, which he compares to "caves containing fossils of an animal presumed extinct," namely consumers in the early era of capitalism (quoted in Buck-Morss 1989, 64). Small, forgotten, or seemingly frivolous objects capture Benjamin's fascination throughout his writings, as when he wanders Moscow, ignoring its heroic Communist monuments in favor of toy stores and sweet shops (Benjamin 1986). Yet beyond idiosyncrasy, the power of Benjamin's attention to objects is that he sees in them a power to witness history that narratives lack.[3] In the debris of industrial culture he reads the culture's own fragility (Buck-Morss 1989, 170). Thus fossils in Benjamin's usage bear forth the history of capitalism as a natural history.

Fetishes

I would like to build a recuperative notion of fetishism for a discussion of intercultural cinema. Certainly an oppressive kind of fetishism is at work in postcolonial relations. Fetishism aptly describes the violent colonialist impulse to freeze living cultures and suspend them outside of time. Critics such as Edward Said (1979), Johannes Fabian (1983), Trinh T. Minh-ha (1989, 1993), and Homi Bhabha (1994b) have skewered this fetishistic quality of colonialism decisively. Without forgetting these critiques, I want to claim other meanings of fetishism in order to describe the transformations that occur in postcolonial and transnational movement.

In fetishism, power does not inhere in beings but flows among them. Fetish objects can encode knowledges that become buried in the process of temporal or geographic displacement but are volatile when reactivated by memory. Fetishes get their power not by *representing* that which is powerful but through *contact* with it, a contact

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Field Work – Rotterdam Port

Guided Tour to *FutureLand* – Transcript

Currently we are on our way to another big container ship, which is on the right side of us, if you look over the wall that we see, stones that we see on the right side, we see orange cranes and in the distance there is a brand new ship from China. It's on its maiden trip so that means it is the first time that it visits the port of Rotterdam. It's the COSCO ship named *Aries* and that ship is carrying also 20,000 containers so it's almost the same size as the ship we saw before. And we are one of the only ports in Europe that is able to handle these ships with full cargo, so if they are fully loaded and they have a draft of 16 to 16.5 metres, there are only a handful of ports in Europe able to unload and off load them, and this is one of them. Because today, you already know, you are in the biggest port of Europe.

Also interesting for you to know is that this used to be the North Sea, only eight-and-a-half years ago, when I started my work here there was only water, there was nothing to see. And with a lot of sand from the bottom of the sea we made a new island, a new peninsula, and that peninsula is called Maasvlakte, which means the area or the surface on the end of the river Maas. You can see the trucks on the left side of the ship in the distance passing over the high way, because behind the sea wall, the dunes, there you can find the infrastructure. Not only the highway for trucks, but there's also a train track. And inner land we also have connections over the water.

Now I understood that today the focus is the supply chain. Well, in that supply chain, ships are of the utmost importance here in Rotterdam. Almost half of our cargo of the Maasvlakte, which is mainly containers, is shipped, so it's not going by road or by train, but it's about 45% of all these containers coming and going to the Maasvlakte, is shipped over the water, over our channels and our rivers, inland, and it's going as far as Hungary. So we have connections to Switzerland, Italy, Hungary, but also the countries surrounding us of course, Germany is very important for us, the South of Germany. About 12% is done over the train tracks and then about 35% is left over and that is done by road. So that's the division of containers here in the port of Rotterdam.

It's not only about containers of course, you saw these frames for wind turbines earlier on, there is space left for the coming decades, so there is enough room for companies in the coming years. And these companies have to stick to a very strict sustainable profile, we have very strict environmental rules here on the Maasvlakte. So it's not that you can just get a piece of land here, but you have to stick to some rules and regulations. And that means that the companies that we have here are all green, all sustainable. The container terminals that we passed when we left with our ship are fully electric and they are operated on wind power. So there is no emission on these terminals, all the equipment, robots, cranes that we use, and you will see that later, when you join me on the bus. These are all electrified, and the power that we need, the electricity that we need, is bought from companies that

produce green energy, such as wind farms close to Denmark, etc. The border between the existing port and the new port is where we will pass in a few 100 metres. Where you see that small ship on the left side and where the sand ends, and the wall, the key wall of the ships, begins, that is the border between the existing and the new port, so that is where we glued the two together.

The strange thing is, is that behind us we can find the North Sea, so behind the wall, behind the ship, thats the entrance of the port, but as you can see there is no entrance directly over there, the ships first go a few kilometres to the Hook of Holland, a city on the coastline of the Netherlands, then they make a U-turn into this project, and that is for safety, so if there are big waves or we have a big storm, or there is a big flow into the sea current, then it's much safer to enter from that side than from the front side. So that's why you don't see an opening on the outer contour of the Maasvlakte, and also of course that is our protection. Behind that wall, and we cannot see that unfortunately, also not with a bus, later on we will have a better vision on the outer contour, but there are big concretes cubes, stones, and there is dunes and beach to protect us against the big storms and waves. So currently we are all gathering behind the bridge because it is pretty chilly, with this wind, again if you would like to go to the Captain, the door is open, so you are more than welcome there, not everyone at the same time of course, but with small groups of five, then it's no problem.

So ladies and gentlemen, I don't know if you have been here before, in the port of Rotterdam, but we are well known for our robotisation and our automation, on the container terminals you will see robots driving the containers back and forth to the cranes. There's actually a robot with a green container, behind the small ship that we see at the moment, and that robot on the wall, on the left side of you, there is a green container that you can see and that green container is brought from the ship to the stacking area as we call that. We will see multiple of these robots, later we will come more close by, and you can see all different sizes of ships here. The first ship that we meet here is an inland ship, so these are the ships that I was speaking about, going to Germany, Belgium, France, Italy, Switzerland, Austria, The dark blue ship, with the name *Conmar Bay* , that is a European line service, so these ships they go as far as Iceland. We shall not go there today because it is already pretty cold enough here. But these are the European line services, so we connect from Rotterdam to Iceland, Scandinavia, United Kingdom, Ireland, and also as far as the Black Sea area, to Turkey, the Russian parts and also the Ukraine and these kind of countries. So that is where we connect with this blue ship. And then we meet the first rather big container ship, this is a ship from about twelve years ago, the COSCO *Vietnam*, as you can see.

And that ship is able to carry a capacity of about 9,500 containers, if you look at the ship from this perspective you

wouldn't say that but if I tell you that if we put the ship in upright position, so if we would make a tower of it, it's about the same length as the height of the Eiffel Tower, and I'm not joking. So everything around us looks much smaller from this perspective than it is. The same for that blue ship that I was speaking about earlier, that brand new ship, because that ship is 400 metres long and that means it's longer than the height of the Empire State building in New York. Most of the containers are inside the ship, so what you see on top of the ship is only a small part of the cargo. Most of the containers are inside the body of the ship, that ship from COSCO at the moment is about 10 metres under the water level, so that means that everything that you see above the water, just above the letters of the ship, that is also the part that you can find under the water line.

Some oil tankers going back and forth, because these ships are mainly using fuel oil, in the future we will switch to gas, but most of the ships at the moment are still running on oil, and that is brought here by these tankers, there are going alongside, so the fuel is coming to you, you don't have to come to the fuel, but we will bring the fuel to you. And there you have that brand new ship, the first time that it visits Rotterdam, that COSCO ship that you see on the left side of us, as I told you before, has a maximum capacity of 20,000 containers and we are handling the ship as you can see, with seven multiple cranes, so there are seven cranes involved with the handling of the ship, and now for the supply chain, for your study later, it's important to know that these containers are not randomly stacked on the ship, but they are stacked as such so that here in Rotterdam, we can unload and off load in the fastest possible time frame. So in China, when it departed in the container terminal, they took in account that here in Rotterdam we

have to take off a few thousand containers again, and they try to do that as logically as possible, taking in account the weight of each container, and the size, because they are not all the same size as you can see, so the containers in the middle of the ship are stacked eight high. When it arrived there were even nine containers on top of each other, but this ship is able to handle more than ten. Only problem is that, this terminal, which is only ten years old, doesn't have these huge cranes that we have on Maasvlakte 2, so higher stacking than this is not possible at the moment, but on Maasvlakte 2, you will see that in a few seconds, it is, because these cranes are slightly higher.

Okay, let's get a little bit closer, so you can see what we are looking at, because this is a building of twenty floors, we go to the bottom of the ship and we look to the Captain, which is on the bridge, above the word COSCO. Its about 75 metres, the height difference, between the bottom of the ship and the bridge. So if you have never been in a world port before and you have never seen such a huge ship, make a few pictures for your family, your friends, and share it on your Instagram or your Facebook. Because there are no bigger ships in containers at the moment than these ones. The biggest ship on the planet for containers is containers from Hong Kong, but the size is almost the same, it's then only about the stacking of the containers and the height of these rows. It's all Asian cargo. These containers are originating from Japan, from Taiwan, from China, and above your head the crane operators are active in handling. Look at the people in the ship, then you can see the size as well, because these guys are having radio contact, not only with the operators, but they are also monitoring the cargo, so in the cabins above your head, in the cranes, there is a crane operator. He's

looking down through a glass shield, and these people are operating the so-called spreader. It's an object to pick up the container, it works with steel , a steel twist lock, it's a locking system, locking onto the corners of the container. And there is another one, departing from the ship, if you are a well-trained crane operator, you can handle about forty containers an hour, so that means 1.5 minutes for one. Each 1.5 minutes. There's a gentleman next to me saying that I heard that on the new Maasvlakte you have remote control, and that's correct. So these cranes are still manned, here's still somebody in the crane, but the container terminal that we will visit today, these container cranes are remotely operated. There is even no cabin anymore on the crane. They are only working with joy sticks and cameras and screens of course, from a master building, so not from the crane anymore.

These are refrigerated containers on your right side, the big stack with the white containers, these are cooling containers, so-called reefers, so there can be fish inside or meat or potato products, fruit. We could also see the cooling device on the other side of the container, and all these cooling containers are light grey or white, for the reflection of the light. We have another stack of them here on the right side, a few of these coloured containers on top, so the containers with the colours are the goods that you ordered last week with Alibaba, AliExpress in China, these are the things coming in here. And the white containers, the grey containers, are refrigerated products, so you can see the elements for the... it works like refrigerator, and we call that a reefer. You can also see them here in the front of the ship.

So only twelve years ago, this was one of the biggest container ships of the planet, and you saw the ship behind that, so in only a timeframe, from lets say beginning of this century, till today, in these eighteen years, the ship size has almost tripled, with containers. And that means that all these ports and all these container terminals, bought new equipment, deepened their ports, but much deeper than 20 metres for container ships is not possible, so we will not find it much deeper than that. This is the European container ship that we passed. Also on that ship you can see a radio man, he was talking to the crane operator, so there's always somebody on the ship, and there are people on the ship connecting the containers to the ship, because they are secured with steel lashing rods, they are steel frames, steel cables, they are connected to the ships, these containers. They are connected to each other with a special device and they are stabilised with steel cables, steel lashing rods, and the people doing that are called the lashers. You can see them on the ships between the container rows. This container ship is an inland ship, as I told you when we came into the channel, and these containers are not secured, so they are just on top of each other, because an inland ship doesn't meet so much problems on the channels, on the rivers. And also these containers are not very highly stacked. Sometimes we put

what we call a stacker in between them, its a steel device just to make sure that they cannot shift, but the connections, as we saw that on these big ships, from Asia and from Europe, this is a different system. When we are down again, inside the ship, I can show you one of these devices, how we connect the containers to each other.

