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Political Economies of Media and Communications, the Climate Crisis, and Insights From Greta Thunberg's *The Climate Book*

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Abstract

The speed and depth of current earth system trends revealing environmental crisis are alarming and unprecedented. Key indicators of earth system stress are revealing themselves as more profound than scientists' prior projections, taking experts by surprise. The year 2024 has officially been recorded as the hottest year on record, as well as the first year to exceed 1.5º of global heating (Copernicus Climate Change Service, 2025a). Already, 2025 has indicators of similar increased weather "weirding" beyond and faster than earlier scientific projections, including a record low extent of global sea ice, the warmest ever March in Europe, and the third-warmest June and July on record (Copernicus Climate Change Service, 2025b). Particularly in relation to climate change, but also in relation to other earth system trends and planetary boundaries, the science is well settled and understood. However, the political, cultural, and societal shifts needed to transition towards environmental sustainability (and indeed stability) are not happening fast enough to mitigate or adapt to changes in our planetary home.

Greta Thunberg has risen to prominence as a global phenomenon, for her environmental activism and her straight talking critique of the economic status quo. This article notes a maturation in her approach through her publishing of *The Climate Book* in 2022/2023. In line with the theme of this issue, one must acknowledge the significance of this work for its breadth and depth of perspectives—from scientists to activists, creatives to policy and media contributors. Key and necessary contributions for the discipline of media and communications can be found through engagement with this book. Thus, this article uses *The Climate Book* to consider key topics in the political economy of media and communication. Issues on media, consumption and materiality, degrowth, and the waste economy all appear in *The Climate Book*, and as argued here, these need to be foregrounded and grappled with as matters of centrality and urgency for our field.

Since Greta Thunberg's The Climate Book was published (in October 2022 in the UK and February 2023 in the US), the reality of the 'epochal crisis' of anthropogenic environmental change (Foster, 2022, 2013a) has been deepening in near real-time. Major climate events across the Earth have increased in number and intensity. They include the North Atlantic Ocean heatwave in the spring of 2023, wildfires, floods, the failure of Antarctic sea ice to generate, and drought in Europe. Further, 2023 was recorded as the hottest year ever, not only in the timescale of human measurements, but over the last 125,000 years, a geological timescale (Copernicus Climate Change Service, 2024). This climate breakdown continued into 2024, the hottest year on record and the first to see global temperature increase at 1.5º (Copernicus Climate Change Service, 2025a). While at the time of writing full data for 2025 was not available, it appears to be showing predictable unpredictability in temperature extremes, drought, sea-ice failure and other weather events associated with anthropogenic climate change (Copernicus Climate Change Service, 2025b).

These climate events are bedfellows with many other earth-system impacts caused by human activity. Indeed, numerous earth-system trends all point to changes in air, land and water to the extent that the Anthropocene epoch, a former point of linguistic discussion amongst AHSS scholars, looks set to be ratified by the Anthropocene Working Group of geologists. In July 2023, the site for the ratification of this new epoch, Crawford Lake, was chosen due to the quality of its sediment layers revealing impacts from human activity, such as levels of plutonium-239 and atmospheric CO_2 levels (University of Southampton, 2023). The ratification of this new epoch will be a signal to mark the end of the Holocene epoch, marked by stable climatic conditions. This was the bedrock on which human society evolved, developed and flourished.

At the same time, the war in Ukraine has trundled on and at the time of writing, the Israel-Palestine conflict showed no signs of abating. Right-wing governments, some with climate-denying inclinations, are being successfully elected in more and more countries. There is alarm over the direction of the UN climate change conference (the COP), which in 2023 was hosted by the United Arab Emirates, a top oil producing nation. The president of COP 28, Sultan Al Jabar, is also the chief executive of the UAE's state oil company. The UAE state oil company, operating under the extractive and expansionist logics of late capitalism, intends to expand its production of fossil fuels. As a key member of the anti-fossil fuel campaign group 350.org noted, "It is the equivalent of appointing the CEO of a cigarette company to oversee a conference on cancer cures" (Singh Kanda, 2023). Concerns have not abated, with COP29 in 2024 similarly hosted by a petrostate. Indeed, the president of COP29 is an "oil industry veteran" (Gayle, 2024), and the organising committee have had to respond to backlash over the initial exclusion of women (Heckwolf & Soubeyran, 2024).

