### 1---K

Haunting K

#### The plastics industry creates dispossession where Black, Indigenous, and impoverished people are the site of toxic accumulation in order to save the white world.

Davis 22, professor of Culture and Media at the New School (Heather, “Plastic Media”, *e-flux journal* #126, April 2022, https://www.e-flux.com/journal/126/458489/plastic-media/)--js

The slow violence in Mossville and throughout the region accumulates and concentrates white supremacy through plastic infrastructures. Black land and bodies are forced into an “ontologized plasticity,” as Zakiyyah Iman Jackson has called it. The land is presumed to be there for development, for progress, for infinite and limitless transformation. The loss that happens here is a loss imposed by this violent plasticity—the land, air, and water made plastic through petrochemicals, rendered unrecognizable and unlivable. PVC distributes the effects of white supremacy in the air, water, and soil. As Denise Ferreira da Silva argues, it is impossible to understand contemporary capitalism without acknowledging the ways that it is built on, and continuous with, the project of slavery. This is particularly evident in how capitalism endures through settler colonialism as a mechanism of dispossession and dislocation by making the land itself toxic. Toxicity is justified as necessary to progress and economic growth, where some bodies are deliberately held as accumulators of toxins so that others can profit. The collusion of the Louisiana government and industry continues this legacy, where slavery was not, as Sharpe argues, a singular event but rather a singularity. This singularity continues, pulling into it bodies and land, here operating through plastic. Plastic’s inheritance, the wealth and supposed safety and sterility that it brings for certain people, depends on the disposability of Black, Indigenous, and poor communities.

Here plastic is transmitted onto people and land. “Transmission” has two primary meanings. The first is associated with conveyance or transference, from one person or place to another. Chemical transmissions are also a form of transference, transferring the harms and costs of technological progress onto peoples and places at a remove from those who directly benefit. The second definition speaks more specifically to the ways in which the concept of transmission applies to mass media, where transmission often refers to light, heat, sound, and electromagnetic waves, as in a broadcast. This latter definition is taken up in media studies, where transmission describes the flow of information from source to audience. However, as many media theorists have argued, the transmission of information is often full of noise, and the audience is not without its own capacity for response, or interpretation, as Stuart Hall has made clear. In the process of plastic’s transmission, it has encountered a lot of resistance. The Black communities that are being dispossessed fight all the way to keep their homes and bodies safe.

Chemical Media

It is not only through the content of Solastalgia that plastic is linked to photography; photography is a medium that has always been dependent on plastics and petrochemicals. One of the first precursors to plastics as they are known today was celluloid. Celluloid was the generic name for cellulose nitrate, made from a polymerization process derived from plant material. It was originally created to replace billiard balls and was later used as an alternative to horn or ivory. But celluloid became famously associated with media technology through its use in cinema. As the journalist Stephen Fenichell remarks, “Celluloid film succeeded in raising the first plastic’s cultural profile from a medium of mere mimicry into a priceless repository of human memory.” Plastic becomes central, not just to the material culture of twentieth-century life, but to mass media and human memory, including in photography. Later, audiotape, vinyl, and CDs came to etch the human voice, music, and images onto various synthetic polymers. The worlds of art, representation, and imagination now rest on plastic and oil as their basic substrate. As Stephanie LeMenager writes, “Oil itself is a medium that fundamentally supports all modern media forms concerned with what counts as culture—from film to recorded music, novels, magazines, photographs, sports and the wikis, blog, and videography of the Internet.” Contemporary culture is saturated in oil. Moving from analog to digital did not lessen our dependence on oil or plastic; plastic constitutes approximately 17 percent of most electronic devices, including digital cameras and the computers and phones we look at photographs on. The infrastructure of digital media relies on plastic to function, as it coats the underwater and underground cables that are the invisible yet fundamental substructure of the internet. Plastic is used in these circumstances for its ability to insulate and because of its nonconductivity. For, far from being an immaterial “cloud,” the internet relies on very specific and highly material infrastructures, such as transoceanic cables and server farms, which themselves are very much dependent on the material of plastic. In fact, plastic constitutes the conditions of digitality, included in everything from the networked infrastructures to the hardware to the production of various photographic and display technologies. It provides the infrastructure for the offices and other buildings in which all these materials are developed and produced—from the carpeting to the paints to the desks and clothes of workers.

As plastic has become so central to communications and infrastructure, plastic operates as a logistical medium—that is, a medium that sets the “terms in which everyone must operate.” Plastic determines so many of our relations, including the goods we can access, the distribution of food, access to water, medical supplies, and an infinite variety of other things that arrange and regulate the movements of people and the qualities of our lives. It is a leverage point of power, distributing and amplifying other systems of inequality.

#### Your understanding of technologies liberatory potential obscure that they are embedded in plastic---there is no pure tech, or pure electricity, they are all dirty, founded on oil.

Taffel 21 – Sy Taffel is codirector of the Political Ecology Research Centre at Massey University. (“Data and oil: Metaphor, materiality and metabolic rifts,” 2021, pg. 6-9) julian \*language change bracketed

Mapping assemblages of data and oil provides an important perspective for understanding how the knowledge/power nexus operates in computational capitalism. This involves shifting the focus of digital exploitation away from a critique of surveillance capitalism’s encroachment upon the liberal fantasy of individual human autonomy (Zuboff, 2019), instead foregrounding unequally distributed social and environmental harms associated with the material dimensions of digital extractivism. The multiple material connections between data and oil require elaboration partially because of the commonplace misconception that a technological teleology runs from primitive tools, through dirty and polluting industrial machines, to smart, green information technologies that depend on immaterial labour, and produce virtual realities and where knowledge resides in a cloud. Behind this obfuscatory discourse, however, lies a material reality whereby digital technologies and the data they produce are deeply entangled with dirty, toxic and energy-intensive extractive industrial processes. Focussing upon materiality does not, however, imply that discourse is unimportant; the aim is to demonstrate how popular ideas about digital technology conceal substantive social and ecological harms. Without shifting the discourse, those harms are likely to remain unaddressed.

At one level, between 15% and 25% of the mass of most digital microelectronics devices are literally made of oil in the form of plastics (Fisher and Kingsbury, 2003; Hobi International, 2013): synthetic polymers derived from petrochemicals. Plastics are used in microelectronics for numerous reasons: as electrical and thermal insulators, they are well-suited for components such as circuit boards, their light-weight and capacity to be moulded while retaining strength and durability makes them appropriate for cast parts such as casings and fans and their elasticity is ideal for flexible components such as cable housings. Cumulatively, electronics industries use approximately 18 million tonnes of plastics every year (Geyer et al., 2017). The presence of such significant quantities of plastics within microelectronics allied with issues surrounding plastics’ non-biodegradability and bioaccumulation denotes that digital technologies are among the substances associated with contemporary concerns over oceanic plastic pollution and terrestrial electronic waste (Taffel, 2016).

While the complex geographical flows of electronic waste significantly depart from straightforward narratives of the developed world dumping toxic waste on impoverished areas, ‘there are undeniable toxic impacts on people and environments associated some forms of e-waste processing especially, but not exclusively in developing countries’ (Lepawsky, 2015). E-waste is far from equally produced: of 53.6 million metric tonnes of e-waste produced in 2019, countries such as Rwanda and Sierra Leone generate around 0.5 kg per capita, whereas the United States, United Kingdom and Australia produce over 20 kg per capita (Forti et al., 2020). As with many Anthropocenic crises, the problem is not an undifferentiated humanity but economically privileged humans. Harms resulting from e-waste include children with elevated levels of lead in their blood (Guo et al., 2014) and DNA damage (Liu et al., 2009). While these harms arise from the presence of heavy metals, plastics in e-waste also ~~impair~~ [harm] human health in e-waste processing areas, such as elevating levels of endocrine-disrupting chemicals such as bisphenol a, which has been found in both adults and unborn babies in e-waste processing sites (Zhang et al., 2020), and the production of persistent organic pollutants such as dioxins and furans that are released when plastics are burnt, a process that occurs when wires have plastic casings incinerated so the valuable copper can be accessed (Basel Action Network, 2002).

Another material connection between data and oil surrounds the production of the devices and infrastructures that are required for digital capitalism to operate. Digital technologies are materially complex artefacts, typically requiring between 60 and 70 of the 84 nonradioactive elements found on earth. From tantalum capacitors to gold-plated pins, copper wires, silicon chips, indium-tin oxide capacitive touchscreens and lithium-nickel-cobalt batteries, these materials are employed to leverage their unique affordances (Crawford and Joler, 2018). Procuring these materials requires globalised extraction industries which have a wide range of deleterious impacts for ecosystems and human populations, not least of which are the energy – and therefore fossil fuel – requirements for extracting materials from the planet.

It should, however, be noted that what is removed from the earth is not tantalum, indium, lithium or lanthanum; extracted ores scarcely resemble the highly purified materials required for reliable, high-performance microelectronics (Starosielski, 2016). For example, consider the manufacture of silicon, which is used as the semiconductor base for integrated circuits. Despite being the second most-abundant element on earth (Opfergelt and Delmelle, 2012), naturally occurring forms of silicon such as the silicon dioxide that comprises the major constituent part of sand and quartz crystals are far removed from the highly purified silicon required for semiconductors.