So imagine that this concrete wall on your right side is 40 metres deep, so the wall is 40 metres into the ground and the water is 20 metres deep, its 1.2 metres thick concrete, with a steel frame inside, and the black objects that you see are for the ship and for the wall, so that the ship doesn't damage and our wall doesn't damage. It's called a fender, it's made out of a rubber compound and a plastic compound, so that the concrete wall isn't damaged and the same for the ship of course. The concrete production is very close by, we have one of these industries in the Europort area. So from the point that we are currently, it's about 15-20 kilometres, so it comes from very close by. If we are lucky today, ladies and gentlemen, we see a few seals. I don't know if they want to show up today because also for them it's chilly.

But we have a group of about sixty seals in the Maasvlakte, and a lot of birds of course, and under our feet its just the open North Sea. This water is directly connected to the North Sea, so there is a lot of fish and other fauna, other fish living under our feet. But the seals are always the most interesting to see, so hopefully they will show up today. Yesterday I saw a mother seal with a baby, so maybe they show up again. We are a little bit out of the wind again, so the temperature is a little bit better so we can warm up. How about any more questions so far?

That huge ship you just saw from China, how many staff members are working on that ship, who knows that? How many people operate such a huge ship? Maybe just one. Well if I tell you it has to sail from here to China in only 28 days, with only one person. The biggest ship yes, five people. Okay, so five, only one somebody says, looks difficult to me. 50? 200? 250? Well, the correct answer, and of course for every company they have a different amount of people, but it's something between 19 and 32.

So it's just a low amount, I know that the ships from MAERSK, and we will see that ship again, is operating with 22 people, a captain, a few officers, to assist the captain on the bridge. You need a small crew to repair the ship of course, if there is any damage.

You have a cook, because you have to eat, so if that one gentleman that you named is Captain and cook, and he can repair the ship, then he can do it. But you need a cook and you also need a ship's doctor. And that's all you need. And if you have three crews of seven or three times eight, and a captain, then that's enough, so somewhere between nineteen and thirty two people. The question was, also for the people downstairs in the ship, what is the percentage of women working on these ships. On a container ship I have never met one, because I've visited numerous,


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but on offshore ships, working on sea with drilling platforms and with wind turbines, etc. I've visited one of the biggest ships in the world, which has a crew of six hundred, and of these six hundred, twenty five were women. So that was the percentage on that ship, but it will differ from ship to ship of course. But the ships that I visited, I've only seen men and no women, so that was the percentage was zero.

The question is, I will repeat for every one of you, the existing terminals, because we cannot call them old, because you said to me 'the old terminals', but its only ten years old so it's quite an innovative new terminal. But the existing terminals are also all automating, or they are also automated, because the terminal you just saw, the only difference which they have with the new terminals, is that the cranes are still manned and the robots that they use there, because they also have robots, driving these containers back and forth, they don't have an elevating platform. The new robots that we have, they can lift containers and bring them to a storage or a rack themselves, so they don't need a crane to take the container off their back, off their body, and the existing robots don't have that, but that's the only difference. Because the rest of the operating system, the computer system on that terminal, is the same. The other existing terminals, which are older than that, from the 90s, you can see that they are also automating, they have to. They are also buying new equipment, new cranes, higher cranes, and they have these robots. They are also buying this remote-controlled system, because they have competition, these container terminals, they are each others' competition, and you might imagine that if there is one container terminal doing four hundred containers per hour and the other one only one hundred, that the one with four hundred will have all the customers. So they are in a sort of competition where these automating systems are very important. It's not only about speed, but it's also about the terminal itself, because if you want to compete with the other ones and you automate, that also means that you lower your costs, if you are more efficient.

And that's also something very important to these companies. It's not only of course about speed, but it's more about efficiency. They are more efficient when they use these equipments, and you will see later, because I will show that to you, they only use automation when it's really helping them. So there are still cranes that are manned, even on the new container terminals, because if the human eye, if the human being is faster, more efficient, then why should you automate?

It's only on the points where it helps us, the hard work or the heavy work on these container terminals. Hold your questions please for a minute, because otherwise we pass the oil ships and then we have more time for that, of course. But let's look at these trans-shipment ships of oil, what are they doing here? Well, these ships also have a draft of 50 metres or more, these oil tankers, and that means that there are hardly any other North West

European ports able to handle them. So what we are doing here in Rotterdam, is we are handling these ships, we are trans-shipping, pumping the oil from the big ones to the smaller ones, and the small ship brings the oil to another European country.

It's only trans-shipment so we are basically only pumping oil from one ship to another and these ships have to pay money to the port of Rotterdam to do that. You have to pay sea port dues and for such a ship of this size it can easily be something like 50-100,000 euros per visit that it has to pay to the port authority and that is the money with which we operate our port. And maintenance our port. So we make money with the visit of ships. Also with our container ships that is one of our biggest incomes sources.

So this oil tanker was full when it arrived and you can see it is about ten metres under the water. You can see the number of metres it is under the water level so fifteen is the maximum, that is the red stripe. The border between the red part and the black part or the brown part so it's now five metres higher and it is trans-shipping its oil in another ship so the red ship, a smaller ship that is behind this ship. When we are little bit farther you can see the ship again and the same will be done on the other side of you because there is one more big oil tanker here and that one is waiting to ship oil so it is not taking oil out but it will bring oil to another country so we will pump oil from a smaller ship in a big one and we need a few small ones of course.

And then we try and ship it to another country. It can go to Africa or wherever they need it. The ship is going under the flag of Nassau – the city of Nassau – where is Nassau, who knows that? Bahamas, correct. Because all these ships go under the flag of the Isle of Man , and Bahamas , Cyprus , Malta, the Marshall Islands. These are all places on the planet where you can register your ship for good price. Because you need a registration, a license plate, a number of the ship is under the word Nassau. So that number that you see there is a registration number in the Bahamas. There they have a good tax system for these ships so that's where the ship registered but it never goes to the Bahamas. It never goes to the Bahamas, never comes to the Bahamas, stays here in the region. Goes to Russia back and forth. We receive 135,000 ships per year, means one every four minutes. But if the ship is close to departure and it looks like that because the cranes are moving up and we are talking about the container ship, ladies and gentlemen, that we saw earlier before. On the GPS system is probably shows where it goes to. So I'll check that out when I am downstairs again on my mobile phone for you. Let's see if the seals show up today. Nothing. No, because they were here yesterday on the sandy banks on the right side. By the way, all the water that you see is all for the expansion for the future so all that water that we have here is possible to make new land again. So we have land and space for more decades. And if it's okay with you I go downstairs again because the

microphone will freeze together with my hand. Sorry, when the container terminal is in vision, I will be back.

That's a lot of questions. In a very short time. The question was what about the land surfaces and what about the connections that you have? Can you give me a figure about how these ships connect and where do they come from. I don't want to sound stupid if I give this answer but they come from all over the planet so from every corner of the planet. We have about thirty five of these big line services per week that we just saw before. And about 25% of these are from Asia because that was also part of your question. And from that 25%, about 85% is Chinese. So this has the origin China. So from the total, 20%. With our inland ships, we connect as far as Hungary and countries like Italy and Switzerland. If it is with the train, we connect to Russia, to Moscow but our train goes as far as the centre of China so there is a weekly line service from the port of Rotterdam to the middle of China. That is about fifteen days of travelling by train. By ship it is about twenty eight days. So the train is quicker but more expensive, of course, because it takes about hundred containers and that ship took twenty thousand. So per container it is much cheaper to ship it across the water.

So there is a huge network of hundreds of ships per week from Iceland to the Black Sea area. We have ships from North America, South America, from Africa, from Asia. From Latin and North America, the percentage is about, well, let's say together about 35–40% so that's also very important to us and that is mainly our food – fish, meat, citrus fruits, tropical fruits like pineapple, banana, etc. And we also export again to these countries. So it's not only import but it's also export. The Chinese like our milk products and they like our machinery for the cotton industry and for

farmers so it's not only that. So if you want a total overview of these numbers because these are only a few, if you go to the internet and you look to port statistics on the Port of Rotterdam website, you can find everything that you need in the biggest detail so you can find it till the exact number – import and export not only to the countries that I named but also to Africa, etc. Africa is also important to us but that's more like oil, gas, liquified gas and agricultural products, import and export. And mining – iron ore is also still very important. South America , Brazil, Colombia, these kind of countries, they are still very important to us in the mining industries.

And also iron ore. Also Australia, not to forget. Australia is also a trading partner. Okay? So port statistics for all of you. Unfortunately, we don't have time to tell all the numbers because we are already here near the container terminal. In perspective to security, ladies and gentlemen, and Customs, I will save that question till we travel by bus and we will go close to Customs and I will show you how we deal with forbidden products and what is – how do we check, okay? Arms, ammunition, drugs, but I promise I will answer that question in the bus. Let's first look at a very special building on the right side since you are in architecture. The building that you see on the right side is the control room of this container terminal and inside the glass top of the building, there you can find the crane operator.

So the crane operators are in the glass part of the building in the top floor, let's say in the penthouse of the building. Construction a building in the port is difficult because you are in a salty climate because always you have wind and there is a lot of sand around you so the material you use, specially the coating that you use for the building and also your ventilation systems and air condition systems they have to be as good enough to operate in this climate, in the sea climate that we have. Now here we have the cranes with remote control. Both of the terminals have it. Here you can see there is still a cabin in the crane which means that you could take over manually but the opposite terminal from the MOLLER MAERSK group with that huge ship from MAERSK that we will see in a few minutes, these cranes don't have a cabin anymore in the crane.

Now for the ones who missed out on the robots before, there we have them. Driving over the wall. That's self driving vehicles and later in the bus I can explain how that works. So they don't have an operator, there is nobody inside. Its just four wheels and a platform running the containers back and forth. There are tens of them. Here on this terminal they have fifty six. And here you have these gigantic container cranes. The crane above your head is the newest generation. These ones are from Asia so these are shipped in from Shanghai from the famous crane builders ZPMC. And the ones opposite to us from the water, the blue ones are made in Finland, in Scandinavia. It's a different brand and they are also slightly higher than the biggest Chinese model. This crane, the

top of the crane, with the beam upwards is 128 metres. So that comes very close to the top of the famous Erasmus bridge in the centre of Rotterdam. And the newest generation of ships also the big ones, with more than 20,000 containers, they can be handled here.

Look at the wheels only of these cranes. You will see later as well when we drive with our bus over the terminal, how huge these objects are. Per crane it's about 2000 tonnes, 2 million kilos. Look at the forklifts on the walls, in comparison to the crane. That gives you a little bit of a vision how big it is. Looks like toys. So this is Rotterdam World Gateway. This container terminal is a container terminal from a consortium of companies from Dubai, Asia and France, the big France company CMA CGM. It looks very quiet now and it is because there is a big ship departed just last night and now we are shipping the containers to the rest of Europe with our European ships. Here you have them.