Against this backdrop, I use the focusing device of Thunberg's *The Climate Book* (Thunberg, 2022) to reflect upon and provide points of discussion for the field of media and communications. On the one hand, the field is necessarily concerned with the content and representation of the scientific and societal dimensions concerning environmental crisis. Yet, on the other hand, there exist gaps in the foregrounding of environmental issues, their connection with power, and indeed their connection with wasteful practices such as planned obsolescence and unsustainable consumption. To this end, I focus on two aspects regarding the political economy of communication:

(1) those of unsustainable consumption and materiality, and

(2) concepts of degrowth and the waste economy.

This article interrogates the extent to which media and communications are complicit in unsustainable environmental practices, as well as their potential contribution to discourse on degrowth and the waste economy.

Dimensions of political economy issues

The core of this article focuses on the implications of Thunberg's book for the field of media and communications. Analysis is guided by a structural approach which takes account of political economies and political ecologies of media and communication. To this end, it is argued that moving beyond studies of representation and addressing macro issues and contradictions in media and communications is urgently required (in order for the discipline to contribute to knowledge and understanding *of* this epochal crisis *in* this epochal crisis).

Enhanced understanding of the structural dimensions of media and their deep linkages to environmental crises is clearly essential at a time of alarming earth system changes. This article is by necessity written with a sense of urgency throughout, because time is short for fostering informed public debate on just action and just transition, for promoting transparency in reporting on climate and environmental metrics (including ESGs, scope 1, 2, and 3 emissions, biodiversity indicators, and atmospheric PPM of CO_2 to name but a few). It is also urgent to support effective and ambitious international policy responses to address interdimensional environmental crises. This urgency is also driven by the political economy of media in the contemporary setting, where, according to the President of Ireland "an incredible and dangerous narcissism" (Lee, 2022) combined with billionaire-level wealth can see the takeover of a social media platform and the gutting of content moderation. Meanwhile, the users are expected to be of sophisticated enough media literacy and critical thinking capabilities to discern between robust climate and environmental information, and that of delay, inaction, obfuscation and outright rejection of the science. Thus, understanding the structural dimensions of ownership, economic interests, practices, and impacts on digital literacy are more than ever, of paramount importance.

Consequently, this article reviews selective sections of Thunberg's book to focus on two crucial and interrelated sets of concerns relevant to the field of communication studies and those engaged in media practice and production today. These are how media and communications as a discipline relates to, engages with, and reflexively critiques (1) consumption and materiality *in* and *of* the media, and (2) how specific economic sectors—including those of media and communications—require degrowth (as understood through the important concept of the waste economy).

The next section lays out broad themes concerning the materiality of waste in media and communications, and by inference the necessity to curb unsustainable production and consumption of media hardware. The section after that turns to more non-material ideas of waste, through the lenses of degrowth and the waste economy in monopoly capitalism.

Media, consumption and materiality

The Climate Book implicitly and explicitly challenges ideas of unsustainable consumption throughout. For example, an essay by Annie Lowry (2022) on "The Cost of Consumerism" argues that in focusing on companies and governments alone, "they miss the people whose excessive—even wanton—consumption is harming the planet" (p. 281). While Lowry is careful to not blame the average household, she observes that "an American one-per-center accounts for ten times the

greenhouse gas emissions of the average American" (p. 282). This places ideas of economic inequality into focus, even within high-income countries.

Mike Berners-Lee in his contribution "How (Not) to Buy" similarly focuses on consumption but also includes consumption of information and misinformation as factors. This places the field of media and communication as central to understanding the dynamics of climate mis- and disinformation and discourses of delay. Furthermore, he directly addresses those who work in marketing and advertising, arguing that "in today's situation, it is *not* OK to make a living persuading people to think a certain way or to buy things regardless of whether it is in their best interests or the interests of the planet" (p. 288). He urges such employees to "ask yourself carefully whether that is the nature of your work" and if so, "that has to change" (p. 288). In this light, the role of media and communications practice is foregrounded. However, it also points to the discipline in terms of media education, while highlighting the need for critical engagement from media and communication scholars who focus their research on marketing and advertising.