The silicon chips that are often described as the brains of our digital devices require ‘nine nines’ purity, 99.99999999%; for every billion atoms, only one non-silicon atom is permissible. Producing this extremely pure material requires numerous complex chemical processes involving precise control over the temperatures at which reactions occur. This requires substantial amounts of energy, which with contemporary energy mixes means considerable usage of fossil fuels including oil. First, high-purity silica sand or lump quartz is placed in powerful electric furnaces, producing a reaction that removes oxygen, leaving 99% pure silicon metal. This is then subjected to the Siemens process, which combines silicon metal with hydrogen chloride to produce trichlorosilane, which is subsequently distilled and purified at 1050° C (Dazhou, 2017) to produce polysilicon. That polysilicon is then melted and spun within highly purified iota quartz crucibles – the only substance chemically similar enough to elemental silicon to avoid contamination – to produce silicon ingots which are sliced into wafers and sold to microchip manufacturers such as Intel and AMD (Vince, 2018).

In addition to the extraction of materials from the earth, contemporary microelectronics industries are dependent upon the extraction of specific elements from the ores that exist entangled with one another prior to anthropogenic processes of purification. These materials that rarely or never occur without human intervention are described as ‘technofossils’ and are said to provide a geological indicator that the earth has left the Holocene (Zalasiewicz et al., 2014). Elemental aluminium, plastics and nine nines silicon are examples of technofossils, without which digital colonialism simply could not exist in anything approaching its current form. The production of these technofossils depends upon planetary extraction industries and complex chemical processes, which both require immense amounts of energy. Again, we see that without oil and other fossil fuels, there would be no data revolution.

Consequently, it is perhaps unsurprising that despite only weighting around 120 g, a top-of-the-line iPhone has lifetime carbon footprint of 110-kg CO2e (Apple, 2019a), whereas a top-end Mac Pro 2019 desktop has a carbon footprint of just under 7 tonnes (Apple, 2019b). Of course, the globalised network that moves ores from mines to numerous refineries for purification, then onto various factories for manufacturing into discrete components and eventually brings these components together to manufacture the phone requires a huge amount of transportation, the vast majority of which is currently powered by oil and other fossil fuels. According to Edward Humes (2016) ‘the iPhone has a transportation footprint at least as great as a 240,000-mile trip to the moon, and most or all of the way back’. This logistical supply chain system is far from evenly distributed across the globe, existing within the geopolitical territoriality that Martin Arboleda (2020) describes as the ‘planetary mine’ and circuits of extraction of 21st century capitalism. Transportation, however, is a minor element in life cycle carbon emissions for microelectronic devices. Portable devices such as the iPhone typically see approximately 80% of lifecycle emissions associated with production, while over 90% of emissions from desktop computers such as the Mac Pro arise from production and use (Apple, 2019a, 2019b).

When considering the energy and fossil fuel demands of contemporary computing, it is crucial not to myopically focus on end-user devices which only comprise the tip of the technological iceberg required for platform capitalism to function. Data centres, 3/4/5G cellular towers, Wi-Fi routers, the sensors required for smart city projects, GPS satellites and hundreds of millions of kilometres of fibre optic cable are just a handful of the material- and energy-intensive technologies required for data colonialism to operate. Indeed, estimates are that by 2030, 21% of all global electricity demand will be for information and communications technologies (Andrae and Edler, 2015). While existing literature primarily focusses on the electricity requirements of data centres (Brevini, 2020; Brodie, 2020; Cubitt et al., 2011; Hogan, 2015), Andrae and Edler’s (2015), modelling suggests that data centres will use less electricity than fixed access wired and Wi-Fi networks, with extraction/manufacturing and wireless network access use also being substantial contributors to the total energy requirement. In contrast to these infrastructural energy requirements, consumer devices are anticipated to be responsible for just 8% of the electricity use associated with communications technologies.

It turns out then, that the material assemblage involved in generating digital data requires vast amounts of oil in a very literal sense when considering the volume of microelectronics that are produced from plastics. Equally, the extraction of ores from the planet and the purification of those entangled materials for use in microelectronics hardware requires immense amounts of energy, which is primarily produced from fossil fuels including oil. Transporting materials across complex global supply chains requires further oil, as does the production of the electricity required to power digital assemblages. Far from being smart, green and weightless, the cloud turns out to be more akin to a miasma of toxic smog. While popular immaterialist accounts laud data as the ultimate renewable resource mapping the flows of energy and materials required for large-scale data extraction and analysis illustrates the significant and unevenly distributed ecological and social harms associated with digital capitalism. My argument is not that digital technologies have material costs, so they are bad, but that the harms associated with digital technologies principally affect marginalised groups and strategies to reduce these harms are urgently needed.

The material relationship between data and oil is not one-way traffic though. Just as vast amounts of oil are required for data colonialism, today digital data and sensing techniques are necessary for locating oil and other fossil fuels, as large and easily accessible reserves have mainly been depleted. Techniques including seismic reflection imaging and thermal sensing visualise oil reservoirs at depths of up to 3000m, with processes of making the subterranean visible comprising the initial stage of unearthing new sources of oil. Throughout the procurement process, fossil fuel companies today promote their use of data-driven technologies, including artificial intelligence, advanced analytics and robotics, to improve yields, boost the rate of production and maintain safety (Shell, 2020). Viewed this way, we see the merit of claims surrounding the informationalisation of industry (Castells, 1996; Hardt and Negri, 2005): just as the industrial revolution industrialised agricultural processes, today digital technologies have informationalised industrial activities.

#### Not only oil, but blood. Tech development requires mineral wars and treacherous labor in order to maximize capital accumulation for a white world.

Noble 16, assistant professor in the Department of Information Studies in the Graduate School of Education and Information Studies at UCLA. (Safiya Umoja, 2016, “A Future for Intersectional Black Feminist Technology Studies”, *Socialist & Feminist Online*, Issue 13.3-14.1, <https://sfonline.barnard.edu/traversing-technologies/safiya-umoja-noble-a-future-for-intersectional-black-feminist-technology-studies/>, accessed 8/26/2021)—js

\*\*\*note – underlined portion of the card has mention to sexual assault, it will not be highlighted.

The New Scramble for Africa: An Intersectional Analysis of the IT Sector

In the new scramble for Africa’s resources, transnational information and communication industries are racing to control the minerals and land needed for their aggressive expansion and growth—an echo of earlier colonial pursuits by European nations looking to open new markets for cotton and revitalize depressed Western economies.[20] Neocolonial processes remain intact, particularly in places like the Democratic Republic of Congo. That nation’s history of Western plunder began a century and a half earlier, under the rule of King Leopold II of Belgium, when its rubber and ivory resources were extracted for the manufacture of tires and condoms destined for the sprawling automobile and leisure culture of the United States.[21]

Efforts to reclaim autonomy over the Congo and its natural-resource riches were led in part by the pan-Africanist Patrice Lumumba, whose opposition to Belgian and US control of the Congo resulted in his assassination in 1961. This was but one of many efforts to subdue and effectively put down Black liberation movements on the continent of Africa. The foreclosing of African anti-colonial movements by Western state powers was mirrored in the US government’s simultaneously enacted Counter Intelligence Program (COINTELPRO), which systematically assassinated and jailed Black feminist and Black Power liberation and civil rights movement activists in the US from the 1960s to the 1980s. Many of these same strategies are being re-enacted in this historical moment under the USA Patriot Act. The North American activists targeted by COINTELPRO were seeking liberation from interlocking oppressions, and developed relationships of solidarity and mutual aid with many pan-Africanist movements. Since the 1940s, pan-Africanists had been actively engaging in conferences and knowledge production designed to unify the interests of oppressed peoples directly affected by imperialist projects around the globe. This is an important intellectual lineage from which intersectional feminist critiques and activism emerged, their origins evident in the statement issued in 1945 from the Fifth Pan-African Conference:

We condemn the monopoly of capital and the rule of private wealth and industry for profit alone. We welcome economic democracy as the only real democracy. Therefore we shall complain, appeal and we will make the world listen to the facts of our condition. We will fight every way we can for freedom, democracy and social betterment.[22]

These intellectual linkages of critique and resistance demonstrate the connection between colonial projects of the past to the neocolonial, transnational, and neoliberal projects of the contemporary moment. Indeed, the neocolonial projects that fuel extraction industries (and their concomitant environmental and human catastrophes) in places like the Congo today persist in a historical trajectory of global capital’s thirst for expansion at the expense of Black life. Pádraig Carmody details the colonial quest for rubber and ivory in the Congo that led to the slaughter of more than ten million people; Carmody estimates that another three to five million were killed from 1983 to 2003 in wars over minerals and the control of coltan.[23] Coltan, short for columbite-tantalite, is a mineral, more potent than steel which is needed for computers and electronics to release electrical charges in small capacitors.[24] Contemporary global communications infrastructure, including the internet and the billions of devices, appliances, electronics, and “things” connected to it, could not exist without cheap access to coltan. Nevertheless, the bloody “conflict mineral” wars over its control—the rape, violence, and loss of human life involved—are largely invisible byproducts to digital tech users in the West.