And I am quite sure in the course of the day or later maybe in the afternoon we will have a new ship arriving. The shipping lines, because there is a question here, the shipping lines they are timetabled. They go months ahead. So on the internet, and if you know where to search you can already understand and find the name of the ships or the ships arriving in April or in May or even in June. So these timetables these are scheduled for months ahead and that means that these line services they operate with a big number of ships. We take the the neighbours MAERSK LINE, they have six hundred of these ships operating on the planet at the moment, not the same size, of course. And their timeframes, their timetables are working with (inaudible) so the ship departs from China, then goes to Rotterdam and probably to Gutenberg, Sweden and then to Gdansk in Poland but it's a fixed route so always these ships go to the same ports. So a lot of these ships I already understand, I know because they arrive here every three months about... they do the same loop about four times a year but since there are 135,000 about, it's a little too much to understand them all. So sometimes I have to search and see what kind of specifications they have but the most of these ships that arrive here in Rotterdam have been here before. So I have seen them here in a previous visit. The only factor in the route of such a container is delayed by natural circumstances so it can be a defect on the ship of course, a technical problem. But most of the time it is something with the storm or bad weather on the open sea. Last week we had a computer default on one of the container terminals here and our terminal was closed for about four or five hours so that means delay. Of course we can try to speed up the work and we can put one of two extra cranes on top of the ship to see if we can catch up a little bit but these are the things you have to think about in delay and in the worst case scenario the ship has to wait on the open sea so if it is days late, then we handle another ship of course, we are not waiting for it. So first another ship will be handled and the ship has to wait on the

North Sea to enter the terminal and the one... a seal, yeah, there is one on the right side of you here.

Yeah, there is a seal on the right side of you. (laughter on boat) Then the story is matching up with what I just told you. Later on when we will travel with our bus you will see more of our natural areas because this is a very special port, a port with not only industry-industry but we also have a lot of nature. We have a reserved area for birds. And we will see that from the bus and we will see the beach and the dune. So these things we will see later. But finally a seal. Okay back to the questions because there were more questions. Okay. The question was how much money was lost during that 3–4 hours of shut down. Well that I cannot tell you of course because they don't share these numbers with me but I know for a fact what happens about half a year ago, when we had that hack, do you remember that? MAERSK was hacked and our two terminals here on Maasvlakte were shut down for two weeks. And the company MAERSK, the CEO of MAERSK said to the media that he lost somewhere between 2 and 400 million Euros in these weeks so that says something about the money. In this case of course it is much lower than that. They also shut down with a storm. When there is a big storm, they have to shut down for four to five hours and the exact amounts they lose they won't share with us I am sure but that you have a vision about how much money is involved in this. So if you are shut down for a week, then you lose about 100–200 million. Well, it's not the port operating these terminals but the companies are private, that's important to know so in this perspective a company loses money and the port of course is also involved because we have sea port use and other things but the companies are private and if it is a weather circumstance, if it is a storm or if it is something force majeure as

we call them, then there is no insurance for it as well. So these companies have to pay for them themselves. If there is a technical default, if the technical company can do something about it then maybe they can work with insurance but... exactly. Also for the ladies and gentlemen downstairs, the port is the landlord so we are the landlord and we are responsible for the infrastructure, the key wall, the roads, the train tracks, the water ways, the security on the water, so the traffic management and the companies these are private so these are privately owned.

I will answer more questions but if you will allow me I will go downstairs with you because I have to do four more tours today. I see you in the (inaudible) so if you want to ask me more questions, follow me downstairs inside the ship and if you want to make a few nice pictures from that big MAERSK ship then you have to say of course on the first floor. Another question that was asked to me was whether the terminal that we will visit owned by MAERSK or is it a different company? Well, the big company so the governing company is called MOLLER MAERSK group and this company is in Denmark and this company has a few subsidiaries and one subsidiary is MAERSK LINE and MAERSK LINE is the company operating these ships. The container terminal however is called AP MOLLER Terminals and that is a Dutch company with a head office in the Hague. But it is under the umbrella of the big company from Denmark so MAERSK LINE is a different company from AP MOLLER terminals that's important to know but in the end they are all part of the big MOLLER MAERSK family – the Danish company.

The Port is only the landlord, there are over 3,000 companies, they are private, we don't have shares. The robot, the cranes, they are all owned by these companies, not by us. The terminal, the road are paid by these companies. So they have a concession, a lease contract with the Port of Rotterdam for twenty five years, which is the minimum lease term. So let's focus on the ship and then I will be back. Here you have the no. 3 of the planet, the third biggest container-ship at the moment, 20,568 containers, the *Milan* MAERSK and there are other six of these ships under construction. Sorry, I have to wait a little bit because they have to make the sound recordings upstairs on the deck.

<ON THE BUS> A beautiful view over the North Sea later, and the nature, because you asked me can we see a little bit more of the nature. Well, we will do now.

There is a traffic jam from trucks on the left hand side, which happens not very often. There must be another software failure. On the left side of you, the building with the green windows – that is the Customs office. That is where the containers are checked for forbidden goods, we already said to each other on the ship that could be drugs, weapons, ammunition, etc. The containers you ca see on the floor on the left of us, close to that black building, these are suspicious. There must be something with these, but they already had pre-check so they went

through the X-ray scan. How that works, and how we select these containers, that is something I will tell you on the way back. And we will now pass the Distribution Park, all these holds, all these warehouses, they are for distribution. Photo cameras, printers, photo equipment, and also frozen and cooled goods are in the white buildings to the side of us. For the ones of you that have the map with them, we put the map on your seats, on the map we just passed No. 1, that was the flyover. This is truck-parking on the right side, the truck parking is especially needed on the nightly hours and the evening for the truck drivers that want to sleep because they have security and camera security there.

On the left side are infrastructure, train tracks, you do have thirty six parallel train tracks, and on the right side, nature. This is a protected area for birds. Behind this wall there is a reserved area, twenty one hectares for birds, and there is more nature to see of course, because here we will pass the dunes of a peninsula with famous cites like Oostvoorne. Behind this wall is restricted for human beings, it is for only nature, for birds and for seals as we saw before on the ship. And that is very rare. I cannot name another port in the world that on the outer contour has recreational area and protected nature. This is very unique. Now what surprised me a few weeks ago, where we never see any action, they are constructing, and of course I went to my collogues to see what is happening here, but it will be a wind turbine so there is an exclusion in this protected nature area for one turbine. And the rest of the turbines will be made on the wall. On the right side of you, will be a new wind farm, wind park, with a capacity of 50 megawatt for our electricity network. We have a beautiful vision here over the sea, this is one of the most beautiful panorama points. On the left side of us, we see the protected area, we see the wooden fences and the barrier on the beach. That is restricted area, not for human beings. And from that barrier it's also allowed to take a walk, recreate or do some kite surfing, or sports fishing. And on the islands on your left hand side there are seals and also birds.

As far as I can recall, there is no other port in the world with such a beautiful recreational area as this. This is all Maasvlakte 1. And now we will go to the new Maasvlakte, the new port, the barrier is on the right side, you will see a new fence and a gutter. The water on your right side, that is the border between the existing and the new port. It's an art object that symbolises the sand blowing over the dunes. And it's made out of concrete, and these Rotterdam artist wanted to symbolise the dunes, or the way the sand blows over the dunes. And it's also reachable for people, you can sit there and watch the ships coming into the ports, coming in and out of the ports.

We had a huge storm some weeks ago, so look what happened to our stairways. This is No. 3 on your maps, on the right side of you the port basin that we just came out of. That is where we made a round trip, and here we are constructing

a new highway and a new flyover behind you. New connections to the container terminal so that we have the best logistical and the fastest and most effective logistical connections. And this is the entrance of a container terminal for the trucks. We just passed the entrance gates from the terminal, the license plate of the truck is scanned, the container code, every container has a unique barcode, and the driver has to identity with a special pass and with a fingerprint. And that is how you enter our container terminals. Beautiful view again over the North Sea.

These ships that you see on the horizon, they are moored, they are on an anchorage place, and they are waiting to enter the port. So these are ships that are too early, too late, or they don't have cargo at all. Also since that you don't have to pay these monies that you have to pay when you're inside the port. This is new land on the right side of you, we constructed that since August. I told you on the ship that we have twenty five new customers interested in land, and five of them we are in negotiation with a contract. And the land here on the right side, 40 hectares, is for companies having anything to do with wind turbines, blades, the turbine itself. In a few months time, we will start the construction itself but first the sand has to decline, compact, you need to leave the sand alone for half a year to be able to construct. On the left side, some ships entering the port. This wall on your left side is our storm surge barrier, this is our sea wall against the North-West storm because that is the most dangerous storm we have in the Netherlands, in North-West Europe. And if we would climb over the wall, which we cannot do today, we would see 20,000 concrete blocks, 45,000 kilos each, and on the other side of the wall its covered with stones. It has a carpet of about four metres, four metres of rubble and the backside of the wall is fertile clay and grass. Special grass that can grow into the silty bottom and this together protects us against the dangerous North-West storm which comes over the open water. And here it is 1.7 metres higher than our famous delta works, because we took into account eventual sea level rise, climate change, so we made the wall higher than necessary so that we are sure that in the next half century, fifty years, we are protected against eventual changes, or very big storms, super storms. That is No. 5 on your map.

On the right side of the city of Hook of Holland where the ferry boats go to the United Kingdom, that is also the entrance of the city centre of Rotterdam. We can see a feeder ship going there and a chemical tanker. This is the entrance of the port, 830 metres wide, 25 metres deep, and in the distance in the right side, behind you, you can see the city of the Hague, on the horizon, and there is also a famous pier of Scheveningen, where you can visit the beach, a lot of tourists go every year.

This is our main gate, main entrance. The two objects that you see, the green, white and red stripe object, these are the port beacons, light beacon. In the front you can find a very bright green and red light

so the ships know how to enter the fairway. As you can see, the ships in the North Sea. On average every three or four minutes a ship enters or goes from the port. I told you about it that 35,000 ships visit us per year.

The port of Rotterdam is one of the big suppliers of wind energy. You must have seen all these wind turbines when you were driving here along the highways. About 10% of all the wind energy in the Netherlands comes from the port of Rotterdam and there is more to come, we are not ready with the construction. This is the container terminal that we visited before, this where that big Chinese container ship is docked on the left side of you. That was the ship with 20,000 containers and this is the back side of the container terminal where the trucks move back and forth to pick up or bring containers.

There is a question, and the question is: I've just passed the Yangtze channel. Why is it called the Yangtze channel and does the Chinese have influenced and help with the construction? So the Yangtze channel is named right after one of the biggest rivers of the world. It is a river in China more than 6,000 kilometres long. When we constructed Maasvlakte 1, in the '60s and the '70s, we had to choose names, and we took the five biggest rivers on the planet – the Nile port and the Amazon Port, Mississippi Port, and also Yangtze is the third biggest river on the planet, so doesn't have anything to do with the Chinese or for training we gave it a Chinese name so that is interesting for Chinese investors. It's just a coincidence that that river is one of the five biggest rivers on the planet. It is like this that the container terminal of Euromax ECT is for 90% in the hands of a company from Hong Kong. That company came here at that terminal in 2008 and then the channel and the port was already named after that river so it doesn't have anything to do with that perspective with Chinese investors or with Chinese involvement in the project.

We are modifying our infrastructure. This is a two times one lane highway at the moment but we are expanding to two times two lanes and to two extra emergency lanes. And this is all for the connection to these new companies with the wind turbines – wind turbine parts and pieces and also to the container terminal. There will be a new flyover and the traffic lights will be removed so that there is a good stream of traffic: the logistical connection.

So the story about the Customs, and there was one of the ladies asking me that on the ship. The Customs, they have to check 13.7 million containers per year. Impossible to check all these containers for the content, because then the logistical system would be useless, and it would be too slow. So the customs they make a profile of each containers, they have sixty factors – they know sixty things about this container. Where did it come from? Where does it go to? Did it stop on its way here? Were people involved? Are there sports shoes inside, or parts and pieces for cars? Did we find anything illegal before from a container from a respective company? These are the things that the Customs are checking.