Silpa Kaza's "Waste Around the World" provides stark statistics about waste, with projections that by 2050 there will be a 73% increase in waste generated globally. Again, dimensions of inequality are present in this critique, with the projected waste generation per capita from 2020-2050 showing that high-income earners produce vastly more waste than low-income groups. Nina Schrank follows this thread with a contribution entitled "The Myth of Recycling", pointing out that what the Global North considers recycling is often just shipped to the Global South. Schrank observes that when Greenpeace visited sites in Malaysia, they found "European household waste in dumps 6 metres high" (p. 297). Given these projections and observations, it is key that the field of media and communications critically interrogates the role of marketing, advertising and similar forms of commercial speech in contributing to norms around consumption.

Thunberg (2022) acknowledges that such critical perspectives are uncomfortable, noting that "this book contains some stark messages that can be a bit challenging" (p. 301). This observation certainly fits the juxtaposition in Schrank's (2022) essay with its full-page image of waste washed up on the shore of Sian Ka'an World Heritage Site in Mexico (p.300). Artist Alejandro Durán photographed a series to highlight that these items "originated in over sixty countries", constituting a "new form of colonization by consumerism" (p. 299). Thunberg (2022) reminds the reader that systemic change including a decrease in consumption is imperative (and that obfuscation of temperature rise targets through greenwashing, offsetting and rebranding cannot continue).

Thunberg (2022) also observes that "the media and our political leaders have the opportunity to take drastic and immediate action, and still they choose not to" (p. 302). It is in light of key contributions in *The Climate Book* that this article suggests the need to focus on the materiality of media. This is backed up by increasing attention in the field, although there tends to be an understandable focus on representation and content (Christensen & Nilsson, 2018). This is arguably a weakness in media studies, especially when it comes to environmental issues. Visibilising materiality of media, such as the infrastructure on which media devices and platforms are made, is of key importance. This perspective urges scholars to think beyond representation and towards the consequences of media hardware, such as e-waste, along with its uneven geographies of production, consumption and disposal. Christensen and Nielsen (2018) note that becoming aware of the materiality of media use "challenges the notion of technology - and digital technology in particular - as clean", despite very ecological metaphors for our digital ecosystem - clouds, farms, tweets, streams etc. (p. 271). However, these metaphors also present research opportunities for media and

communications researchers, allowing them to provide "new, provocative ways to examine questions central to environmental communication" (p. 271).

Maxwell and Miller's (2012) seminal contribution to the field has argued that attention needs to be paid to the planned obsolescence in digital devices, noting that "today's digital devices are made to break or become uncool in cycles of twelve months and counting down" (p. 2). Apple and Samsung were recently fined for deliberately slowing down their older phones, to increase user dissatisfaction and prompt them to upgrade to a new phone. For Maxwell and Miller, "references to the symbolic power of media technology" along with the rhetoric of the potentials of technology "mak[e] it hard to perceive its material connection to ecological decline" (pp. 4-5). Therefore, rather than considering "smart" economies as ecological in their clouds, tweets, streams and farms, we are reminded that "in reality, old-time toxic manufacturing has moved to the Global South, where it is ascendant" (p. 6). This manufacturing often involves extraction, processing and transportation of toxic bioaccumulants present in many media and communications devices. For example, lithium is used in many contemporary communication devices, usually for their batteries. Cubitt (2017) notes that "workplace media are one of the biggest markets for Li-ion batteries" (p. 67). Lithium mining is water-intensive and can cause water shortages where it is mined, and it also accumulates around the mining sites where it can destroy any vegetation. Yet, Cubitt observes that this is treated as an externality, and that it follows the historical precedent for gold mining, noticing that "the market … will not question the metal's provenance, nor take responsibility for the conditions under which it has been produced" (p. 78). Therefore, producers of communications devices and infrastructures are under no obligation, under existing market logics, to factor the environmental costs of production and disposal of heavy metals into their devices.

For scholars such as Sy Taffel, the ethics of small devices such as AirPods reveal both temporal and spatial inequalities in the global supply chain of luxury media and communications devices. Taffel (2023) argues that AirPods are an example of "ecologically unequal exchange" that "benefits a privileged minority of humans while inflicting significant harms to humans and ecosystems that will persist across inhuman temporalities" (p. 432). His analysis of AirPods reveals these inequalities by comparing a luxury product designed for over-consumption with a lifespan of just 18-36 months to the earth processes and labour processes that are involved in its manufacture.