In the networked economy of resources needed for global communications infrastructure, Black lives are engaged in some of the most treacherous labor essential to the growth and proliferation of the internet. Capital’s organization in multi-tiered global supply chains[25] obfuscates the direct relationships between Black labor, child labor, civil war, rape, and a smartphone, laptop, or iPad. Electronics companies such as Google, Apple, Dell, Intel, Sony, Nokia, and Ericsson are heavily invested in the computer and electronics hardware manufacturing industries and need raw minerals such as coltan to produce components such as tantalum capacitors for microprocessor chips. But this labor is outsourced, and thus conveniently out of sight and out of mind, going to low-bidders who provide the cheapest labor under favorable neoliberal economic policies. These practices are consistent with other forms of racialized and outsourced internet labor, such as commercial content moderation for large internet companies.[26]

In a transnational and neoliberal context, such practices are not limited to sites located geographically outside the West. David Pellow and Lisa Sun-Hee Park have written a comprehensive study of the underside of Silicon Valley—touted as a panacea of innovation, wealth, and opportunity, when this is the reality only for a choice few.[27] Just as in other areas of the globe, the technology and communications industries headquartered in Silicon Valley achieve their capital accumulation at the expense of overuse and abuse of the environment, gross poverty, and health degradation as they rely on an invisible labor force of immigrants and others living in the transnational, racialized margins:

Power, privilege and wealth are relational, which often means that one person’s riches and leisure time are derived from another’s impoverishment and hard labor; one’s socioeconomic or racial/ethnic group’s access to safe, high-salary jobs and clean neighborhoods is frequently linked to another group’s relegation to dangerous, low-wage occupations and environmentally contaminated communities. This is the essence of environmental racism and environmental injustice: ecological policies and practices are characterized by unfair treatment, discrimination, and oppression.[28]

Intersectional analysis makes these relational elements visible and allows us to trace the connections forged by inequities of wealth and power that bind local communities to others around the globe. Taking an intersectional approach to the internet and its infrastructure bridges the African diaspora, to help us see where and how oppressions are operationalized in similar ways and in the service of shared agents or shared motivations. The internet and its infrastructure are implicated in cases such as the recent public health crisis in Flint, Michigan, where state and corporate abuses, in the interest of multinational companies heavily invested in the technology sector, resulted in poisoned water supplies. The web is functioning as a site of online hyper-surveillance and trolling of Black activists engaged in the #BlackLivesMatter movement in the US and beyond. It is fundamental to Wall Street, where, through the mortgage crisis and Great Recession of 2008, information technology and the gamification of financial markets led to the largest decimation of Black wealth in the history of the United States. It is central to the oppressive working conditions facing Congolese laborers engaged in mineral extraction, in mineral wars, and in creating the greatest site of sexual violence in the world, according to the United Nations. It is evident in the toxic waste sites on the west coast of Africa, in Ghana, where e-waste is shipped in from the West and dumped, poisoning land, water, people, and environments.

These connections need to be made in order to understand the tradeoffs and true costs that come with the overemphasis, financially and in policy, on digital technologies and internet infrastructures. Communications scholar Robert Mejia has critiqued the multiple ways in which electronics and communications devices and infrastructures have material consequences with potent environmental impacts. He notes:

it is imperative that media and cultural studies scholars offer an account of how the 3.7 million gallons of water used per day by Intel in Hillsboro, Oregon, and the millions more used elsewhere, contribute to an ecology hospitable to infectious disease and its natural reservoirs… Knowing that an estimated 632,000 pounds of mercury were disposed of in United States’ landfills between 1997 and 2007, from just discarded personal computers alone, and that about 130 million cellphones are thrown away each year.[29]

The consequences of these ecological disasters are not equitably applied to everyone. The study of the materiality of the internet includes thinking through the specific contexts of who is affected by the social, environmental, economic, and policy arrangements of the digital.[30]

Intellectual investments in thinking of the internet and the digital as disembodied and ephemeral—as if they have no materiality—come at a great cost of erasure and denial. Jean-François Blanchette has written one of the most detailed critical accounts of the development of computing—including the ways in which information is processed, networks are developed and managed, and fiber infrastructure is built and maintained—in order to dislodge the idea that the internet and computing are immaterial or abstract.[31] An intersectional examination of the global information infrastructure underscores that it is predicated upon a complex, globalized, and fundamentally material economy of resource extraction and human labor, from Congolese labor to extract minerals, to Chinese labor working for poverty wages at Foxconn to make Apple’s iPhones, to the exclusion of African American labor from high-wage IT jobs in the United States, to Ghanaians sifting through electronic trash and toxic waste.

#### CCS is a project of colonial managerialism that legitimizes carbon’s destruction of indigenous environments and extends “state and corporate entitlements to Indigenous bodies, lands and ecosystems.”

Stanley & Alexander 21, Anna Stanley: Adjunct Professor @ University of Guelph. Chloe Alexander: PhD Candidate @ University of Guelph (The colonialism of carbon capture and storage in Alberta's Tar Sands, *Environment and Planning E: Nature and Space*, DOI: 10.1177/25148486211052875)

The coloniality of CCS

It has been widely acknowledged that the tar sands is an extractive economy structurally reliant on the abandonment of Indigenous people and places to ecological disruption, toxic exposure and premature death (Huseman and Short, 2012; Klein, 2014; Parlee, 2016; Parson and Ray, 2016; Stanley, 2020; Zalik, 2016). As Indigenous scholars have shown, ‘Oil sands mining has significantly altered the [Athabasca] delta and watershed landscape through open-pit mining, deforestation, contamination and de-watering of rivers and lakes, degradation and fragmentation of wildlife habitat,’ and has transformed Indigenous land (the basis of life and livelihood) into a source of ‘significant environmental harm’ (Parlee, 2016: 330–331; see also Awasis, 2014; Coats, 2014; LaDuke, 2014; Thomas-Muller, 2014). Its toxic residues and by- products, including polycyclic aromatic hydrocarbons, heavy metals (like mercury, cadmium and lead) and secondary organic aerosols are present at unsafe levels in the air, groundwater, snow, lake and river sediments, fish and animals, and have been linked to elevated rates of diagnosed cancers (including leukemia and other cancers of the lymph and blood-forming systems), respiratory illnesses, organ damage, genetic defects, and stillbirths in nearby and downstream Indigenous communities as well as to the disappearance of Muskrat nations (Adkin, 2016: 94; Awasis, 2014; Carter, 2016 Chen, 2009; Edwards, 2014; Kelly et al., 2009; Leahy, 2019; Liggio et al., 2019; McLachlan in CBC News, 2014; Natural Resource Defense Council, 2014; Parajulee and Wania, 2014; Parlee, 2016; Simpson et al., 2013). Tar sands have displaced Indigenous communities, destroyed land-based economies and continue to alienate and disrupt Indigenous peoples’ ability to care for and govern lands and communities (Awasis, 2014; Coats, 2014; LaDuke, 2014; Thomas-Muller, 2014).

The policy trajectory outlined in the paragraphs above describes the ways in which CCS and the regulatory innovations required to support it make harm visible and actionable in specific ways – primarily as excess unmanaged carbon emissions per barrel and according to the right mixture of technology and strategically arranged free market incentives. GHG emissions are here construed as harmful in excess of emissions intensity thresholds and if left un-managed as captured, stored and/or utilised carbon. Excess and un-offset carbon if un-managed may be harmful; captured/stored/utilised/ traded/offset/paid for and less-than- intensity threshold emissions (i.e. all managed excess emissions) are not. Especially not harmful (in- visible and not-actionable) are absolute carbon emissions and emissions associated with oil combustion. Even less visible are the distributed geographies of harm associated with the tar sands – those that include more- than -carbon harms, and that are disproportionately and without their consent born by Indigenous people.

This is a construal heavily reliant on market forces to organise and facilitate efficient (and cost effective) circulation of carbon into supposedly harmless novel regulatory forms (as captured, stored and/or utilised emissions), as well as to incentivise uptake of this technology through compliance with emissions intensity thresholds. It is also a managerial strategy in which harm is fungible: exchangeable geographically and temporally for emissions abated elsewhere and against a promise of future reductions. Near constant attempts by both levels of government to engineer markets for captured carbon, through the introduction of carbon offsets, emissions trading, and clean technology funds provide additional ways to make excess emissions manageable: exchangeable (across time and space) against fund payments and emissions abated elsewhere by others.

CCS as a mode of governance (mis) construes (tar sands related) harm as minimal and manageable, and the tar sands more broadly as harm-less. This is a construal that is deeply colonial: not only because of how it detracts from the geographies of Indigenous exposure and land alienation that make the tar sands, but because of how it reproduces state and corporate entitlements to Indigenous bodies, lands and ecosystems. Construction of novel regulatory objects and domains of regulatory jurisdiction, as well as their alignment with re-combinatory narratives about the efficiency of the market and private sector innovation reproduces (and in many cases extends) state and corporate access to Indigenous lands and bodies and consolidates state power in the tar sands. Here we focus on the ways in which the emissions trading systems set up to incentivise CCS and establishment of novel regulatory domains advance colonial entitlements.

The construal of harm as minimal and manageable depends to a large extent on the intersection of market forces (the logic of the market as a spontaneous, self-organising force) and a ‘threshold’ logic of pollution. Emissions intensity thresholds (one version of this logic) are what make CO2 emissions tradeable in the first place –their establishment creates the excess that constitutes the basis of the trading system and they make it possible to enfold emissions within market logics. Pollution thresholds assume the existence of scientifically or socially defensible quantities of pollution that can (and should) be absorbed into an ecosystem, and according to Liboiron (2021: 55–56) ‘arrange land as a standing reserve’ for settler and colonial aims. GHG emission intensity thresholds relative to CCS reproduce colonial entitlements to Indigenous land (see Liboiron, 2021: 9): in perpetuity as a sink for carbon as ground upon which to transport it long distances and as space within which to otherwise contain the toxic wastes of the tar sands. And they do so with respect to emissions above and below the threshold: emissions captured and stored underground (to comply with thresholds), below-threshold emissions, and all the excess emissions traded (and accumulated) for offsets and against future reductions (e.g. payment to the TIER fund) all operationalise colonial entitlements to use ecosystems, people, atmospheres and subsurface spaces as sinks for carbon. CCS assumes an entitlement for all tar sands emissions to Indigenous lands.