And they give these containers penalty points. And the ones with the most penalty points – they go through through the scanning equipment, meaning that we still scan about 120,000 of these containers per year. So also, every three to four minutes one is scanned.
So what do you find? You find drugs, weapons, ammunition. But the biggest amount of items we find are fake-goods. So you have to think about fake watches sunglasses, clothing, bags etc. The number one most found illegal product is tobacco. Cigarettes, illegal cigarettes, that are shipped without any tax. 85 million cigarettes were intercepted last year by our customs and 2.2 million fake-goods.

The queue of trucks are still there, so I am assuming there is a software problem or an entrance problem. There was no hack, by the way, just a failure in the software and that is what happens when we have a failure in the software.

You are kindly requested to have your ID, passport, driver's licence or ID-card ready because we will go through the security check and then we will visit the container terminal. And just for your information it is not allowed to make video material on the terminal. Only photos, and only for private-use. So don't make any movies, please. Shoot a few photos and don't share them on the internet.

I am proud of you because I understood that everybody had a valid ID with him or her. So let's go through the VIP entrance of the terminal. This is not the truck gate of course and again I cannot check out all of you but don't make any videos please. There we have the robots and we will see much more of these.

The truck drivers end up in the parking place. We have 100 parking places for trucks so we do 100 trucks simultaneously. First the truck driver steps out of the cabin, pushes a button, and the rest is automated. The crane is also a robot, it's working with sensors system. The only thing the truck driver has to do is to decouple, to release the twist locks – the connection to his truck. He can also leave that of course but then the truck is up in the crane. Terminal equipment, this has to be shipped overseas. These are vehicles working on container terminals.

'The stacking cranes are constantly moving back and forth and repositioning the containers. So each time a truck is enter the terminal the container for the truck is already on the top of a row, and presumably in the front, preferably on the front of the row, so that the way to the truck is short, and we don't have to take off the other containers and that is going on 24/7 so it's just a huge puzzle with 10,000s of packages-boxes-containers.

This is the train terminal of the container terminal. They have their own train tracks, four, so they can handle the train with two of these gigantic rail cranes, and these are still manned. So these are not automated – the human eye and a human is faster than the robot in this perspective. And this is the electricity cable of the crane. I told you before everything is electric. Left of the bus, these are the damaged

containers, the cooling container this one is also pretty badly damaged. These containers stay here until the Customs were involved if there's anything inside, we contact the sender and we ask him or her where the cargo has to go, and if we have to load it into another containers so they can continue its way to the rest of Europe. It's quiet on the train terminal at the moment.

Let's go to the key wall. Let's go closer to the ships.

We are arriving at the key wall. We see the container terminal from the side so that we have a beautiful view over the logistical system. A few seconds, I was a little bit too early with my text. The yellow container on your right side is positioned on the rack, it is a buffer zone and the robot will take it with him or her later. I don't know if the robots are him or her so. Generally speaking they are not both of the two: gender neutral. There we have the container terminal and the action is close to that huge ship, of course. There are more that seventy of these robots involved on this container terminal. Basically they are the taxi service between the ships and the stacks where the containers are temporarily stored. And then from the back of the stacks you have seen the trains and the trucks and on the end of the container terminal we will find the barge ships.

Pay attention please to robot 149. It's behind number 133. Robot 149, behind the lights on the terminal, on the right side of you. That robot will bring the container from the rack with its elevating platform with the lift. I told you that these robots are from the latest generation and they are autonomously. They don't need a crane to take the container off their back but they bring them themselves. There it is.

This saves a lot of time in the logistical process and also the other things that we have, the remote control, etc. because the robot is now decoupled from the crane. It doesn't need a crane or other equipment to take it from its back but it brings the container and gets the container itself. It has to wait a little bit for number 173 and now it's off to the next destination, to the ship. It's a US container from the company TEX.

And the next robot is already here, number 106, also picking up a container. So basically it works like this, ladies and gentlemen, that the crane operator with the remote control takes the container from the ship, puts the container in the basis of the crane. There is a platform. From that platform the container is put on the driving robot, the automated guided vehicle, and from there it is computerised. So there is still somebody involved with the on and offloading of the ship itself. But 95% of this system is fully computerised. That is the terminal operating system operating all the pieces of equipment. And there are two ships here on the queue and we saw them before. NORDIC HAMBURG, it's a European line service and that mega-ship with 20,568 pieces maximum. The cranes are 100 metres high to the top of the crane. They are from the latest generation and they are specially built for the future, for the big ships of the coming decades. We don't have to take off all the containers, 20,000, because the ship of course also goes off to other ports buts let's assume that we take off 7,000 pieces, which is a very reasonable amount. Then it's about one and a half to two days' work. So, if we would have to take off all 20,000, it's about five days work.

Have a glimpse, have a look at number 105 on your left side, the robot, then you can see the space between the racks and the robot itself. It's only a few centimetres and it works with transponders in the floor or the container terminals. So the vehicle finds its way by a transponder, transmitter system. Every one and a half metres, there is an object in the ground giving a signal to the robot where to drive. So a 24/7 operation. The only moments that we stop with our work is on first Christmas Day and New Year's Day. Then the staff of the terminal has two times a shift, two times eight hours off but the rest of the year it's a day and night operation and the robots don't need too much light so the lights that you see are only beamed at the key wall for the people working here but in the middle of the terminal there is no lights because everything, every equipment there doesn't need any light to operate.

The object on the right side, ladies and gentlemen, that is a double spreader and we can pick up two containers at the same time with it. That is also something that we are practising with because if you can pick up two at the same time, then your capacity, of course, is 50% higher so that's for the future. That's for the coming years. We already used it on some ships but not every ship is suitable to use that double spreader.

Okay, ladies and gentlemen, also an important question maybe interesting

later for your study and for the study on that logistical process. Globally, we have about 45 million containers. Seems a lot but if you know that 13.7 per year are here you now already know that some of these containers go to Rotterdam multiple times a year in the same timeframe. These containers are owned by container companies. So all these different brands that you see they correspond with the different companies that you have and you can hire them and lease them for a timeframe if they are empty. So if your container arrives from China or from Asia, and they arrive here in Europe, you can store them at an empty depot, so you don't have to take them back, but you stored them in the Port of Rotterdam or in one of these other ports around us and there's a system in which the companies or the people that want to lease them, they can see where the empty containers are, and which position and where they can rent them, so they are stored in empty depots around the globe, and that's how you lease them again for a next drop so it doesn't mean that they all go back empty to China to fill them up again, and that's important to know in this story.

We do a scan about 120,000 per year on the content, and we scan all of them on radiation so every each and every container that enters or goes from the container terminal is going through a radiation for radioactive and nuclear material. But actually checking them on content and viewing the photos that is about 120,000 per year. So each three or four minutes – one.

The last time that I heard that was in 2016. The numbers of two years ago was 40. 40 of 12.2 million containers had too high radiation. The first thing I did was go to my colleague to ask what was it inside, and he said to me, it's none of your business. But one container he wanted to share with me, and that was a container with handbags for women from China and the steel parts of these handbags had a much too high radiation, so if you have that on your shoulder, I'm quite sure it's not very healthy, but they didn't match up of course with our rules or regulations here in Europe.

Interview with Stefan Helmreich, Heather Paxson, on the coach trip back from *FutureLand* – Transcript

Naiza: Stefan how was your day at the Rotterdam Port. Have you been here before?

Stefan: I haven't been to *FutureLand*, it's hard to get to the future. So I was happy that there was a boat that went there. And I was struck by the guide's constant reminding of us that everything was larger than it seemed, because the whole enterprise, one thought initially would be all about this mammoth scale, and we'd be overwhelmed by it, and, I guess they have anticipated that people are not so overwhelmed by it as they often imagine they will be, and so they make an effort to say, 'yes you should be overwhelmed, it is much larger than you think it is, it's farther than it appears'. I don't know exactly what to do with that observation about scale, but...

Heather: But it's about pride, I think there is real pride in this operation, and what it stands for, and the history behind it, and the future that it portends for the Dutch.

Stefan: It's about Dutch pride. I was fascinated by the discourse on the future, well the place is called *FutureLand*.

Heather: Unironically

Stefan: Yes, Unironically, which to an American ear, sounds like an amusement park attraction. But, we kept getting pointed to places that were going to be inhabited by companies, and more ships in the future, maybe even larger container ships than we saw...and it even extended as far as claims that they were prepared for extreme sea level rise by the year 2100 or something, so they were very forward thinking, and that was part of the rhetoric, but at the same time, what was interesting at the very end, the tour guide also said that one should not worry about jobs being vanished, rather new jobs will be created and that seemed to be both an ideological and rhetorical defense. I mean, it's not the same kind of jobs, its not the same kinds of people, the class politics of that are not just transferable from one location to another. And then he said that, 'Well, we wouldn't have predicted 20 years ago that the Internet would have revolutionized the economy, so you can't really predict the future'...and we are there in *FutureLand*, where they have spent all this time predicting the future and building an infrastructure...so on the one hand, they have this faith in the future, and on the other hand when it´s rhetorically useful they claim that they don't know what the future holds. So, I found that fascinating.

Naiza: It was quite brutal, the way he just smoothed over the fact of loosing 15,000 jobs to creating new jobs for maybe 70 people.

Stefan: Well, in a way that's his job isn't it, but it became a very shutdown, ideological, pronouncement at the end.

Heather: Well, It was very defensive, clearly anticipated...

Stefan: He was building a wall around the discourse and around the concerns of the company, which is his job. But in that sense it was more about containment.

Naiza: I don't find this sort of tourist offering in other ports, so it was interesting to have this choreographed survey, we spent almost 6 hours with the guide, they impressed upon us the future, the enterprise and the scale up, and so there were no messy bits, no rough ends.

Stefan: No, everything was anticipated, everything was very clean.

Heather: The sustainability message...

Stefan: Yeah, there was also that, it's all sustainable, it's green, so any question you can think of... And what about the gender politics, and then he gave us percentages as well, 'there are no women over here, there are some women over here', these are just facts. There's no explication, it was a simple announcement of the state of the world, and then there is also a place for nature– 'over here on the right hand...' so that's taken care of. So everything is in the container, containerization... from container ships to contained discourse... so those are some thoughts.

Indurable Monstrosities: Megaships, Megaports, and Transpacific Infrastructures of Violence

Charmaine Chua[1]

In the past 5 years, the world's largest shipping companies have been locked in a battle for the title of 'World's Largest Ship.' First in 2013 came Maersk with their Triple-E ships, with a maximum capacity of 18,000 TEU – ships longer than the empire state building on its side. Complacently, Maersk purchased the web domain, worldslargestship.com – only to find less than a year later that it had been taken over by the CSCL Globe, a 19, 100 TEU behemoth launched by China Shipping Container Lines in 2014. Then came the MSC Oscar at 19, 224 TEU, which held the title until Maersk answered back, with new 20, 000 TEU ships. Finally in 2016, OOCL ordered six 21, 000 TEU ships – and that, for now, is where things stand, with the OOCL Hong Kong claiming the title of the first ship to cross the 21,000 TEU Mark when it was delivered in 2017.