Journalist Caroline Haskins (2019) observes that "AirPods are a product of the past", made of plastic but also tungsten, tantalum, lithium, tin and cobalt. She observes that the origins of these elements are from the Big Bang, 13.8 billion years ago. Like Taffel, she highlights the inequalities of labour involved in the manufacture of components for AirPods, noting that

> humans extract these elements from the earth, heat them, refine them. As they work, humans breathe in airborne particles which deposit in their lungs. The materials are shipped from places like Vietnam, South Africa, Kazakhstan, Peru, Mexico, Indonesia, and India, to factories in China. A literal city of workers creates four tiny computing chips and assembles them into a logic board. Sensors, microphones, grilles and an antenna are glued together and packaged into a white, strange-looking plastic exoskeleton.

Both Taffel and Haskins observe that through planned obsolescence, the lithium-ion batteries stop holding their charge, and the AirPods become unusable in a short product lifecycle that demands repeated consumption. They cannot be repaired due to how they are glued together—the casing has to be cut apart, which destroys the AirPod. The tech repair blog iFixit, which gives instructions on

how to repair popular consumer goods, gave the AirPods a repairability score of 0 out of 10. Taffel (2023) notes that "This does not indicate that AirPods are extremely difficult to repair, but that doing so is not possible" (p. 445). In his view, the entire lifespan of AirPod devices is dictated by the lithium-ion batteries, leading to an extreme disconnect between "wasteful upgrade culture" and "the materials required to produce them" in "geological processes that required hundreds of thousands or millions of years" (p. 14).

The work of Taffel and Haskins reveal how digital devices, from AirPods to domestic "smart" speakers are both social and material products—they embody invisible labour, geological processes and social wealth. At the same time, these processes are hidden from consumers. For Taffel (2023), an ecological approach to AirPods would involve an analysis that places them within the vast planetary infrastructure upon which their functionality depends. Thus, one must think of consumer devices within a vast, planetary process of mining, transport, labour and data, rather than a shiny luxury good that can be thrown away when no longer useful.

An ecological analysis of media and communications devices therefore reveals that vast planetary processes are embodied in them, along with a global invisible chain of labour. Their disposability highlights issues of proprietary tech that does not allow the right to repair, which would contribute to slowing down the consumption cycle of these goods. Positive change is, however, underway. The Right to Repair campaign is advocating that people in the EU replace screens and batteries themselves, while encouraging manufacturers to both follow an Ecodesign for smart phones and tablets and provide necessary information to simplify repair. Such advocacy takes responsibility away from the individual buyer, who has little power to change design, but pressurises manufacturers to change their processes in ways that will prohibit the limiting of device lifespans. For political economy of media and communications research at a time of environmental crisis, we must first and foremost integrate and visibilise the materiality of our products, eschew the yearly upgrade of our phone, speakers, earphones, tablets and laptops, and advocate for both the right to repair, and for the care and maintenance of our work tools. Contributions from *The Climate Book* provide a complementary lens to that of scholars already working on this topic, as well as a rationale to strengthen this area of our field.

Degrowth and the waste economy

As the previous section has described, this article argues that the materiality of media and communications needs to become inherent to the study and practice of such entities. Issues of planned obsolescence and e-waste must be amplified in the political economy area, as they directly connect to unsustainable consumption. However, the non-material dimensions of waste in the media industries must also be considered. This means reflecting upon the place of media as a sophisticated vehicle for advancing wasteful and consumerist practices, while also promoting consumerism as the only way of life (Lewis, 2017). I now examine the political economy concepts of "degrowth" which feature in Thunberg's book, along with ideas of the waste economy.

Growth is frequently discussed in *The Climate Book,* with Nicholas Stern's "Emissions and Growth" an important contribution (2022). Stern observes that since 1988, when Syukuro Manabe, Michael Oppenheimer, and Michael Mann (both Michaels have essays in the book) testified in the US congress about the existence and threat of climate change, "global annual emissions have continued to grow" and were "54 per cent higher in 2019 than in 1990" (p. 306). However, Stern nonetheless claims that GDP growth can be continued, despite acknowledging how it "does not

account for biodiversity loss, environmental degradation and climate change" (p. 307). However, various Jason Hickel's various contributions on degrowth use empirical measurements to challenge the idea that infinite (compounding) economic growth is possible. It is to the degrowth theme in *The Climate Book* and the literature more broadly that I now turn.