Compliance with these thresholds, the organisation of emissions into harm-less forms (stored carbon, offset carbon and so on), and ultimately the amount of pollution generated for absorption in Indigenous land is facilitated by market forces via emissions trading schemes. Market logics and market-based emissions trading systems (including when these are orchestrated by governments) anticipate and operationalise colonial entitlements and are instrumental to appropriation of Indigenous land to store waste. Market forces (and the regulators they repeatedly stand in for) determine and administer acceptable quantities of pollution and represent supposedly neutral and objective assumptions about the suitability of atmospheres, climate systems and sub-surface pore spaces as sinks for carbon and about the ability of people and ecosystems to absorb polycyclic aromatic hydrocarbons, heavy metals and other toxicants. The point here is not that markets don't work, or that regulatory incentives are too lax to make them work (though both are likely true) but that in conjunction with the invention of an emissions threshold they make emissions regulatable: they provide the structures and categories that make GHG's fungible and contribute to the appearance of manageability. In so doing they organise and administer colonial entitlements to Indigenous lands and bodies; they literally operationalise jurisdictional entitlements by managing (or appearing to manage) GHG emissions. Importantly too: market forces interpolate social relations such that the ways in which they optimise and organise harm reduction appear neutral and objective. The ways in which they work relative to CCS, to align implementations of its infrastructure with predatory economic growth and the objectives of settler and colonial society, are thereby obscured.

#### Environmental economics imposes Western environmentalism onto indigenous spirituality---putting a price on ecology results in technorational top-down planning that throws the periphery aside and makes effective mitigation impossible.

Poppe 16 [Roan Poppe 16, M.A. candidate, Faculty of Humanities @ Utrecht University, 4-28-2016, “Applying Decolonial Perspectives to Climate Ethics: An inquiry into the use of management approaches in climate ethics,” Utrecht University Repository, [pg.](http://dspace.library.uu.nl/handle/1874/334548) 34-41]

The way decolonial thinking thus relates to climate ethics is that it can be used to address epistemological issues in the current climate ethical debate. The argument that will be explained below is going to say that there can be no global social justice without global cognitive justice (Santos 2008, p. 258). In a nutshell, this means that an ethical form of mitigation policy cannot be achieved if the epistemology(-ies) employed to justify the evaluation of justification of moral statements (moral epistemology) is in conflict with epistemologies and relations to nature of the people affected by that policy. Management approaches interfere with global cognitive justice Different relations to nature The argument regarding global cognitive justice draws upon indigenous relations to nature. According to Enrique Salmon, indigenous ways of relating to nature should be understood as a kincentric ecology (Salmon, p. 1328). This means that indigenous people regard themselves and nature as part of the same family. Salmon argues that the best way to understand such a relation to nature is through the Rarámuri (an indigenous community in eastern Mexico; the Sieraa Madres) concept of iwígara, which he explains as the following: “Iwígara is the total interconnectedness and integration of all life in the Sierra Madres, physical and spiritual”…”Iwí also makes reference to the Rarámuri concept of soul. It is understood that the soul, or iwí, sustains the body with the breath of life. Everything that breaths has a soul. Plants, animals, humans, stones, the land, all share the same breath. When humans and animals die, their souls become butterflies that visit the living. The butterflies also travel to the Milky Way, where past souls of the ancestors reside. Iwí is also the word used to identify a caterpillar that weaves its cocoons on the madrone tree (Arbutus sp.). The implication is that there is a whole morphophysiological process of change, death, birth, and rebirth associated with the concept of iwí. Iwí is the soul or essence of life everywhere. Iwígara then channels the idea that all life, spiritual and physical, is interconnected in a continual cycle. Iwí is the prefix to iwígara. Iwígara expresses the belief that all life shares the same breath. We are all related to, and play a role in, the complexity of life. Iwígara most closely resembles the concept of kincentric ecology.” (Salmon, p. 1328) The concept of kincentric ecology, iwígara, is at the heart of the Rarámuri land management philosophy (Salmon, p. 1329). It is a reciprocal relationship in which the Rarámuri are one of the relatives of the family of the land, of which they regard themselves as guardians (Salmon, p. 1329). The Rarámuri conception of nature and their relation to it is quite different from Western conceptions. Singer, for example, argues that the atmosphere (which is a part of nature) is to be perceived as a resource and that for the sake of justice in mitigation policy, the entitlements to this resource need to be allocated fairly. Similarly, Escobar argues that the conception of capital in political economy is undergoing a significant change with regards to nature. He calls this the ecological phase. Nature, he says, is no longer exploitable and external to capital, but rather it has become internal to capital (Escobar 1996, p. 326). “No longer does nature denote an entity with its own agency, a source of life and discourse, as was the case in many traditional societies, with European Romantic literature and art of the 19th century. For those committed to the world as resource, the ‘environment’ becomes an indispensable construct. As the term is used today, environment includes a view of nature according to the urban-industrial system.” (Escobar 1996, p. 331) As mentioned in Singer’s section, the UNFCCC (United Nations Framework Convention on Climate Change) recognizes a right to sustainable development, because of the assumption that economic progress is essential for combatting climate change. According to Escobar, however, this is counterintuitive, because economic growth and capital accumulation are largely the source of environmental degradation ( Escobar 1996, p. 329). Therefore, the ability of sustainable development to preserve nature is questionable and the question should be asked whether this is even the main aim of the project. Referring back to the reflection on Singer, the preservation of nature seems to be subject to the preservation of political and economic systems. “The sustainable development strategy, after all, focuses not so much on the negative consequences of economic growth on the environment, as on the effects of environmental degradation on growth and potential for growth. It is growth (ie capitalist market expansion), and not the environment, that has to be sustained. Since poverty is believed to be a cause, as well as an effect, of environmental problems, growth is needed with the purpose of eliminating poverty and with the purpose, in turn, of protecting the environment.” (Escobar 1996, p. 330) Escobar says this is perhaps most visible in discussions regarding the biodiversity in rainforests. Their preservation through sustainable development is not to save the rainforest for the sake of saving the rainforest. Rather it is to save the rainforest as a resource; the resource being the genes of the species living in this environment that can be used for bioengineering (Escobar 1996, p. 334-335). “Nature and local people themselves are seen as the source and creators of value-not merely as labour or raw material. The discourse of biodiversity in particular achieves this effect. Species of microorganisms, flora and fauna are valuable not so much as ‘resources’, but as reservoirs of value-this value residing in their very genes-that scientific research, along with biotechnology, can release for capital and communities. This is one of the reasons why communities-particularly ethnic and peasant communities in the tropical rainforest areas of the world-are finally recognized as the owners of their territories (or what is left of them), but only to the extent that they accept viewing and treating territory and themselves as reservoirs of capital. Communities in various parts of the world are then enticed by biodiversity projects to become ‘stewards of the social and natural “capitals” whose sustainable management is, henceforth, both their responsibility and the business of the world economy’.” (Escobar 1996, p. 334-335) These ethnic and peasant communities are the indigenous peoples that inhabit these territories (Escobar 1996, p. 334). Key to the argument of global cognitive and social justice here is that, as Escobar says above, these peoples are expected to view and treat these territories and themselves as reservoirs of capital. According to Lohmann, however, “a resource is something whose value lies in being a ‘source’ of something else”…”a commodity is something whose value lies in what it can be swapped for or what price it can fetch” (Lohmann et al, p. 55). Therefore, it seems that Escobar’s use of the term resource can perhaps better be swapped for commodity. Although this makes little difference for the argument to come, it means that what Escobar calls reservoirs of value can be interpreted as resources. What this means for indigenous peoples, on the one hand, is that they have to abide the ideology of efficiency that is central to modern economics (Lohmann et al, p. 54). For example, as Lohmann says, this means that indigenous peoples might be forced to divide their land into permanent forest areas and permanent agricultural areas, even though many indigenous communities use areas periodically (they use a piece of rainforest as agricultural land for some time, then move on to another area to let nature run its course on the previously used area) (Lohmann et al, p. 54). On the other, it means that they consequently have to redefine themselves, their relation to nature, and their everyday practices. No global social justice without global cognitive justice Before it is possible to construct a sound argument, it is important to define social justice and cognitive justice. Michael Novak claims social justice is social in two ways: 1) it is social in the sense that it requires cooperation to attain justice; and 2) it is social in the sense that it aims at all members of a community (whether it be local or global), not at a single individual only (Novak, p. 12). The second claim can be understood as an entitlement to an equal notion of justice: justice applies to everyone equally. Cognitive justice, as Santos argues, should be understood as a “just relationship among different kinds of knowledge” (Santos 2008, p. 258). This means that no a priori supremacy should be granted to any kind of knowledge (Santos 2008, p. 258). Justice is in itself a challenging philosophical concept. Referring back to Timmons, normative questions about how to attain justice are inevitably subject to metaethical questions of what justice is and how a concept of justice can be justified. Even though decolonial thinking regards universalist tendencies as problematic, there is need for a common ground in the understanding of the concept in order to have a normative discussion about global justice. Therefore, perhaps the Universal Declaration of Human Rights is the best model to work with, since it expresses that the “…recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world” (UDHR, preamble). In the making of the social and cognitive justice argument, I will draw upon Article 18 of the Declaration: Article 18: “Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.” (UDHR, 1948) Santos’ argument, as previously mentioned, is that there can be no global social justice without global cognitive justice. So what exactly in climate ethics interferes with global cognitive justice? As mentioned in the previous chapter, Singer’s principles of fairness are aimed at allocating the burden of mitigation fairly. This burden, however, is expressed in economic terms: the monetary cost of reducing emissions. For indigenous peoples such as the Rarámuri, however, it is not so much a material problem as it is an epistemic one. As illustrated above, their knowledge and beliefs do not fit in the epistemic framework of rationality and scientific thought; they employ a spiritual epistemology. Their philosophy of land management is directly related to their spirituality. Their use of land, such as a periodical use, is not arbitrary or random, but it is a manifestation of their spiritual beliefs. The Rarámuri, for example, only harvest plans in areas where their Iwígara (their life breath) is strong, so that the plants with a weak Iwígara may strengthen (Salmon, p. 1330). This way they believe to maintain a balance in the interconnectedness of life (Salmon, p. 1330). By demanding that indigenous peoples view and treat nature and themselves as resources (reservoirs of value) to preserve biodiversity, they need to adjust their practices in order to secure such preservation (like setting permanent forest and permanent agricultural areas). The problem, therefore, is that mitigation policy through management approaches interferes with the manifestation of indigenous beliefs in practice, which is a violation of Article 18 of the UDHR. Assuming that the UDHR is indeed an adequate standard for what is just, this means that management approaches (and therefore climate ethics operating under a management framework) fail to bring about social justice. Having established this, why is there need to discuss cognitive justice as a prerequisite for social justice? Is it not possible to simple adjust policy in such a way that it does not interfere with social justice? As mentioned in the introduction, policy-decisions regarding climate change come predominantly from Western countries. The Intergovernmental Panel on Climate Change (IPCC), created by the United Nations Environment Program and the World Meteorological Office in 1988 (Singer, p. 184), includes no representatives of indigenous peoples (Lohmann et al, p. 38). Yet, as discussed above, the policies constructed affect and disrupt these peoples way of living. It seems, then, that the construction of policy is paternalist in nature; indigenous peoples have no say in the construction of policy, even though they are affected by it. This implies that the policy-makers know better what is best for indigenous peoples than themselves. Consequently, this can be interpreted as a rearticulation of coloniality through the rhetoric of development: the Western policy-makers being the developed and the indigenous peoples the undeveloped. According to Giovanna Di Chiro, this is exactly the claim of the People of Color Environmental Leadership Summit. They claim that conventional environmental organizations and policy-makers employ a managerial top-down approach with a technocratic rationality that is “disempowering, paternalistic, and exclusive” (Di Chiro, p. 306). As Escobar argued, however, people living in what are now labeled as developing countries did not use to define themselves in terms of development, even though billions of these people now do. Indigenous peoples, however, even though they often live in these developing countries, still do not define themselves in terms of development. Mark Plotkin, an Amazonian ethnobotanist, argues that the reason why indigenous peoples often live isolated should be regarded as a form of resistance, precisely because they do not want to comply with Western thinking and way of life (Plotkin, 2014). This resistance can thus be understood as the previously mentioned epistemic disobedience; indigenous peoples reject the epistemic hegemony of rational and scientific thought. Consequently, following decolonial reasoning, qualitative statements regarding indigenous ways of life in terms of development or rationalism are inappropriate, because indigenous peoples do not employ a rationalist epistemology nor regard development as the meaning and direction of history (see Santos’ monoculture of time). As mentioned in the introduction, policy-decisions regarding mitigation policy come from the global actors empowered to make such decisions and conventional policy takes a management approach towards mitigation policy. These are the developed (Western) countries, because they have a stronger economic and political position than developing countries. Important to keep in mind is that mitigation policy is an international endeavor; the developed countries do not construct policy on their own and enforce them nationally, but this is managed globally by intergovernmental organizations such as the IPCC. Since the Western epistemic framework assumes an epistemic supremacy of rationality and scientific knowledge, according to decolonial thinking, policy-decisions reflect this assumption. Therefore, the construction of mitigation policy reflects the rhetoric of development, because policy-makers would consider Western knowledge to be more sophisticated and thus believe the employment of such knowledge to be capable of benefitting everyone, including indigenous peoples, more than other knowledges. Management approaches in policy show the same paternalistic tendency, because they globally impose the assumption that nature is a resource to be managed and preserved as to sustain capital (Escobar, p. 328). As has been illustrated above, however, such reasoning leads to the interference with indigenous ways of life and even their fundamental human rights. Therefore, from a decolonial perspective, there can be no global social justice without global cognitive justice in the construction of mitigation policy. Consequently, climate ethical theory or principles that operate in a management framework cannot achieve social justice, because the employment of a management framework in international policy-making implies the epistemic hegemony of one knowledge over others (a lack of cognitive justice). Therefore, cognitive justice is a prerequisite of social justice.