If the monstrous ambition of these shipping companies seems like a sort of masculinist game – a Tower-of-Babel-esque quest for mastery over the ocean – you would not be off the mark. But something else is also at stake: the unmitigated expansion of logistical infrastructure produces an unfolding series of political economic crises when they fix themselves in physical landscapes, turning logistical fantasies of seamless global flow into logistical nightmares.

Here's one of those nightmares: On August 30, 2016, without most people noticing, an unprecedented global crisis occurred at sea and out of sight. The expansion of ship sizes brought so much container capacity onto the market without accompanying trade growth that ships began to suffer the weight of over-speculation. Under the weight of a $5.4 billion debt, South Korea's largest shipping company – and

The OOCL Hongkong. Source: Daily Mail UK

seventh largest in the world – Hanjin, filed for bankruptcy. With its assets frozen, 85 ships across Asia, Europe and North America found themselves stranded or placed under arrest, as creditors rushed to seize what assets they could salvage and ports refused to allow Hanjin ships to dock because of uncertainty about who would pay their bills.

This left more than 80 massive container ships, half a million cargo containers and $14.5 billion worth of goods – from Samsung electronics to furniture and food – stranded at sea. As retailers struggled to get their merchandise off these ships, 3000 crew members across the world were stranded at sea, asked to ration their food, water, and fuel amidst diminishing supplies. In some ports, sailors were denied the basic right to walk on land for months – direct victims of a wider supply chain crisis.

If the hurried expansion of mega ships sounds even intuitively like an unsustainable practice, it is my aim to show why and how that has become so, and in turn, to interrogate the links between logistical expansion, speculations about the future of growth, and the effects of infrastructural expansion on human disposability.

In this talk, the question I seek to ask is not primarily a causal one, such as 'why does the shipping industry seems to be shooting itself in the foot by building bigger and bigger ships?' Rather, this chapter poses a question more attentive to the forms of violence such projects entail: What are the spatial, social, and political effects of the monstrous scale of infrastructural expansion? And what does the scale of these projects tell us about capital's imperative to expand value accumulation through the construction of a global logistics space?

As corporations over-invest in the expansion of their shipping fleet carrying capacities, another form of infrastructural expansion is also demanded in the adaptation of port infrastructures, which are often funded by federal and municipal taxes. This means that while the ownership of the means of circulation are privatized, the risks of over-investment are socialized, and come to be borne by society at large in contested and uneven ways. Rather than follow the neoclassic economic logic that megaship expansions are built on the logic of economies of scale, this chapter suggests that private infrastructure expansion cannot be explained in isolation from broader shifts in the way the logistics economy is organized, and in the way the state participates in facilitating the circulation, production, and consumption of commercial capital.

As such, I propose the following argument: Both state and corporate projects to expand the scale of logistics infrastructure are materialized bets on the durability of capital accumulation. As the state-capital nexus seeks to build this durable future, facilitating the expanded reproduction of capital through the growth of global logistics space, these infrastructures become burdens on the public that spatially fix concrete spaces of transit through contested and uneven processes of rescaling and dispossession. As such, it becomes important to understand the expansion of logistical infrastructure not only in terms of the physical system of circulation it enables, but also in terms of the irrational rationalities that these obsessions with monstrous expansion entail.

Interrogating the interface between massive expansion of both megaships and megaports, I argue that the material systems of global supply can be understand not only as durable infrastructure – public works that stimulate local and global economic growth – but as unendurable monstrosities that imprint the violence of global circulation onto the lived spaces of populations that are vulnerable to the displacements and dispossession that such infrastructural expansion produce in their wake. The co-dependency of one monstrous infrastructure (the megaship) on another (the megaport) unevenly distributes violent political effects beyond the port itself, especially into spaces and populations in the global South who supply the raw materials and cheap labor for such undertakings.

'It's an Arms Race': Neoclassical Logics of Monstrous Expansion

At first blush, neoclassical economic rationales for the megaship boom seem to make sense: Since the international standardization of the shipping container, ships have sought to increase in size to capture economies of scale. As seen in Figure 1 above, ship sizes have gradually expanded since the first trans-oceanic voyage of Encounter Bay in 1968. While the largest shipping liners have experimented with increasing their carrying capacities for decades, it was not until the global financial crisis in 2008 that megaships were produced in high numbers. At the height of the financial crisis, freight rates (the slot costs per container transported) plummeted along with global trade volumes (Morris 2015). Shipbuilding orders were cancelled in droves, leaving half-built ships stranded in yards all over South Korea and China. When orders finally picked up again in 2010 and 2011, companies knew that they had to cut costs. Pushed along by weak freight rates and rising fuel costs, many shipping lines concluded that the most cost-effective solution was megaships, which, by expanding the number of containers transported per vessel, could lower the costs of transporting each container by leveraging economies of scale. The larger shipping companies who could afford these costly investments began to place orders in bulk.[2] Maersk first set the trend with 20 18,000 TEU Triple-E class ships, ordered in 2011. Two years later, other shipping companies followed suit, suitably convinced of the competitive advantage of these behemoths.

Building bigger vessels allows ship owners to capture economies of scale in fuel and crew costs, allowing them to lower the unit costs per container and restore profitability through cost-saving measures. If a single mega-vessel can now carry what it used to take 3 ships to transport, fuel costs can be cut by as much as 50%, and crew sizes might be reduced by almost half. These cost-cutting measures have been crucial for the profit maximizing strategies of larger container lines such as Maersk: since their super-post-panamax ships have launched, their freight costs

have gone down from $3108 per TEU in 2011, to $2630 today (Drewry Maritime Research 2014). In micro-economic terms, these cost-saving measures allow larger corporations to capture the market share of global container capacity. For individual carriers, then, the rationale for ordering bigger, more technologically advanced and fuel-efficient ships is based on competitive dynamics at the firm level: the bigger the ships and the larger the proportion of the fleet comprised of them, the greater the ability to edge out competitors by lowering slot costs. In accordance with such calculations, the scramble to order megaships has escalated since 2011. Ninety-seven ships capable of carrying between 18,000 and 20,000 20-foot-equivalent container units are scheduled to be delivered to various companies by mid-2019, crowding an already-large global fleet of megaships with more orders of even larger container vessels.

At an industry-wide level, these calculations quickly begin to meet with wider problems. In the last few years, companies have supplied so many vessels that hundreds of behemoth ships have come into service at the same time, making it difficult for carriers to match demand with burgeoning supply. Since the 2008 financial crisis, trade volumes have not recovered sufficiently, and returns on capital have remained low, resulting in many empty ships traveling across the ocean while filled with far less than their projected maximum loads, resulting in what the industry terms 'overcapacity' (Maritime Executive Staff 2015). Overcapacity poses a supply-side challenge for the shipping industry: with ships traveling only half-filled on their designated routes, the fuel and slot cost savings these large ships were designed for are largely cancelled out, forcing companies to drive down their freight rates. In September 2015, freight rates dropped 59% to an all-time low of an average $313 per twenty-foot container. Even with this price competition, shipowners have failed to fill their megaships with the number of containers that would justify their projected economies of scale. In 2015, Maersk, the largest shipping company in the world, reported a $600 million shortfall in their full-year profit forecast, nearing a 50% fall in profits from 2014.

Considered in terms of the wider industry, the megaship arms race begins to meet its internal contradictions in its inability to meet its own projected outcomes. According to some analysts, low freight demand, overcapacity problems, and the consequent tightening of profit margins led to the top four carriers sustaining a cumulative loss of $3.5 billion in 2017 (Milne 2018). Trade volumes have risen at such a slow pace that they have not justified the high expenditure on megaships. In fact, overcapacity has only exacerbated the problem of slow growth. Multiple maritime analysts have argued that trade volumes must rise before the container line market continues to be flooded with monstrous ships. With overcapacity projected to hit 8-10% by 2018, the highest since the financial crisis in 2008, analyst forecasts for balancing trade volumes have generally been cautious.

In the ideal outcome that these container lines picture, ships would be fully loaded and constantly circulating the ocean. Yet, in the current climate, many ships are idled, and kept out of service at anchor for a month and beyond because there is not enough volume to put the ships in service- and bear the crew, fuel, and docking costs which that requires. In November 2015, the reported laid-up cellular capacity was almost past the million-TEU watershed: 263 container ships were reported idled, totaling 934,700 TEU and representing 4.7% of the total global fleet. Idling megaships evidences how serious the situation of oversupply has become. Carriers typically endeavor to keep their largest ships and therefore most expensive assets active; an idling megaship suggests that desperate situations have called for desperate measures.

Carriers thus face a dilemma: without using the newest and largest ships to lower operational costs, they risk losing business; but by investing in a state-of-the-art fleet, they exacerbate a supply glut and poor freight earnings, and are now struggling to stay afloat. As one shipping analyst confided in an interview, 'Flooding the market with additional capacity is counterintuitive, and I believe all shipping lines know that. Unfortunately, it has become a case of 'you are damned if you don't, you are damned if you do'. Everyone is trying to play catch up' (Bill Hatch, personal interview, 2015). At the firm-level, shipping liners thus respond to an industry-wide problem of overcapacity with a technocratic response based on the self-interests of particular stakeholders, rather than probe into cascading social, material and political effects they bring to bear on the totality of global capitalist relations.

Speculative desires: Monster ships as durable futures

The process by which capitalists, as a class, invest in logics of unmitigated expansion with little consideration of broader structural impacts begs investigation. Shipping experts frequently rely on rhetorics of assurance to indicate their simultaneous faith in and uncertainty about the continued future of capital accumulation. In an industry where fine-tuned cost calculations champion rationalistic, economistic thinking, I often found in interviews with shipping executives that extra – or even non-economic desires often played key roles in decision making.

For instance, in a 2015 interview with Maersk network designer Nils Madsen, I pressed the question of how ordering megaships relied on projections that they would be filled at 100% capacity. 'How do you know that your Triple-E ships will eventually be filled if the global economy is bad and trade volumes haven't been going up?'

Madsen responded: 'Well, you don't know. You hope. There's a bit of hope in it. Of course we try to read the economic numbers, and well, the world economy seems to be growing, no matter what happens. If it grows 2%, then in principle, you need to grow your fleet by 4% to grow the company. So we keep building bigger ships' (Nils Madsen, personal interview, 2015).

Madsen made no admission that the mad rush to build megaships could be the precise cause and exacerbation of a shipping crisis. Rather, he proudly owned the fact that Maersk has continuously set the precedent for larger ships in the industry:

M: What you're going to see is
if we order triple Es, soon everybody
orders triple Es.
C: Right. COSCO copied, UAC copied.
M: And, when they do that, then
we have to respond.
C: By ordering more...
N: More, or bigger.

In October 2015, Maersk CEO Nils Anderson reaffirmed this logic of competition: 'We don't want other companies to leapfrog us and to be more aggressive on investments, so we are going to defend our market-leading position' (Ellyatt 2015). Such logics of defense against 'leapfrogging' suggest that the shipping logistics industry, like many others, frequently justifies its infrastructural investments in terms of firm-level decisions to defend against industry competition. Projections of megaship growth are often made on the basis of maintaining market share, and on the assumption that trade volumes will continue to grow. In this way, a core component of the logic of megaship expansion is a speculative bet on the future of capital accumulation.

Perhaps unsurprisingly, this talk of big ships was also frequently augmented with military and sexual metaphors. 'It's an arms race,' several shipping industry professionals have told me. Nils Madsen went on:

> 'Don't get me wrong, it's an arms race. But also, and maybe this sounds stupid, there is also pride in having the biggest one.'