Degrowth

Degrowth is a planned reduction of energy and resource use designed to bring the global economy back into balance with the living world in a way that reduces inequality and improves human well-being (Hickel, 2021; Hickel, 2019; Hickel & Kallis, 2020). Degrowth takes a position that humans *per se* are not causing the climate crisis, but a particular system that depends on growth—capitalism—is. Hickel's (2022) "De-growth" essay in *The Climate Book* centres on the need to "scale down less necessary forms of production and organize the economy around human well-being rather than capital accumulation" (p. 312). Degrowth uses empirical evidence to critique ideas decoupling of both energy and resource use from GDP, in order to highlight the inequality of impacts. Key contributions from the work of Jason Hickel both in the book and beyond (Hickel 2021; Hickel 2019; Hickel & Kallis 2020) highlight how, firstly the empirical evidence for resource decoupling does not stand up to scrutiny, and secondly, that the empirical evidence for energy decoupling somewhat stands up but will always be playing catch-up with energy demand increases under compounding economic growth.

In *The Climate Book* Hickel (2022) highlights some key statistics from the literature on degrowth, including how the Global North is responsible for 92% of all emissions in excess of the planetary boundary (350ppm of CO_2). Furthermore, within the Global North, it is mainly the wealthier classes and corporations that contribute to these excesses, whereas most countries in the Global South are well within the planetary boundary of 350ppm of CO_2. Yet the Global South bears the brunt of the crisis with estimates of 82-92% of the economic costs of climate breakdown borne in these areas, and 98-99% of climate-related deaths. Thus, for Hickel the evidence for the viability of continued GDP growth, or even "green growth" is therefore not supported empirically when environmental impacts of any economic growth are considered.

The premise of degrowth acknowledges that the Global North already has excessive quantitative growth and arguably needs to degrow its resource and energy impact on the Earth (Hickel, 2021). Furthermore, the climate justice perspective inherent in degrowth logics reveals massive inequalities through historical colonial relations and neo-colonialism, highlighting how goods (including digital media products) are produced in the Global South, consumed in the Global North and disposed of again in the Global South. Degrowth therefore acknowledges the uneven geographical impacts of growth.

This is also discussed in *The Climate Book* in an essay by Solomon Hsiang on "Warming and Inequality" (p. 182) which starkly shows maps of the impact of climate change on mortality rates in 2100, the impact of climate change on GDP per capita in 2100, all juxtaposed with a map of GDP per capita in 2019 (p. 184). In describing these graphs, Hsiang observes a "familiar pattern in which countries in cold or temperate regions have higher average incomes, while hotter countries closer to the equator in tropical and subtropical regions tend to be much poorer| (p. 185). Hsiang observes the consequences that

> this puts poor populations in a worse starting position when it comes to climate change, because they live in hot locations, where warming is especially harmful, while

> rich populations live in cooler places, where warming proves less damaging – and is sometimes even beneficial. (p. 185)

The concept of degrowth is therefore more concerned with foregrounding the need for qualitative changes to the economic system than any merely quantitative approach. Thus, while critics often try to conflate the two, degrowth is not to be equated with economic recession. As Hickel (2021) observes, recession is not planned, it has uneven impacts, and it exacerbates inequality. Another way critics attempt to obfuscate degrowth and recession is through measures such as GDP. In contrast, advocates argue that degrowth is not necessarily focused on reducing GDP, rather the emphasis falls on reducing throughput of energy and materials in the economy (Hickel, 2021). If the reduction of material throughput leads to a reduction in GDP, that is to be planned for and managed in a safe and just way. The crucial point for this article, however, is in how degrowth advocates argue that policy needs to be selective about which sectors of the economy need to reduce activity and de-grow. In the degrowth literature, military spending, industrial beef, advertising and planned obsolescence are all parts of the global economy that are deemed harmful and unnecessary. They should be scaled down in favour of growing other sectors such as healthcare, schools, care labour, conviviality and activities that broadly speaking encourage human dignity and flourishing. As Thunberg herself observes in "They keep saying one thing and doing another" (p. 278), "We must no longer define progress only by economic growth, by GDP or the amount of profit given to shareholders. We need to move beyond compulsive consumerism and redefine growth. We need a whole new way of thinking" (p. 280).