#### Green capitalism linearly increases imperialist violence.

Brand & Wissen 21, Ulrich Brand: Professor for International Politics @ University of Vienna. Markus Wissen: Professor of Social Sciences at the Berlin School of Economics and Law. Translated by Zachary King (The Imperial Mode of Living: Everyday Life and the Ecological Crisis of Capitalism, *Verso Books*)

EXTERNALIZATION AND RESISTANCE

Green capitalism is anything but inevitable. In many places, the creation of a green economy has encountered resistance from the fossil factions of capital and from people’s everyday practices. In the US especially, these forces have received an additional boost with the presidency of Donald Trump. There is a boom in the extraction of oil and gas through fracking, in tar sand oil extraction and in the exploration and exploitation of deep sea fossil energy sources. 42 In the EU, the transition to a renewable energy regime is slowed down by the Visegrád Group (Poland, the Czech Republic, Slovakia and Hungary). And even in places where green capital factions and practices are becoming socially relevant, they are in constant conflict with retrograde social forces. This description even applies to the ‘pioneer’ in renewable energies, Germany, where powerful social forces from industry, energy suppliers and trade unions are increasingly aggressive in articulating their resistance to the energy transition and find political advocates in state apparatus such as the German Federal Ministry for Economic Affairs and Energy. 43

Eventually, green capitalism will neither effectively manage the ecological crisis nor reduce inequality, let alone create good living conditions for all; instead, it will generate and externalize new socioecological costs. It will impose these costs on the workers in China, Africa or elsewhere who under miserable conditions extract rare earth metals and other raw materials that are indispensable for ‘green’ technologies; on the sugar cane workers on Brazilian plantations who risk life and limb to supply the US and European markets with ‘biofuels’; on the peasants who are evicted from their farms and villages because of land grabbing; on Kenyan women as they are ‘rewarded’ for reforestation activities with certificates of dubious value while they sacrifice food security to protect the climate; and on unpaid care work and poorly paid personalized services that are not considered in green economy concepts. 44

The power relationships between different factions of capital, as well as between the developed capitalist world and the emerging economies of the global South, will be readjusted; inequality will increase within industrialized and industrializing countries; relations with other parts of the world will be reorganized on the basis of military coercion and by actively pursuing ‘a raw materials diplomacy’. 45 The green capitalism project will therefore necessarily represent a spatially ‘fragmented hegemony’ with a highly unclear temporal perspective; it is characterized by exclusion and exploitation, and yet ensures the continuation of the imperial mode of living. 46

#### The alternative is haunting. The affirmative cannot escape its violent past, ontologized plasticity. So instead, we dwell. Moving beyond plastic’s toxic past is farcical, which means that embracing plastic’s immutable character is necessary.

Davis 22, professor of Culture and Media at the New School (Heather, “Plastic Media”, *e-flux journal* #126, April 2022, https://www.e-flux.com/journal/126/458489/plastic-media/)--js

Plastic as Medium

I want to suggest that plastic’s makeup in mass and digital culture, the fact that it has become the medium through which life in the twenty-first century is negotiated, involves a haunting. This is not only because of the ways that plastic transmits a violence outward, and how it shores up white supremacy, but also because of the ways it relies on the unearthing of ancient plants and animals for its basic composition. Plastic can, in this light, be thought of as a medium, communicating with long-dead organisms to make their vital presence felt among the living. The unearthed beings of fossil fuels released in our present day through vast communication networks represent these multiple hauntings, of immediate and more protracted violence, in the form of toxicities and also in the undead relations of fossil fuels themselves.