And then with a wink he said:

> 'I mean, we are men after all, right? We like to have the biggest one, always. That's how it works!'

Carol Cohn has traced in the context of military defense intellectuals that discourses of nuclear strategy frequently employ 'technostrategic' language that is characterized by 'extraordinary abstraction and removal' from military realities and peppered with sexual subtext, or as she puts it, 'white men in ties discussing missile size' (Cohn 1987, 692)

The same might be said of shipping professionals – white men, in ties, discussing not missiles – but very big ships – in very deep harbors. Leaning across the table at a cafe conspiratorially, Madsen explained Maersk's superiority in this way:

> 'We'll always have the biggest. We are in a race to have the most impressive monster. But of course the minute you announce that you are making a new megaship order, you start a war. You are saying [sticking his tongue out and making a taunting noise] 'I have the biggest now! Yay! Show me yours! Come and get me! So you start a war all over again.''[3]

I want to suggest that these juvenile sexual metaphors do more than reveal the performative masculinities embedded in corporate culture. These allusions to phallic imagery and sexual domination are linked to speculative desires about the continued well-being of the capitalist future, marking the extra-economic logics inherent in logistical fascination with infrastructural monstrosity and scale.

The language of monsters captures the tension in which decisions that appear at the outset to be rational, ordered and calculative run up against chance, fortune and mystery. As David McNally notes in his book on the centrality of the monstrous as a strategic-theoretical metaphor for global capitalism, 'the idea that something monstrous is at work in the operations of global capitalism is never far from the surface today' (McNally 2010, 9). The etymology of the monster derives from the Latin monere (to warn). Amongst other things, McNally argues, 'monsters are warnings – not only of what may happen but also of what is already happening' (ibid). Gordon and Gordon similarly note that fear and uncertainty accompany monster metaphors because they are often employed in the face of disaster. Monsters 'are harbingers of things we do not want to face, of catastrophes' (McNally 2009, 10). Shortly after the 2008 financial crisis, journalist Matt Taibbi famously characterised Goldman Sachs as 'a great vampire squid, wrapped around the face of humanity, relentlessly jamming its blood funnel into anything that smells like money' (Taibbi 2010). The idea that something monstrous is at work in the operations of global capitalism is thus never far from the surface today.

We might thus understand the megaship as a monster that expresses both fascination with the grandiose, and fear in the speculative future that is to come. The simultaneous allure and fear of monster capital becomes evident in even a cursory survey of the shipping industry's reaction to megaships. Shipping professionals who exhibit a fascination with perpetual expansions of megaship scales express a contemporary social imaginary in which monstrous ships simultaneously strike a mixture of fear and fascination between that which is knowable, and that which is not, or as McNally puts it, 'the role of human creation in the process of economics in particular and science more generally, and the anxiety induced by the impossibility of exorcising the unknown – economic or otherwise' (McNally 2009, 10).

Marx himself intuited this gothic character of capitalism through the use of the monstrous as a metaphor. In the Grundrisse, Marx explains: 'capital posits the permanence of value (to a certain degree) by incarnating itself in fleeting commodities and taking on their form, but at the same time changing them just as constantly; alternates between its eternal form in money and its passing form in commodities; ... But capital obtains this ability only by constantly sucking in living labor as its soul, vampire-like' (1973,

646). As Jack Halberstam notes, Marx here describes the economic system in which we live, capitalism, as gothic 'in its ability to transfer matter into commodity, commodity into value and value into capitalism' (Halberstam 2013, 103).

Thus, while vampire-like, blood sucking capital accumulation may be the primary desire at work in the shipping industry's megaship frenzy, logics of market competition often stumble over the edge of the rational, relying on categories of hope, risk, and speculation to justify often seemingly self-contradictory and irresponsible forms of economic decision-making.

Drawing from this scholarship on the monstrous, I want to suggest that the building of monstrous ships represents a form of speculative infrastructural building that exhibits a desire for not only market share, but mastery and control the entire architecture of global capitalism. The 'arms race' of megaships becomes monstrous precisely at the point where it crosses the threshold of economic exaggeration, becoming insensible to measured assessments of calculable growth on which neoclassical economic logics are built.

These instances of monstrosity reveal the ruse at the heart of infrastructural expansion: rather than being technical systems for the collective provisioning of basic necessities and needs for human societies – as infrastructure's terminological predecessor 'public works' suggests – logistical infrastructures today are more about monumental projections of the durability of capitalism's future. In situating growth of global logistics infrastructure within an analysis of monstrosity, I am working in part against a tendency in literatures on infrastructure to neglect a broader analysis of the crisis tendencies that arise when infrastructures are built in service of facilitating global flows of capital. Contemporary discussions of infrastructure often focus on the fragility and failure of large-scale physical fixtures (Graham 2009; Chu 2014) In these treatments, infrastructures are the assumed background to everyday life that is 'often hidden, assumed, even naturalized' (Graham 2009, 2): they are the mechanical facilities and organizational structures that maintain and undergird the social life of cities – ensuring that waste is processed, water is potable, and that households have steady supplies of electricity and energy. As various literatures in sociology, geography and anthropology suggest, these otherwise mundane systems only become visible or eventful when they cannot cope with population pressure or budgetary crises, and experience systemic breakdown or disaster (see for e.g. Graham 2009; Edwards 2003). In these instances, infrastructures become spectacles of state failure, evidence of the inability of federal and municipal governments to equitably distribute the basic technical apparatuses for collective life (Latour 1999; Larkin 2008 & 2013; Star 1999).

Yet, these shortcomings do not only result from the failures of national fiscal regimes or localized governments. As Timothy Mitchell argues, 'they also reflect a contemporary world in which financial

infrastructures allow the accumulation of capital to bypass the work of building durable or productive structures for collective life' (Mitchell 2014, 437). As capital has been drawn into large infrastructures, it flows into projects that weaken rather than enhance the possibilities for future collective life: into pipelines for oil exports, skyscraper condominiums, privatized airports, and fracking fields. In addition, these fixed, immobile, and large-scale infrastructures, increasingly massive in size as they seek to service larger volumes of containers coming into the port, extend the fixed infrastructure of distribution – and the associated pollution, noise, and spatial expansion entailed in their construction – unevenly across the city, effectively shifting the costs, and socializing the risks onto society (Li 2009).

In fact, the history of infrastructural development is embedded within capital's efforts to increase its control over territory and workers across long-distances. In the latter half of the nineteenth century, the construction of large-scale networks of transportation and communication gave rise to new relationships between infrastructure and speculation. The railway is a prime example of this relationship: it was the financial cost of railway construction – over such extents of scale and distance – that necessitated the growth of joint stock companies and public finance (Chandler 1977; White 2012). Only by issuing stocks could railways obtain the long-term finance they needed, as the cost of construction was too great for any individual or even extended partnership. In the years from 1843 to 1845, railway development prompted a speculative mania in Britain as investors became increasingly enthusiastic about the prospects of each line proposed (Odlyzko 2010). They appeared to offer investors an almost guaranteed return since, once built, a railway line had near-monopoly of transport between the towns and hubs it served. Stocks issued by railway companies became speculative counters held for future gain, rather than because of their intrinsic worth. Governments simultaneously anticipated how railways would benefit the national economy, and gave land grants to rail companies that in turn sold the land to settlers, real estate companies, and other businesses to raise capital for the railroads. In this way, infrastructural expansion, the states' facilitation of private interest, and speculative economies became yoked together as they mobilized scarce finance in order to exploit the opportunities for long-distance control.[4] It is not in the scope of this chapter to chart a longer relational history between railways and ships, but what I wish to mark for now is the ways that long distance expansion has long been imbricated in an imperial project.

The durability that transport infrastructure promises reflects a corresponding speculative fragility. Here, I follow Timothy Mitchell in thinking through the 'durable yet fragile' nature of infrastructure. For Mitchell, modern infrastructure gave birth to corporate power by containing the promise of income flows that the long-lived fixed capital of equipment and technical systems seemed to guarantee:

> 'Finance capital expanded into a future built upon the new life span of infrastructures, charging its flimsy paper work of financial promises with the durability of the iron, steel, copper, lead and concrete through which it now lived. Capital bulked itself up through the scale and longevity of the material grids of modern collective life, and then traded the expectation of this future income by selling speculative shares in the present' (2014, 438).

This is another way of stating Marx's insight that, counter to a Schumpeterian celebration of creative destruction where successive innovations shape the various epochs of modernity, the fixed capital invested in infrastructure and heavy machinery is bound to meet with contradictions as the falling rate of profit outpaces the ability for that sunk capital to return the surplus value invested in it.

What Mitchell's insight emphasizes in addition to Marx, however, is that the apparent longevity of infrastructure is sold as a promise on future gain. Its durability is not only a liability – that is, the fact that capital is tied up in particular objects and pinned down in place is not only a problem of fixed capital which the capitalist must overcome – it also expresses an implicit faith in the continued renewal of capital's future. In this way, understanding infrastructural expansion as 'a promise of material durability in an otherwise 'flimsy' paper world' connects the relations between material fixed capital and financial speculation (Mitchell 2014). To emphasize the relation between the seemingly immaterial world of financialization and the material durability of the worlds we build, traced in terms of very particular modes of engineering, construction, and planning imprinted across space, is to interrogate the relationship between future and present. As Mitchell illustrates, durability means that the value of the enterprise 'doesn't rest in the steel or concrete that is built, but value rests in the revenue stream that is discounted to reflect uncertainty and sold in the present in the form of stocks or bonds in many other forms' (Mitchell 2014). Durable infrastructures are not (or not always) as Adam Smith and urban planners might suggest, public works that stimulate local economic development. Rather, they are concrete materialities that perform qualities of durability, out of which is created a financial bet on the future that is reflected in the present through qualities of speculation and uncertainty.

We can now add another dimension to this relationship between infrastructure and the state. If the value of infrastructural projects depends on their performance of durability and corresponding ability to obtain a revenue stream for the state, the state is in turn incentivized to build infrastructure whose primary purposes are neither immediately publicly functional nor responsive to collective need, but rather that channel corporate flows of capital, and facilitate a structure of urban planning and decision making in which corporations seeking enhanced mobility have extraordinary power to make

determinations over where and how public funding should be spent, and on which infrastructures. The monstrous expansion of megaship sizes and the accompanying expansion of port systems exhibit this tendency. While shipping liners may understand their investment in burgeoning ship sizes as efforts to reduce per unit costs, their corresponding demand on corresponding ports require intensive outlays of public finances.