Because degrowth is a planned reduction of material and energy use amongst higher-income countries, reducing economic inequality is usually a crucial component of the degrowth strategy and literature; concepts of human flourishing, universal public goods and services, reduction in the working week to allow for more conviviality, living wages, and retraining out of "sunset" sectors all form part of the strategies. It is therefore evident that in a degrowth scenario, the funding, operational practices and ethical orientations of many media outlets and platforms need to be critically interrogated. Advertising and marketing, as mentioned by Berners-Lee (2022, p. 286), but also PR and spin, all form parts of the economy that according to degrowth theories need to be sunset, or at least vastly reduced and reorganised. In a degrowth scenario, the reduction in so-called "waste" work would lower the overall quantity of labour hours, facilitating the reduction of the average working week. At the same time, former employees of these parts of the prevailing "waste" economy would be offered new opportunities for retraining towards new green job sectors or for more socially necessary forms of labour, such as care labour, ecological restoration, and community and social projects.

George Monbiot and Rebecca Wrigley's contribution "Rewilding" (2022) acknowledges the "broken world" (p. 348) and the need to sustain humanity within it. They describe the alienation from nature in the contemporary world, along with the impoverished state of nature as "disciplined, managed and dismal as the daily grind we might be trying to escape" (p. 349). Thus, the authors call for a project of mending the planet, along with the human relationship with it through rewilding, which they describe as "the mass restoration of the planet's ecosystems" (p. 349). Through this restoration, the authors propose that a "re-enchantment with a world that often seems crushingly bleak" can be facilitated. They acknowledge the scale involved—land, oceans, bogs, forests and other ecosystems all need restoration. In doing so "we can replace our silent spring with a raucous summer" (p. 351). Thus, the formerly "waste" occupations identified in the degrowth literature can

be reconfigured towards the vast task of ecological restoration. In the media and communications sector, advertising and marketing workers could better employ their skills within social enterprises, community initiatives and policy communication. Foregrounding such imaginaries and speculative futures therefore should be a key research and practice priority in the field of media and communication.

The waste economy

However, to fully comprehend ideas of retraining for sunset industries, we must further interrogate the extent and impact of the more non-material waste economy. Thus, we next turn to Marx, who discussed capitalist production in terms of a social process that took place within "the universal metabolism of nature" (Foster, 2013a, p. 5). Marx's "metabolic rift" theory, which positions environmental crisis as a rift between nature and society, has not been extensively employed to discuss the issues of commodity capitalism and "use-value production" (p. 5). As Foster observes, engaging with the metabolism of commodity capitalism in its current form reveals that use value is no longer a "rational expression of production costs" (p. 5). Rather, use value per se has become metabolised into the system such that it can be difficult to extract from advertising and sales costs. Thus, "an ever-larger proportion of what were considered costs of production were in fact forms of waste imposed by the system" (p. 5). This process has not only required a growing set of waste economy practices (e.g., in advertising, marketing, and sales), it has also further exacerbated the metabolic rift through ecologically unsustainable practices of built-in obsolescence, as discussed earlier. It is in this context that Monbiot and Wrigley's call for restoration takes on deeper import.

The unsustainable material and non-material practices of planned obsolescence and advertising can equally be considered as products of a wasteful and unsustainable growth-based system geared towards promoting and increasing consumption in order to maintain itself (long after its own usefulness as a system has passed). *The Climate Book* essay by Elizabeth Kolbert entitled "Civilization and Extinction" alludes to this, noting that "Our most dangerous weapon [as a species] would prove to be modernity and its trusty sidekick, late capitalism" (p. 13). Kolbert notes that human impacts began to unfold in the 20th century "not just linearly but exponentially", leading to the Great Acceleration of earth system and socio-economic trends (p. 13). Similarly, Naomi Oreskes in "Why Didn't They Act?" observes that "Capitalism as currently practised has imperilled the existence of millions of planetary species, as well as the health and well-being of billions of humans. It also threatens the prosperity that it was intended to create" (p. 30).

This article therefore argues that a key enquiry for the political economy of communication concerns the evolution of capitalism from a more primitive exchange mechanism to a sophisticated financialised system in regard to interactions with the environment. In order to understand the metabolic rift in its current economic context, including the "waste" economy, we also need to consider the evolution from competitive capitalism to capitalism in its monopoly form (as evidenced by the big tech companies with their trillion-dollar market capitalisation values). Such an analysis helps to explain the increasing role of the waste economy, along with how media and communications practices are involved in it.