Plastic haunts in part through its ability to preserve the images and voices of those who have passed, who live on in these media, as spiritual mediums to afterworlds. Cinematic and photographic media transform into mediums that enable the long-dead plant and animal matter compressed into oil to transfer the voice of the recently or not-yet-dead. Photographic prints now use polyethylene-coated paper, polymer ink, and film that is made of a plastic base; they utilize fossil fuels as the medium through which images appear. But these long-dead organisms also transfer their own messages. In his famous discussion of the punctum—the wound of photography that grabs the attention of the viewer—the literary theorist Roland Barthes speaks of a simple family photograph of his mother as a child, viewed after her death, and insists on the utter irreplaceability of her suffering and her life. The photograph operates, Barthes argues, as a melancholic accounting of the passage of time: the subject is frozen in time, in a deathly state, through the capture of the image; we are forever looking back at a moment passed (even when that moment was a second or two ago). The photograph is a continuous reminder of the inevitable passage of time, a record of life’s passing. Yet in light of the fossil fuels that compose that image as an object, Barthes’s photograph also acts as a fold in time, collapsing and compressing present, past, and deep geological time. And also, possibly, future, as plastic does not easily decompose. Through plastic, the photographs become the medium to our loved ones, and they then transmit petrochemicals out into the land and bodies. As Barthes argues, “It is often said that it was the painters who invented Photography (by bequeathing it their framing, the Albertian perspective, and the optic of the camera obscura). I say: no, it was the chemists.” By stressing the way in which photography, and mass media more generally, are thoroughly engineered, and the ways that this engineering affects photography’s purpose and power, Barthes also prompts a consideration of photography’s saturation in fossil fuels.

Kodak and Its Afterlives

In Rochester, New York, Barthes’s melancholic analysis of photography can be read through the carcinogenic and other harmful legacies of the Kodak company. The images that capture our lives and that metaphorically foreshadow our passing are produced through the chemicals that have foreshortened many people’s lives and caused many deaths. There, photographs and film become a vector not only to the lives of ancestors and others who have come before but also to the legacies of toxicity, which will have untold consequences for an indeterminate period into the future.

The Kodak plant’s toxic transmissions go back decades. In 1990 Kodak paid a total of $2.15 million for chemical spills and extensive groundwater pollution because of a failure to notify the state immediately of a spill of “5,100 gallons of methylene chloride, a solvent used to make film and a suspected carcinogen, in February 1987.” However, despite this penalty, the company continued to pollute the air and water in the area. In 2000 Kodak was the prime contributor of dioxin, a known carcinogen, into New York’s environment, according to the Environmental Protection Agency. And in 1999 Kodak was ranked “as New York State’s leading producer of recognized airborne carcinogens and waterborne developmental toxicants.” Since this time, the plants have shut down, but their legacies linger, like ghosts, in the air and water of the area, the molecular hauntings of the desire for a moment, through an image, to endure. The capture of a particular time and place has transferred itself into the future not simply through the medium of photography or film but as a chemical medium that endures, in the land. These long legacies illustrate the notion that “pollution is not just a harm in the moment but part of ongoing violence that stretches across generations, across communities, and across Land.”

Photographic media, soaked in oil, continue to speak, to roam and to affect the people in the area, demanding to be heard. The results of these pollutants, the messages of the long-dead organisms that have become petrochemicals, find their way into the bodies of the residents, living there and mutating, apparitions that trouble the bounds of life and death, pulling living bodies into untimely ends while proliferating the lively attributes of deathly substances. Barthes’s conflation of death and photography suggests a present-moment haunting: the inability of the dead to let the living go. The petrochemicals and other toxins that were used in the Kodak factories do not simply go away with the closing of the plants themselves. Instead, the petrochemical past haunts the future, continuing to speak through whichever mediums they find, where lively petrochemicals continue to assert their presence. The toxic legacies of photography and cinema refuse to be transformed, remaining in waterways and in the air, transferring the grief of the land through the generations. It is often difficult, if not impossible, to remediate these landscapes. Instead, they will haunt future generations with imperceptible chemical threat, fading into the background, but transmitting the legacies of those that came before, much as with an old photograph.

They continue this haunting differentially, where the inheritors of the plastic project are often shielded from these negative outcomes. As Fred Moten writes, in a poignant critique of the lurking universalism in Barthes’s analysis and the ways that it utterly fails to account for differences within death, within suffering, “You need to be interested in the complex, dissonant, polyphonic affectivity of the ghost, the agency of the fixed but multiply apparent shade, an improvisation of spectrality, another development of the negative.” What Morris’s Solastalgia series pictures is not the suffering of photography, not the ways in which plastic is embedded in these modes of suffering through photography as a chemical medium; it instead stages the chemical medium’s excess, drawing where the photographs of Mossville are animated with a “powerfully material resistance.” The use of this chemical medium, the photographs that transmit so many messages between living and dead bodies, animate a powerful act of seeing a disappearance, which operates as a kind of abundance. This is an abundance of the power of the ancestors, haunting, not just in a negative sense, but as a powerful force, in particular highlighting Morris’s relationship to her ancestors, drawing on the power of her grandmother in her resistance to Sasol’s erasure of Mossville. It is not just in seeing that the resistance is staged, but in not seeing, seeing what is not there, in this form of haunting.

Haunting

If we think of the petrochemicals as coming to tell us stories, to communicate their inhuman messages, we might also be invited to think about oil as a kind of grand-kin, highlighting the connection of our life force now with the lives of those long-dead organisms that appear as oil. But these more-than-human relations have been unearthed, weaponized. These are not easy relations but rather ones that disturb multiple boundaries of time, memory, the living, and the dead. Oil could be invited, as Zoe Todd asserts, as a reminder of the ancient life that came before ours, that is still a part of us, that makes our lives possible through intergenerational knowledge, through a deep indebtedness to our ancestors, through evolution. Recognizing these long-dead organisms, feeling their vibrancy, could be an invitation to a profound sense of interconnection. But these organisms have been unearthed from their resting place without their consent. As Todd writes, “To turn the massive stores of carbon and hydrogen left from eons of life in this place, weaponises these fossil-kin, these long-dead beings, and transforms them into threats to … the ‘narrow conditions of existence,’ which Blackfoot scholar Leroy Little Bear reminds us we are bound to.” Instead of an invitation into an evolutionary and intergenerational acknowledgment of the ways that our lives are made possible through the knowledge and creativity of so many others, human and other-than-human alike, we have turned these potential grand-kin against themselves. They appear as specters, all their compressed time and stores of energy unloosed to wreak havoc on the living.

In a brilliant article, Eve Tuck and C. Ree compare the different versions of haunting and ghost stories in American and Japanese films. They note that in America the narrative asserts the possibility of appeasement. As long as the protagonist does the right thing, the vengeful ghost will rest at last. Once the innocent hero destroys the monster, balance will again be restored to the world. In the Japanese films, on the other hand, the ghost often cannot be appeased, and “the hero does not think herself to be innocent, or try to achieve reconciliation or healing, only mercy, often in the form of passing on the debt.” Instead, people are forced simply to live with these ghosts. Tuck and Ree use these two genres of horror films to talk about two different approaches to settler colonialism. In the American version of the ghost story, the settler is an innocent bystander incomprehensibly attacked by a specter that will not leave them alone. We could read this as the continuing demands for land back, reparations, or abolition that fall on the uncomprehending ears of white settlers, or the narrativization of white fragility that includes death paranoia. The Japanese narrative describes something else. It describes a reckoning with the total violence of slavery and settler colonialism. It describes the way that there is no resolution or reconciliation, only the possible hope of mercy. It describes a temporality that is indeterminate, that refuses progression, and instead asks us to sit with what has been done, understanding that the harms committed are permanent, the lives taken cannot be returned. Tuck and Ree continue: “Haunting doesn’t hope to change people’s perceptions, nor does it hope for reconciliation. Haunting lies precisely in its refusal to stop.” This understanding of the ongoing and insistent legacies of plastic as an extension of the ecology of white supremacy functions precisely “in its refusal to stop.” For the toxicities unearthed through plastic are not going away. The examples of southern Louisiana and the photographic practices that have also etched their marks in Rochester, New York tell of the ways that this haunting plays out in particular forms. Black and low-income communities are left with a devastating mess, a place that is no longer their place, a grief that has set into the land without a clear sense of how to clean up or move on. Plastic’s increasing production mean that these harms will become more commonplace.

Instead of turning away in horror or fear, plastic’s multiple and conflicting temporalities need to be taken seriously. Settlers need to learn the lessons of haunting, even as we are being haunted by this material that refuses to let us go. Full reparation here, carrying the meaning of the attempts to repair and also the desire to account for immeasurable loss and violence, is impossible. This does not mean that we should not be held accountable; on the contrary— accountability or reckoning may appear as a haunting. For we, white people, are certainly not innocent. Instead of moving so quickly to evade the present, producing times that circle violently forward and back, what would it mean to sit with this refusal, this total violence, white supremacy? What might we learn if we listened to what these chemical media were transmitting?

Under the conditions of white supremacy, knowledge systems and institutions are not well versed to be attuned to these hauntings, to all that has been lost. This is especially true because the social is built on the disappearance of those losses, but these memories, these hauntings and losses, give us a much richer sense of our present moment and offer a different, I would argue, decolonial, knowledge. For haunting involves a “transformative recognition” rather than “cold knowledge.” To make a world otherwise will only be possible when we face what has been lost. For haunting is an animated state where this violence is making itself known. It is a forced seeing, sensing feeling of that which has been repressed, excluded, or forced out. Through the commingling of ancient beings with raced and classed bodies, this violence comes to the fore, as a refusal to stop. Avery Gordon, in her account of haunting, points to its strange potentiality: “To be haunted in the name of a will to heal is to allow the ghost to help you imagine what was lost that never even existed, really. That is its utopian grace.” This is a utopian grace barely recognizable as such, an opening that offers little safety but potentially some solace through lines of relation that open onto ancestors, those to come, and the more-than-human world.