Port expansion and the unendurable distribution of logistical violence

In fact, ports worldwide are only just beginning to understand the impact of this growing presence of mega-ships. Terminals originally built to discharge cargo from an earlier era of ship sizes (5,000 TEUs and below) are now struggling to handle cargo from ships that in 2005, had twice, and now in 2018, four times those carrying capacities. In a 2016 report by the International Transport Forum, researchers found that the average vessel has increased by 79% in size over 2007–2014 (Dynamar 2015), concentrating ports into a hub and spoke-network, consisting of a limited number of large ports that can support main intercontinental trade lanes, with smaller feeder ports connected to these larger ports. For example, in North Europe, about 4/5ths of all direct calls from Asia dock at six main ports. Similarly, in the US, almost 40% of all shipping traffic docks at the Ports of Los Angeles – Long Beach (ITF 2015, 33–35). While ordering larger ships may achieve cost savings for ocean liners, the megaship growth has led to the clogging of supply chains by creating bottlenecks at ports that are not ready for oversized vessels

All ports fear being replaced by the quicker, more efficient passage, so they invest heavy fixed capital in upgrading their infrastructure. The prospect of receiving bigger ships with larger volumes of cargo has increased the competitive dynamics of urban centers and nations seeking to attract big ships to their ports, and the revenue associated with increased maritime traffic. Major seaports from Long Beach to New Jersey have been investing in capital-intensive adaptations, leading to what some have called the 'battle of the ports' (Danyluk forthcoming, CanagaRetna 2010, 12; Spivak 2011). Cargo traffic in the Port of LA has increased 700 percent since the early 1980's, and the port now has a 10 million containers per-year throughput of imports and exports. By the year 2020, the Port of LA expects the container throughput to rise to 24 million TEUs (Alameda Corridor Project 2001). The Port of LA and Long Beach's combined commitment to creating a logistics space that can accommodate large ship capacities has been an important factor that enabled the ports to capture 56 percent of containerized Asian imports into the US by 2005 (Leachman 2007 in De Lara 2018, 46).

To accommodate this traffic as well as to increase its competitiveness, the port has engaged in two consecutive rounds of infrastructural adaptation through landfill, bridge-raising, and dredging projects. Building a megaport is a mammoth task, both financially and spatially. Channels must

be dredged to make way for a deep water harbor, not only once, but repeatedly, in order to counter the tides that are constantly depositing sand. Islands are blown up. Crane heights must either be raised, or replaced by larger ones altogether. Yard space in the docks must be increased to support the higher volumes of containers entering the port at any one time. In the hinterland, highways, railroad corridors or intermodal systems are required to support the concentration of cargo coming into the city at any one time. There has been an increasing demand – and shortage in supply – of truck drivers. Stowage plans for dock yards now have to accommodate up to three times the container loads coming into port than just a few years ago. These infrastructural modifications, which have to be made repeatedly as megaships have continued to grow, have caused widespread delays in ports across the globe. Once vessel capacity exceeds a terminal's ability to efficiently load and unload increasingly bigger ships, backlogs reverberate around the globe.

In this respect, it is important to consider how the demands of megaship expansion distribute the consequences of monstrous expansion unevenly: Today, port cities battle to become logistics hubs because gaining foothold as distribution gateways has become an increasingly central way in which states attract foreign capital investment to their borders. States that do not have the ability to invest public and private funding into the heavy, immobile, and quickly superseded port machinery and large-scale infrastructure quickly lose out. As the World Bank noted: 'Logistics brings access to new markets; but for those whose links to the global logistics web are weak, the costs of exclusion are large and growing.'

In this way, the growth of supply chain networks has prompted states to justify the environmental costs, drain on public resources and the like as necessary developments to tap into the future of logistical accumulation. As pressure to organize state space that is made safe for logistics flows, dispossession becomes justified through the necessity of monstrous expansion. In this sense, infrastructures of global circulation are more than just technical apparatuses for the mobilization of matter into legible human resources (Chu 2014). They are also the physical manifestation of the state's plans for the future shape of its productive forces.

There are numerous ways in which the rise of the global logistics economy has distributed growth unevenly. In the final section of this essay, I wish to illustrate through one brief example how the monstrosity of infrastructural growth produces violent effects on the spaces and bodies of populations situated at the margins of the global capitalist system. In this example, renewed demands for capital to flow seamlessly through the global circuits of production impact lived realities in ways that expose the unendurable monstrosity of the infrastructural projects otherwise cast as durable futures. The example I turn to is that of land reclamation or terraformed capital in

the port of Singapore: when the construction of a megaport has required massive tracts of land to be 'reclaimed' from the sea.

Terraforming the port: expansion through dispossession

In Singapore, the need to expand logistical space expresses itself in the 'reclamation' of vast swathes of land from the surrounding ocean. As a land-scarce nation, the island state of Singapore, for much of its history since independence from colonial rule, has been engaged in what is known as land reclamation projects in order to increase the living and working space of the island. In the fifty years since its independence, its population has more than doubled, requiring the continuous construction of both private condominiums and the high-rise public housing that serves 80% of the population. But vertical growth has not been enough to sustain a burgeoning populace: Singapore's land area has grown from 581.5 km² in the 1960s to 723.2 km² today, an increase in territory of almost 24%. By 2033, the government plans to increase its land area by another 100 km², making the island a full 30% larger than its original size. Singapore's land reclamation strategy has not been about pure expansion, but the strategic expansion of commercial space. In the 1960s, extensive land reclamation works joined up seven offshore islands to form Jurong Island, a large manmade island that houses Singapore's hazardous chemical and energy industries away from residential populations. But no land reclamation project has been as extensive as the Tuas reclamation project, which is creating a $3.5 billion deep water port on the western tip of the island, strategically located in a region with proximity to important logistical distribution channels, namely industrial areas, expressways, and the Second Link, a route often taken by goods vehicles travelling to and from Malaysia (Teo 2003, H14).

'Because the port thrives, so Singapore thrives,' Prime Minister Lee Hsien Loong would declare at the unveiling of the terminal in 2015 (Lee in Lim, 2015), articulating a common refrain in the national imaginary: if the survival of this tiny nation-state hinges on the continuous expansion of its markets and working population, so too, does it require the expansion of the spaces in which they operate. As the busiest transshipment port in the world, Singapore regularly hosts the largest megaships in the global fleet, since it is the stopping point between the largest Asia-Europe shipping routes. To shoulder the increasing vessel capacities, the Ministry of Transport has laid out a plan to move the entire port operations from 3 different points on the island to a large piece of land on the western corner. This mammoth project will require reclaiming a portion of land that is a whole 7% of the current island area, and will cost 4 billion dollar project, financed primarily by the Port of Singapore Authority (PSA) – a private entity who uses public funds acquired indirectly from Singaporean's compulsory saving schemes for many of its operating costs.

A map of Singapore's territorial expansion from 1965 to present. White areas represent the original land area of the island; the pink designates land that has been reclaimed up till the present day; and the red projects the land that will be reclaimed by 2033.

To supply itself with reclamation material, Singapore first leveled most of its hills in the 1960s, transforming an undulating island into a largely flat surface. Then, it dredged its coastal seabed. Local resources have, however, been barely sufficient to support the massive need, and so Singapore began importing sand from neighboring countries. In the last 20 years, Singapore has imported a reported 517 million tons of sand, making it by far the largest importer of sand worldwide (UN Comtrade 2014, Peduzzi 2014). To give this mammoth figure some context, terraforming 0.6 miles of new ground requires 37.5 million cubic meters of sand fill. This is the equivalent to 1.4 million dump trucks' worth of sand – a line of trucks so long that it would snake from New York City to Los Angeles, and back again. Most of this sand used to come from Indonesia, Malaysia, and Vietnam, but as the environmental impacts of sand mining have increased, depleting marine life, impeding seaborne traffic, and erasing at least 24 Indonesia islands since 2005, all these countries have now restricted or banned exports of sand to Singapore (Peduzzi 2014).

Yet, despite recent media coverage about the implications of potentially illegal practices of sand mining (Milton 2010; Comaroff 2014), under the United National Convention on the Law of the Sea, Singapore can legally 'reclaim' sovereignty around existing islands, reefs, and archipelagos. In this way, land reclamation constitutes a legally sanctioned form of territorial expansion, whose violent effects on vulnerable populations are often obscured by debates over its geopolitical implications. Joshua Comaroff notes in Harvard Design Magazine, for instance, that because the 'physical basis of the state can be incrementally eroded or expanded' (Comaroff 2014) land reclamation inaugurates a 'flow of territory' quite distinct from other forms of territorial expansion such as war, military occupation, or colonial expansion.

The viscosity of coastal borders augments a key insight. Far from finite and unchanging resource, territory in its modern conception is, as Stuart Elden argues, a particular technology of sovereignty rather than an objective fact: a 'distinctive mode of social/spatial organization' that is 'historically and geographically limited and dependent, rather than a biological drive or social need' (Elden 2013, 10). Land reclamation is not a new form of appropriation. Rather, territory has always been a particular mode and logic of spatial organization, in which ostensibly 'new' territory always comes from somewhere else. As Neil Smith notes in the colonial context, beginning in the 1880s, capital ran out of 'absolute' space into which it could expand (2008, 119) with the final partitioning of Africa at the Berlin Conference in 1884. For him, in order to sustain the necessary economic expansion of capitalism, capital has to seek new pathways for accumulation, so that when the seizure of 'unoccupied territories' was complete, geographical expansion had to turn to other forms of partitioning and redivision.[5] Yet, land reclamation exhibits a tendency that straddles Smith's line between expansion through absolute space and redivision through relative space: in expanding Singaporean territory by extracting a territorial resource from its neighboring countries, Singapore participates in widening the uneven geographies of capitalism. As a state seeking to optimize space for facilitating logistical circulation, Singapore's reclamation practices pursue the expansion of capitalist space at the expense of the destruction of other spaces and livelihoods.

To pause over the term 'reclamation' for a while, one might recognize that dubbing an act of terraforming as 'reclamation' is a misnomer. In its deverbative form, reclamation suggests an act of restoration or return in which one is retrieving something that was once yours. This works as a fiction on two registers. First, it presupposes that the coastal sea itself acts somewhat as an aqua nullius, 'empty' space that has no history or value, except to be turned into the property of the state, with the corollary that reclamation is coextensive with an active dispossession from elsewhere. This naturalizes a thoroughly human process of dispossession as a form of natural right. Second, to name the process as a form of 're-claiming' centers the spatial locus of activity on the site in which land is being created, rather than from where it is being taken away. In reclamation, a state deserves to procure or cultivate a site of habitation or commerce; few questions are asked about the impacts on the vulnerable communities and environments in and around the sites from which sand is extracted.

This, however, is where the uneven distribution of the logistics economy becomes especially evident: Because the

heavy financial burden of port construction is placed on states to build infrastructure, states have differential capabilities to expand and build hypermodern ports, depending on their access to capital: competing ports along the straits of Malacca – Indonesia especially – do not have the same extraordinary access to capital that Singapore does. As a result, peripheral ports, and regions with inadequate (and therefore more expensive) access to transportation infrastructures often take on risky growth strategies, including immense foreign debt, in order to compete for commodity flows.

Yet, within a global logistics economy where ports are relatively substitutable within hypermobile corporate supply chains, logistics-oriented growth strategies have not been found to bear fruit. As Danyluk (forthcoming) and Jaffee (2015) have argued, most of the goods moved through a transshipment region are destined for somewhere else, and general no local sales tax revenue, such that the payoffs for risky investments in logistics infrastructure are often vastly overstated. Resultantly, there is little access to the economic benefits of mobility that these ports facilitate.[6] In this sense there is extraordinarily differential in access between developed and developing countries in their ability to compete on the basis of a logistics economy: building the physical infrastructure that requires such heavy capital investments privileges countries who not only have the financial ability to pay, but also requires that those who seek that model of development bind themselves into systems of debt and credit that exacerbate uneven geographical development between competing localities.