According to Baran and Sweezy's (2013a, 2013b) theory, since around the turn of the 20th century, capital has been characterised less by dynamism and competition and more by monopolistic tendencies, cartels and price-fixing. This is contrary to contemporary neoliberal discourses about the dynamism and innovation inherent in capitalism that is stymied by regulation and red tape. Indeed, monopoly tendencies have exacerbated stagnation tendencies in capitalist

economies due to excess capacity. Under these conditions, consumption and investment cannot keep pace with productive capacity, and the core underlying tendency of stagnation presents itself, ultimately, in crisis. Consumerism and associated practices of planned obsolescence alone cannot fully resolve these tendencies, especially in the monopoly phase.

Central to the analysis of the monopoly stage of capitalism is that this excess surplus needs to find outlets in the waste economy. This is comprised of channels that do not provide a societal use-value but prioritise an exchange value that provides profits without a value based in the material, "real" or productive economy. For example, World War II absorbed some surplus after the depression of the 1930s, and after 1945, military spending during the cold war era also helped with the absorption of surplus. This example of "waste" spending veiled the general tendency to stagnation in late or monopoly capitalist economies (Foster, 2013b, p. 2). Therefore, until the economic crisis of the 1970s, the monopoly stage was cushioned by the absorption of surplus in the waste economy. Also included in this part of the unproductive economy is what Baran and Sweezy (2013a) termed the "sales effort" of advertising, which included wasteful practices such as "spurious product differentiation, artificial physical and/or 'moral' obsolescence" (p. 35). The sales and marketing effort through media and advertising industries are therefore revealed as central actors in regard to climate crisis, consumerism, unsustainable growth, and corresponding political economies. This is because they provided a means of surplus absorption in the economy during the monopoly stage (Foster, 2013b, p. 6).

A key characteristic of capitalist or corporate media as a cultural apparatus is that it intends to "to reach and influence the largest possible audiences" (Baran & Sweezy, 2013a, p. 40), rather than serving educational or informational materials to audiences. This objective, rather than promoting alternative, radical or even democratic views "motivates the promotion of [the] least controversial, hackneyed, and corny productions" (p. 40) in the service of profit-making. Even when content is shocking, lurid or extreme, it is conservative in terms of critiquing existing structures and thus should not be confused with notions of such media being in any way rebellious or radical in terms of political economy (Baran & Sweezy 2013b: 61).

To expand upon the waste economy and its implications for media and communications, we must acknowledge that orthodox economics, and especially neoliberal ideology, positions so-called consumers as sovereign and thus entitled to purchase products in the marketplace as much as they see fit. The market is seen as a public sphere where rational actors fairly buy and sell products based on their perceived worth. Therefore, consumerism is seen as natural, and it is not critiqued as an aspect of the class and social conditions under capitalism.

The sales effort is part of the non-productive economy that is involved in the persuasion of citizens to consume. The media and cultural industries are, therefore, also implicated in the production of waste for the absorption of profits. In the ecological context, this cultural apparatus does not concern itself with promoting less wasteful and consumptive norms. Rather, by needing to appeal to the widest audiences, it promotes the absorption of excess productive capacity through consumerism. In this form, these industries are concerned with creating a "mass society culture" centred on commodification and incorporation of more and more domains into the realm of the market (Foster & McChesney, 2013, p. 4).

George Monbiot's "Changing the Media Narrative" in *The Climate Book* considers the role of media in environmental matters. His essay opens with what is in his own terms an "astonishing" claim—if asked "which industry is most responsible for the destruction of life on Earth, I would say the media" (p. 369). Monbiot justifies this by arguing that traditionally "dirty" industries such as

mining, chemicals, extraction, along with "the companies manufacturing useless consumer junk" make obvious impacts. However, "none of these industries could continue to operate as they do without the support of newspapers, magazines, radio and television" (p. 369). For Monbiot, then, such outlets do not just provide "social licence" for these industries. Additionally, the media

> have resisted the action required to prevent the collapse of our life support systems. They have attacked and vilified people who challenge the economic system that drives us towards catastrophe, and used their great polemical power to enable business as usual to continue. In many cases, they have simply denied the realities of climate and ecological breakdown. (p. 369)

In short, Monbiot sees the media as "the engine of persuasion that allows our Earth-destroying system to persist" (p. 369). He then proceeds to outline the failures of public service broadcasters in the UK such as the BBC and Channel 4 to communicate about climate change accurately and notes the dearth of environmental coverage in the United States. As an example, he describes how "In one day, NBC, ABC and CBS spent almost as much time covering Jeff Bezos's eleven-minute flight in his giant metal phallus as on all climate issues in the preceding year" (p. 371).