### Case

#### Their impact scenarios are ideological mystification deployed to protect the colony – extinction is inevitable within settler colonialism which makes it try or die.

Dalley 16 (Hamish Dalley received his Ph.D. from the Australian National University in 2013, and is now an Assistant Professor of English at Daemen College, Amherst, New York, where he is responsible for teaching in World and Postcolonial Literatures., (2016): The deaths of settler colonialism: extinction as a metaphor of decolonization in contemporary settler literature, Settler Colonial Studies, DOI: 10.1080/2201473X.2016.1238160, JKS)

Settlers love to contemplate the possibility of their own extinction; to read many contemporary literary representations of settler colonialism is to find settlers strangely satisfied in dreaming of ends that never come. This tendency is widely prevalent in English-language representations of settler colonialism produced since the 1980s: the possibility of an ending – the likelihood that the settler race will one day die out – is a common theme in literary and pop culture considerations of colonialism’s future. Yet it has barely been remarked how surprising it is that this theme is so present. For settlers, of all people, to obsessively ruminate on their own finitude is counterintuitive, for few modern social for- mations have been more resistant to change than settler colonialism. With a few excep- tions (French Algeria being the largest), the settler societies established in the last 300 years in the Americas, Australasia, and Southern Africa have all retained the basic features that define them as settler states – namely, the structural privileging of settlers at the expense of indigenous peoples, and the normalization of whiteness as the marker of pol- itical agency and rights – and they have done so notwithstanding the sustained resistance¶ that has been mounted whenever such an order has been built. Settlers think all the time that they might one day end, even though (perhaps because) that ending seems unlikely ever to happen. The significance of this paradox for settler-colonial literature is the subject of this article.¶ Considering the problem of futurity offers a useful foil to traditional analyses of settler- colonial narrative, which typically examine settlers’ attitudes towards history in order to highlight a constitutive anxiety about the past – about origins. Settler colonialism, the argument goes, has a problem with historical narration that arises from a contradiction in its founding mythology. In Stephen Turner’s formulation, the settler subject is by definition one who comes from elsewhere but who strives to make this place home. The settlement narrative must explain how this gap – which is at once geographical, historical, and existential – has been bridged, and the settler transformed from outsider into indigene. Yet the transformation must remain constitutively incomplete, because the desire to be at home necessarily invokes the spectre of the native, whose existence (which cannot be disavowed completely because it is needed to define the settler’s difference, superior- ity, and hence claim to the land) inscribes the settler’s foreignness, thus reinstating the gap between settler and colony that the narrative was meant to efface.1 Settler-colonial narrative is thus shaped around its need to erase and evoke the native, to make the indigene both invisible and present in a contradictory pattern that prevents settlers from ever moving on from the moment of colonization.2 As evidence of this constitutive contradiction, critics have identified in settler-colonial discourse symptoms of psychic distress such as disavowal, inversion, and repression.3 Indeed, the frozen temporality of settler-colonial narrative, fixated on the moment of the frontier, recalls nothing so much as Freud’s description of the ‘repetition compulsion’ attending trauma.4 As Lorenzo Veracini puts it, because:¶ ‘settler society’ can thus be seen as a fantasy where a perception of a constant struggle

is juxtaposed against an ideal of ‘peace’ that can never be reached, settler projects embrace and reject violence at the same time. The settler colonial situation is thus a circumstance where the tension between contradictory impulses produces long-lasting psychic conflicts and a number of associated psychopathologies.5¶ Current scholarship has thus focused primarily on settler-colonial narrative’s view of the past, asking how such a contradictory and troubled relationship to history might affect present-day ideological formations. Critics have rarely considered what such narratological tensions might produce when the settler gaze is turned to the future. Few social formations are more stubbornly resistant to change than settlement, suggesting that a future beyond settler colonialism might be simply unthinkable. Veracini, indeed, suggests that settler-colonial narrative can never contemplate an ending: that settler decolonization is inconceivable because settlers lack the metaphorical tools to imagine their own demise.6 This article outlines why I partly disagree with that view. I argue that the narratological paradox that defines settler-colonial narrative does make the future a problematic object of contemplation. But that does not make settler decolonization unthinkable per se; as I will show, settlers do often try to imagine their demise – but they do so in a way that reasserts the paradoxes of their founding ideology, with the result that the radical potentiality of decolonization is undone even as it is invoked.¶ I argue that, notwithstanding Veracini’s analysis, there is a metaphor via which the end of settler colonialism unspools – the quasi-biological concept of extinction, which, when deployed as a narrative trope, offers settlers a chance to consider and disavow their demise, just as they consider and then disavow the violence of their origins. This article traces the importance of the trope of extinction for contemporary settler-colonial litera- ture, with a focus on South Africa, Canada, and Australia. It explores variations in how the death of settler colonialism is conceptualized, drawing a distinction between his- torio-civilizational narratives of the rise and fall of empires, and a species-oriented notion of extinction that draws force from public anxiety about climate change – an invocation that adds another level of ambivalence by drawing on ‘rational’ fears for the future (because climate change may well render the planet uninhabitable to humans) in order to narrativize a form of social death that, strictly speaking, belongs to a different order of knowledge altogether. As such, my analysis is intended to draw the attention of settler- colonial studies toward futurity and the ambivalence of settler paranoia, while highlighting a potential point of cross-fertilization between settler-colonial and eco-critical approaches to contemporary literature.¶ That ‘extinction’ should be a key word in the settler-colonial lexicon is no surprise. In Patrick Wolfe’s phrase,7 settler colonialism is predicated on a ‘logic of elimination’ that tends towards the extermination – by one means or another – of indigenous peoples.8 This logic is apparent in archetypal settler narratives like James Fenimore Cooper’s The Last of the Mohicans (1826), a historical novel whose very title blends the melancholia and triumph that demarcate settlers’ affective responses to the supposed inevitability of indigenous extinction. Concepts like ‘stadial development’ – by which societies progress through stages, progressively eliminating earlier social forms – and ‘fatal impact’ – which names the biological inevitability of strong peoples supplanting weak – all contribute to the notion that settler colonialism is a kind of ‘ecological process’ that necessitates the extinction of inferior races. What is surprising, though, is how often the trope of extinction also appears with reference to settlers themselves; it makes sense for settlers to narrate how their presence entails others’ destruction, but it is less clear why their attempts to imagine futures should presume extinction to be their own logical end as well.¶ The idea appears repeatedly in English-language literary treatments of settler colonial- ism. Consider, for instance, the following rumination on the future of South African settler society, from Olive Schreiner’s 1883 Story of an African Farm:¶ It was one of them, one of those wild old Bushmen, that painted those pictures there. He did not know why he painted but he wanted to make something, so he made these. [...] Now the Boers have shot them all, so that we never see a yellow face peeping out among the stones. [...] And the wild bucks have gone, and those days, and we are here. But we will be gone soon, and only the stones will lie on, looking at everything like they look now.10¶ In this example, the narrating settler character, Waldo, recognizes prior indigenous inha- bitation but his knowledge comes freighted with an expected sense of biological super- iority, made apparent by his description of the ‘Bushman’s’ ‘yellow face’, and lack of mental self-awareness. What is not clear is why Waldo’s contemplation of colonial geno- cide should turn immediately to the assumption that a similar fate awaits his people as well. A similar presumption of racial vulnerability permeates other late nineteenth- century novels from the imperial metropole, such as Dracula and War of the Worlds,¶ which are plotted around the prospect of invasions that would see the extinction of British imperialism, and, in the process, the human species.¶ Such anxieties draw energy from a pattern of settler defensiveness that can be observed across numerous settler-colonial contexts. Marilyn Lake’s and Henry Reynold’s account of the emergence of transnational ‘whiteness’ highlights the paradoxical fact that while white male settlers have been arguably the most privileged class in history, they have routinely perceived themselves to be ‘under siege’, threatened with destruction to the extent that their very identity of ‘whiteness was born in the apprehension of immi- nent loss’.11 The fear of looming annihilation serves a powerful ideological function in settler communities, working to foster racial solidarity, suppress dissent, and legitimate violence against indigenous populations who, by any objective measure, are far more at risk of extermination than the settlers who fear them. Ann Curthoys and Dirk Moses have traced this pattern in Australia and Israel-Palestine, respectively.12 This scholarship suggests that narratives of settler extinction are acts of ideological mystification, obscuring the brutal inequalities of the frontier behind a mask of white vulnerability – an argument with which I sympathize. However, this article shows how there is more to settler-colonial extinction narratives than bad faith. I argue that we need a more nuanced understanding of how they encode a specifically settler-colonial framework for imagining the future, one that has implications for how we understand contemporary literatures from settler societies, and which allows us to see extinction as a genuine, if flawed, attempt to envisage social change.¶ In the remainder of this paper I consider extinction’s function as a metaphor of decolonization. I use this phrase to invoke, without completely endorsing, Tuck and Yang’s argu- ment that to treat decolonization figuratively, as I argue extinction narratives do, is necessarily to preclude radical change, creating opportunities for settler ‘moves to innocence’ that re-legitimate racial inequality.13 The counterview to this pessimistic perspec- tive is offered by Veracini, who suggests that progressive change to settler-colonial relationships will only happen if narratives can be found that make decolonization think- able.14 This article enters the debate between these two perspectives by asking what it means for settler writers to imagine the future via the trope of extinction. Does extinction offer a meaningful way to think about ending settler colonialism, or does it re-activate settler-colonial patterns of thought that allow exclusionary social structures to persist?¶ I explore this question with reference to examples of contemporary literary treatments of extinction from select English-speaking settler-colonial contexts: South Africa, Australia, and Canada.15 The next section of this article traces key elements of extinction narrative in a range of settler-colonial texts, while the section that follows offers a detailed reading of one of the best examples of a sustained literary exploration of human finitude, Margaret Atwood’s Maddaddam trilogy (2003–2013). I advance four specific arguments. First, extinc- tion narratives take at least two forms depending on whether the ‘end’ of settler society is framed primarily in historical-civilizational terms or in a stronger, biological sense; the key question is whether the ‘thing’ that is going extinct is a society or a species. Second, biologically oriented extinction narratives rely on a more or less conscious slippage between ‘the settler’ and ‘the human’. Third, this slippage is ideologically ambivalent: on the one hand, it contains a radical charge that invokes environmentalist discourse and climate-change anxiety to imagine social forms that re-write settler-colonial dynamics; on the other, it replicates a core aspect of imperialist ideology by normalizing whiteness as equivalent to humanity. Fourth, these ideological effects are mediated by gender, insofar as extinction narratives invoke issues of biological reproduction, community protection, and violence that function to differentiate and reify masculine and feminine roles in the putative de-colonial future. Overall, my central claim is that extinction is a core trope through which settler futurity emerges, one with crucial narrative and ideological effects that shape much of the contemporary literature emerging from white colonial settings.