That the benefits of these logistics-oriented schemes are dubious should be further weighed against the economic, ecological, and social costs of infrastructural investment. As Danyluk argues, while 'place-based elites and officials go to growing lengths to capture cargo, the costs and risks are disproportionately borne by the most vulnerable actors in the network' (forthcoming, 21). Studies suggest that the true casualties in competing port growth are the communities who live and work in the pathways of global trade. The Malaysian media has reported that Singapore's land reclamation in the Johore straits has affected thousands of fishermen who make their livelihoods in the coastal zones of Tanjung Kupang, Tanjung Surat, and Kota Tinggi just across from Singapore's Tuas land reclamation site (Straits Times 2002, Shepard 2018). A research officer for Friends of the Earth Malaysia has also found that the land reclaimed in Singapore has meant the annihilation of mangroves, wetlands, and reefs, destroying the habitats of fish, sea turtles, and other marine life, and trading off the multi-million dollar fisheries sector in Malaysia for the pollution and waste of transport hubs and industrial zones (Shepard 2018).

In Indonesia, Singapore's sand mining activity has similarly adversely affected local communities. According to the Indonesian Center for Forestry Studies (LPHI), more than 500 cubic meters of sand had been exported from Riau to Singapore when the Indonesian government banned the trade in 2001 (Kog 2006, 18). The LPHI's Chairman

suggested that 4000 square kilometers of seabed, as well as an extensive area of coral reefs, had been damaged by sand mining in Riau. According to his estimates, at least $1.2 million is required to rehabilitate just 1 square kilometer of seabed, such that the revenue earned by central and local administrations in sand exports was far below the amount needed to rehabilitate Indonesia's coastal environments (Kog 2006; Haidir 2003). In 2001, Indonesian environmental NGO Kaliptra issued a report that dredging and mining within meters of the shore had caused coastline erosion, destroyed fishing grounds, and leading to the disappearance of 24 Indonesian islands since 2005 (Surya 2003; Kog 2006, 19). The report suggested that rehabilitation would take more than 30 years. In Riau, fishing communities have reported that incomes have plummeted as much as 89% since the sand trade began (Surya 2003). These groups, who are disproportionately poor and racialized, thus subsidize the growth of logistical economies through the dispossession of their own livelihoods, environmental degradation, and health impacts.

There is some irony in noting these environmental impacts of extraction (Sonak et al., 2006, Kondolf 1994): the very anthropogenic changes caused by such forms of extraction have become part of Singapore's raison d'etre for land reclamation. Officials have cited sea level change as a primary motivation for raising the level of reclaimed seabeds, portraying Singapore as a victim of climate change, even as the bulwarks that ostensibly protect the island from such processes play a key role in exacerbating its effects. Not least, the labor hired to do the work of such infrastructural development are often precisely those driven from their own communities by such predatory practices of extraction – hired on short-term, contingent, and extremely low-waged contracts to perform highly dangerous work. In this, the very workers charged with expanding Singapore's sovereign space facilitate their own dispensability by constructing the very infrastructure that pursues economic growth on the basis of their precarity and low wages. At multiple scales, then, the pursuit of logistics-based growth strategies, of which Singapore provides only one example, reveal themselves to be risky investments in logistical futures. These logistical futures should be treated with caution, given the uncertainty that they will produce the economic outcomes they promise, and also given the power relations they reproduce between the elites who justify logistical expansion on the basis of the public good, and the public who bears the costs of these projects in unevenly distributed ways.

Conclusion

In conclusion, What I hope to have done today is to think through the infrastructures of violence that accompany acts of monstrous expansion. If the monumental increases in the scale of hypermodern logistics systems are efforts to renew capital accumulation through extending the power of supply chains over the world, these claims on a

capitalist future are ultimately and always unevenly distributed.

Importantly, however, material infrastructures are not resolutely unchangeable systems. Lauren Berlant has written that infrastructure is not identical to system or structure, as we currently see them, but that infrastructure is defined by the movement or patterning of social form. Infrastructure is in her words, 'the living mediation of what organizes life: the lifeworld of structure' (2016, 393). If the current life-worlds of monstrous infrastructure are the vampire squids that suck the life from us through prisons, pipelines, mega-ships and terraformed dispossession, it is ever the more urgent that we refuse to normalize the durability of monstrous capital – and ask instead how we might organize durable, collective infrastrucutres that link us – not to capital's mendacities, but to alternative possibilities for world-sustaining relations. Or – as organizers of the blockade of the Port of Oakland in 2011 put it: It is to Block their world – in order to unleash our own.

Blockade of the Port of Oakland in 2011. Source: libcom.

[1] This essay is a revision of a talk originally given at the Sonic Acts festival, Amsterdam, Feb 2017.

[2] For example, Hyundai Heavy Industries reports that since 2010, it has built 82 ships of more than 10,000 TEU but has received orders for only five ships in the 5,000 TEU range (Morris 2015).

[3] Madsen, pers interview

[4] Although it is not the focus of this chapter, it should be noted here that the growth of long–distance transportation infrastructure has a particular historical role in settler colonialism and dispossession. See, for e.g. Lisa Lowe 2015, Davies 2015.

[5] While I do not have the space to go into it in this chapter, Smith's proposition of a neat temporal distinction between expansion through 'absolute space' and re–division through 'relative space' has been subject to questioning in debates over the ongoing presence of primitive accumulation in settler colonial contexts (see for e.g. Nichols 2015; Ja;; 2013). The colonial implications of land reclamation might arguably blur these lines between absolute and relative space

[6] This is exemplified by the existence of pure transshipment hubs where freight congregates then moves on, but never actually leaves the port to enter the country. Thus a poor region may have huge amounts of trade massing on its doorstep while obtaining little benefit for its own economy. For example, 99% of the 1.1 million TEUS handled at Freeport in the Caribbean are transshipped and do not stay in the local economy. This reflects tensions between relational and territorial power, as discussed by Amin (2004: 36): 'local advocacy must be increasingly about exercising nodal power and aligning networks at large in one's own interest, rather than about exercising territorial power'.

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FutureLand Choreographies – Ifor Duncan

In *FutureLand* the Maasvlakte is a logistical theatre of whispers. The multiple voices of this six-part film expose the elements and sequencing of global supply chain choreography. Deriving from the same root as the chorus of Greek tragedy (a group of bodies who exist between the action and the audience).

Khoros (Greek) – Khoreia (Greek / dancing in unison) + graphy (English) ≈ Choreography (written notation of dancing – late 18th century).

There are two competing choreographies at play in the film: the first is a logistical form, the second disrupts this form. The group who made the film *FutureLand* form a chorus to critically mediate the invisible processes operating in the logistical choreographies of global commerce.

These choreographies sequence the shipping of energy, resources and commodities through mega-ports and between producer and consumer. Supply chain ecosystems connect processes together.

Beyond these connections, in the language of advanced logistics, 'choreography tracks all the information, data and messages between all the used and available services (...). It is responsible for tracking the sequence of multiple services instead of orchestration by – and control of one party.'[1] The Global Supply chain employs its own semantic renderings: 'We suggest the use of a network of ontologies to support choreography.'[2] In explanatory echo the film's chorus declares, 'Infrastructures are matter which enable the movement of other matter. Their peculiar ontology lies in the fact that they are things and also the relation between things.' Through 'peculiar ontologies' algorithms auto-choreograph repetitive percussive movements that attempt to inscribe predictable sequences. Contingencies resist this through breaking rhythms, where the actors meet and miss their cues: 'Just in time' – 'out of time' – 'beyond time.'

The film *FutureLand* reveals the frictions produced by the algorithms, which simultaneously construct and conceal the supply chain's hegemonic processes of power. This is achieved through the use of multiple scales: the particulate, efficiencies of movement, cyborg etymologies for emergent processes, future markets, radioactivity, race.

In *The Birth of Tragedy* Nietzsche paraphrases Schiller's definition of the chorus: 'a living wall that tragedy pulls around itself to close itself off entirely from the real world and maintain its ideal ground and its poetic freedom.'[3] In the Maasvlakte the real world of the port and logistics is walled off from the external illusion. The film was made during a tour of the port of Rotterdam. The tour guide became the port's very own choric voice verbally drawing walls for the ideal ground of the port. In his comic yet malign delivery he tells us that the port was once the 'North Sea.' To counter his interventions the film employs an alternative chorus of voices and feedback interferences as tools to contend the image of the port's walls as the limits of the supply chain ideal. It is here that 'traces leak' from the chain's accumulating tragedies.

> ‘With a lot of sand from the bottom of the sea we made a new island’ — echoes the voice of the tour guide, his semantic violence re-marks nature / culture: ‘here’ and ‘here’ ≈ ‘A seal’

Deleuze dreamt of islands – ‘pulling away, of being already separate, far from any continent, of being lost and alone – or it is dreaming of starting from scratch, recreating, beginning anew.’[4]

The choric guide points out ship’s flags: ‘These are all places on the planet (...) there they have a good tax system for these ships (...). But it doesn’t go to the Bahamas, it never goes to the Bahamas, it never comes to the Bahamas, it stays here in the region, goes to Russia back and forth. By the way, all the water that you see is all for the expansion for the future, so all that water that we have here is possible to make new land again, so we have land and space for more decades. — A seal!’

‘Vibratory Movement’ is a choreographic element, also present in supply chain choreography: repeating individual start-and-stop patterns. The persistent movement produces a hypnotic effect. The supply chain’s own vibratory movement produces a global hypnotic effect. In another choreographic element the film describes halting as ‘strengthening points for the system,’ through start-and-stop patterns. Hypnotic and persistent halting repeats as:

Land/water produced anew (new land again) and deconstructed in percussive, (it never goes to) pendulum rhythms (back and forth) of restless temporality. Nature / Culture is constructed and re-constructed in capital (expansion for the future) yet to come. Future: land / port and yet also sea, shifts (goes to) in vibrating nature / cultures (it stays here). As broths of plastic scrap future markets circulate (new land again) in this more than real port.

All the world’s a stage:

For Nietzsche the chorus emerged out of man’s arrival at the ‘peak of self-negation’ and a need for new symbolism for the body: ‘of the mouth, the eye, the word, but the rhythmic motion of all the limbs of the body in the complete gesture of the dance.’[5] The body is always everywhere / absent in the port. What are the bodies produced by supply chains? Ergonomic dissonances emerge through the revelation of the multiple sequences of logistical choreographies. In the film an algorithmic dithyramb is performed as a feedback of circulating data – the chain’s multiple yet singular cyborg body in ergonomic excess.

The Triangular trade ruptures the semantics of *FutureLand*. The port’s choric guide interjects, ‘we make money with the visits of ships.’ Beneath the halting sequences is a bodily logistics of negation – HALT – the system protects itself here. DITTO+DITTO resist here. The cyborg interjects: ‘Lost Property is circulation’. Choreographies remain buoyant.

All the world’s a port

[1] S. Dalmolen, H. M. Moonen , J. van Hillegersberg, A. J. R. Stoter, E. Cornelisse, “Supply Chain Orchestration and Choreography: Programmable Logistics Using Semantics,” *4th IEEE International Conference on Advanced logistics and Transport* (2015), 76. https://ris.utwente.nl/ ws/portalfiles/portal/5505718

[2] Ibid, p.77

[3] Friedrich Nietzsche, *The Birth of Tragedy: Out of the Spirit of Music*, trans. by Shaun Whiteside (London: Penguin, 1993), 37.

[4] Gilles Deleuze, *‘Desert Islands,’ Desert Islands and Other Texts: 1953-1974*, ed. by David Lapoujade, trans. by Michael Taormina (Semiotext(e), 2004), 10.

[5] Friedrich Nietzsche, *The Birth of Tragedy: Out of the Spirit of Music*, trans. by Shaun Whiteside (London: Penguin, 1993), 21.


MAERSK LINE

Colophon

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