Notwithstanding this, Monbiot does see some established media outlets (such as *The Guardian*, *El Pais*, *Der Spiegel*, *The Nation*, amongst others), contributing positively to environmental stories and issues. He also points to alternatives such as Democracy Now!, the Narwhal and Double Down News as prioritising environmental coverage. Further, Monbiot considers that digital technologies have the capacity to "greatly enhance the reach of alternative media and, in many nations, they have allowed activists and communicators to reach millions of viewers" (p. 371). What Monbiot calls "the digital promise" gives him hope for the media as a source of positive change.

Notwithstanding Monbiot's hope for a digital media sea-change, Michael E. Mann's essay "Resisting the New Denialism" urges resistance against division, despair and deflection of the issues in discourse. Indeed, rather than concurring with Monbiot's hope for the digital promise, he cautions climate activists to "resist divisive fights on social media over matters such as our personal lifestyle choices, and instead set positive examples and work together towards the shared goal of holding polluters and those who enable them accountable" (p. 374).

Within the range of work briefly outlined above in *The Climate Book*, concerning the waste economy, normative assessments of media industries range from public-private partnerships, in the case of semi-commercial public broadcasters (such as Channel 4 in the UK or RTÉ in Ireland) to, at worst, commercial speech, sponsored content, and subvertising. Undoubtedly, in the face of environmental breakdown, the role of advertising and marketing industries need to be thoroughly critiqued in terms of their socially necessary use-value, which is deeply contested. Political economy researchers also need to seriously consider how to put forward alternatives to this waste economy that will sunset waste industries and retrain those workers to use their skills and talents in more productive ways.

Critique and conclusion

Initial reviews of Thunberg's book have been largely positive. One reviewer had initially wondered when approached if readers needed another climate book, and upon reading it concluded that "yes we do" (Svoboda, 2023). This review continues the following extract: "As atmospheric scientist Michael Oppenheimer explained in a phone call with Yale Climate Connections: 'Let me put it this way: I get asked to write a lot of stuff. And 90% of it I turn down. This thing I thought

was worth doing … because I thought it would have an impact.'" The review on AP News was similarly positive, observing that "the book is sure to educate anyone who gives it an honest reading" (Merrill, 2023).

However, one early review called it a "A powerful but uneven clarion call", critiquing the book for its lack of engagement with geoengineering and nuclear options:

> In a book of more than 400 pages, just one and a half are given over to technologies aimed at reducing global heating by reflecting sunlight back into space. That particular essay can be summed up in a quote: 'Geoengineering is not an option.' The idea of withdrawing emitted carbon from the atmosphere gets a little more (reluctant) attention, because 'we've left Greta's generation little choice.' Nuclear power is barely mentioned even though decarbonising energy systems is fundamental to this effort. (Vince, 2022)

This viewpoint is an exemplar of poor media analysis, vastly at odds with the key lessons of *The Climate Book*. As Hickel (2023) summarises, the Global North needs a combination of "the double movement of efficiency plus sufficiency" (p. 47). In short, efficiency on a compounding growth model is not enough. Geoengineering and nuclear energy proponents make exaggerated claims. In this context, false advertising about how the current growth trajectory can be maintained proffers dangerous technological solutions.

To conclude, this article has outlined the ways in which *The Climate Book* is an influential piece of work which is significant for the study of media and communications. By necessity, there are some gaps in the work. For example, while it is strong on waste, there is a gap in terms of e-waste. The critiques of media, while powerful, could be developed further to avoid uncritical hubris around the "digital promise". Notwithstanding this, as a general primer on the scientific, human, ecological, cultural and policy dimensions of climate change, *The Climate Book* deserves to be taken seriously. As outlined in the introduction to this issue, the multidisciplinarity and accessibility of the scientific material therein suggests urgent points of reflection for the field of media and communications.

Author Bio

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