# 1NR

#### The 1AC's framing of existential threats is a false form of white neutrality that posits them as the hero of modernity which actively effaces the structural violence of settlement and racial slavery. The AFF’s citational politics shows their indebtedness toward domination as telos both in the specific pieces of evidence in the 1AC and the research agenda of the 1AC.

Mitchell and Chaudhury 20 – Basille School of International Affairs; York Universite – Keele Campus [Mitchell, A. and Chaudhury, A., 2020. Worlding beyond ‘the’ ‘end’ of ‘the world’: white apocalyptic visions and BIPOC futurisms. International Relations, 34(3), pp.309-332.] iowa – mads

Discourses that predict the imminent ‘end of the world’ are not as universal as they often claim to be. The futures they fear for, seek to protect and work to construct are rooted in a particular set of global social structures and subjectivities: whiteness. Whiteness is not reducible to skin pigmentation, genetics or genealogy. It is a set of cultural, political, economic, normative, and subjective structures derived from Eurocentric societies and propagated through global formations such as colonization and capitalism. These multi-scalar structures work by segregating bodies through the inscription of racial difference, privileging those they recognize or construct as ‘white’4 and unequally distributing harms to those that they do not.5 Whiteness is also a form of property6 that accrues benefits – including material, physical, and other forms of security – and pervasive forms of power, across space, time, and social structures. Due in part to its trans-formation through long-duration, global patterns of violence and conquest, whiteness takes unique forms wherever and whenever it coalesces, so it should not be treated as universal – despite its own internal claims to this status. Most of the leading contributors to mainstream ‘end of the world’ discourses discussed in this article are rooted in Euro-American cultural contexts, and in particular in settler colonial and/or imperial states such as the United States, Canada, Australia, and the United Kingdom. As such, the forms of whiteness they embody are linked to particular histories of settlement, frontier cultures, resource-based imperialisms, genocides of Indigenous communities, histories of slavery, and modes of anti-Blackness. Whiteness is remarkable in its ability to render itself invisible to those who possess and benefit from it. Many, if not most, of the (often liberal humanitarian) authors of ‘end of the world’ discourses seem unaware of its integral influence on their thinking, and would almost certainly be horrified at the thought of their work entrenching racialized injustices. We are not suggesting that these authors espouse explicit, intentional and/or extreme racist ideals, on which much public discussion by white people of racism tends to focus.7 Nor do we wish to homogenize or present as equivalent all of the viewpoints discussed in this paper, which display a range of expressions of whiteness and levels of awareness thereof.8 On the contrary, we work to center broad, everyday, structural ways in which underlying logics of whiteness and white supremacy frame and permeate mainstream paradigms and discourses, including those identified as liberal, humanitarian, or progressive. Even amongst white people who consciously and explicitly disavow racism, unconscious, habitual, normalized, structurally-embedded assumptions circulate, and are reproduced in ways that perpetuate race9 as a global power structure. This includes one of the authors of this paper (Mitchell), who, as a white settler,10 continues to benefit from and participate – and thus ‘invest’11 – in structures of whiteness, and therefore has a continual responsibility to confront them (although total divestment is not possible).12 The ‘habits’ of racism13 are reflected strongly in the way that contemporary ‘end of the world’ narratives frame their protagonists: those attributed with meaningful agency and ethical status in the face of global threats; those whose survival or flourishing is prioritized or treated as a bottom line when tradeoffs are imagined and planned; and, crucially, those deemed capable of and entitled to ‘save the world’ and determine its future. This is expressed in several key features of the genre, including its domination by white thinkers; the forms of subjectivity and agency it embraces; and the ways it contrasts its subjects against BIPOC communities. First, contributors to fast-growing fields like the study of ‘existential risk’ or ‘global catastrophic risk’ are overwhelmingly white. As we will see, almost all of the authors identified by the literature review on which this paper is based, and certainly the most influential thinkers in the field, are white. For example, the seminal collection Global Existential Risk, 14 which claims to offer a comprehensive snapshot of this field, is edited by two white male Europeans (Nick Bostrom and Milan Circovic) and authored by an almost entirely white (and all-male) group of scholars. Likewise, the most senior positions within influential think tanks promoting the study of ‘existential risk’, such as the Future of Humanity Institute, the Cambridge Center for the Study of Existential Risk and Humanprogress.org, are dominated by white men, with few exceptions.15 Another expression of this tendency toward epistemic whiteness is found in the habit, prominent amongst white academics, of citing all or mostly-white scholars, which entrenches a politics of citation16 that privileges whiteness and acknowledges only some intersectionalities as relevant.17 As mentioned above, Mitchell’s (2017)18 work offers an example of this tendency: while it engages critical, feminist, and queer postapocalyptic visions written by white authors, it does not center BIPOC perspectives or knowledge systems. These examples do not simply raise issues of numerical representation, nor can whiteness necessarily be dismantled simply by altering these ratios. More importantly, all-white or majority white spaces create epistemes in which most contributors share cultural backgrounds, assumptions, and biases that are rarely challenged by alternative worldviews, knowledge systems or registers of experience. In such epistemes the perceived boundaries of ‘human thought’ are often elided with those of Euro-centric knowledge. For example, influential American settler journalist David Wallace-Wells19 contends that there exists no framework for grasping climate change besides ‘mythology and theology’. In so doing, he ignores centuries of ongoing, systematic observation and explicit articulations of concern by BIPOC knowledge keepers about climactic change. The bracketing of BIPOC knowledges not only severely limits the rigor of discourses on global crises, but also, as bi-racial organizer and thinker adrienne maree brown20 argues, it produces distorted outcomes. For instance, it smuggles normative judgments that ‘turn Brown bombers into terrorists and white bombers into mentally ill victims’ into apparently ‘objective’ claims. Similarly, the influential work of Black American criminologist Ruth Wilson Gilmore21 demonstrates how white imaginaries of the threat posed by BIPOC bodies has produced the massive global penal complex and the radically unequal distribution of life chances. In short, imaginaries create worlds, so it matters greatly whose are privileged, and whose are excluded. Further, emerging narratives of the ‘end of the world’ explicitly center figures of whiteness as their protagonists – as the survivors of apocalypse, the subjects capable of saving the world from it, and as those most threatened. In these discourses, ‘survivors’ are framed as saviors able to protect and/or regenerate and even improve Western forms of governance and social order by leveraging resilience, scientific prowess, and technological genius. For example, the cover of American settler scientists Tony Barnosky and Elizabeth Hadley’s book Tipping Points for Planet Earth features a stylized male ‘human’ whom they identify as former California governor Jerry Brown (a powerful white settler politician) holding the earth back from rolling over a cliff.22 Similarly, presenting a thought experiment about the planet’s future, Homer-Dixon23 asks his readers to imagine ‘an average male – call him John’ (in fact, the most popular male name globally at the time of writing was Mohammed). This is followed by images of a Caucasian male dressed in safari or hiking gear – both emblematic of symbols colonial conquest24 – tasked with choosing from two forks on a path, as imagined by white American poet Robert Frost. This image of rugged masculine whiteness, embodied in physical strength, colonial prowess, and the ability to dominate difficult landscapes is mirrored in his framing of his former co-workers on oil rigs in the Canadian prairies25 as models of resilience. Similarly, American settler science writer Annalee Newitz26 proposes the Canadian province of Saskatchewan as a ‘model for human survival’, based on her perceptions of the resilience, persistence and collaborative frontier attitudes of its people. Saskatchewan is a notoriously racist part of Canada, in which violence against Indigenous people continues to be integral to its white-dominated culture27 – yet this polity and its culture are held up by Newitz as a model of ‘human’ resilience. By imagining subjects in whom whiteness is elided with resilience and survival, these discourses not only normalize and obscure the modes of violence and oppression through which perceived ‘resilience’ – or, in blunt terms, preferential access to survival – is achieved. They also work to displace the threat of total destruction ‘onto others who are seen as lacking the resourcefulness of the survivor’.28