Greenwashing at Elsevier: A political ecology of corporate publishing

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Abstract

The largest science publishing corporations, including Elsevier, Wiley, Taylor & Francis, Springer, and Sage, are key partners for the oil, gas, and coal industries insofar as they distribute scientific research and data that facilitate fossil fuel exploration, production, and distribution. Critical researchers seldom trace fossil fuels and, in turn, the climate crisis to the publishing corporations that they generally rely upon to distribute their own research. We argue that corporate publishers produce the invisibility of their connections to fossil fuels through changing practices of greenwashing both in the public sphere and within firms. We detail marketing and management practices in the case of the largest science publisher in the world: Elsevier. On the one hand, we examine evolving forms of green marketing. On the other hand, building on recent calls for political ecologies of labor, we highlight the proliferation of 'greenwashing rituals' within the firm – i.e., performative, management-sponsored dialogues and actions regarding climate change. We suggest that researchers continue to expand frameworks for critiquing the fossil fuel industry to include auxiliary industries such as corporate publishing.

Keywords: climate change, fossil fuels, greenwashing, labor, corporate publishers, ritual

Résumé

Les plus grandes sociétés d'édition scientifique, notamment Elsevier, Wiley, Taylor & Francis, Springer et Sage, sont des partenaires clés des industries du pétrole, du gaz et du charbon dans la mesure où elles diffusent des recherches et des données scientifiques qui facilitent l'exploration, la production et la distribution des combustibles fossiles. Les chercheurs critiques font rarement remonter les combustibles fossiles et, par conséquent, la crise climatique aux sociétés d'édition sur lesquelles ils s'appuient généralement pour distribuer leurs propres recherches. Nous soutenons que les maisons d'édition produisent l'invisibilité de leurs liens avec

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les combustibles fossiles en changeant les pratiques d'écoblanchiment à la fois dans la sphère publique et au sein des entreprises. Nous détaillons les pratiques de marketing et de gestion dans le cas du plus grand éditeur scientifique au monde: Elsevier. D'une part, nous examinons l'évolution des formes de marketing vert. D'autre part, nous nous appuyons sur les appels récents en faveur d'une écologie politique du travail en soulignant la prolifération des "rituels d'écoblanchiment" au sein de l'entreprise, c'est-à-dire des dialogues et des actions performatifs parrainés par la direction concernant le changement climatique. Nous suggérons aux chercheurs de continuer à élargir les cadres de critique de l'industrie des combustibles fossiles pour y inclure des industries auxiliaires telles que l'édition d'entreprise.
Mots-clés: changement climatique, combustibles fossiles, écoblanchiment, travail, éditeurs d'entreprise, rituel

Resumen

Las mayores empresas editoriales científicas, como Elsevier, Wiley, Taylor & Francis, Springer y Sage, son socios clave de las industrias del petróleo, el gas y el carbón en la medida en que distribuyen investigaciones y datos científicos que facilitan la exploración, producción y distribución de combustibles fósiles. Los investigadores críticos rara vez relacionan los combustibles fósiles y, a su vez, la crisis climática con las empresas editoriales de las que suelen depender para distribuir sus propias investigaciones. Argumentamos que las editoriales corporativas producen la invisibilidad de sus conexiones con los combustibles fósiles a través de prácticas cambiantes de *greenwashing* tanto en la esfera pública como dentro de las empresas. Detallamos las prácticas de marketing y gestión en el caso de la mayor editorial científica del mundo: Elsevier. Por un lado, examinamos la evolución de las formas de marketing verde. Por otro lado, nos basamos en los recientes llamamientos a favor de las ecologías políticas del trabajo al poner de relieve la proliferación de "rituales de lavado verde" dentro de la empresa, es decir, diálogos y acciones performativos patrocinados por la gerencia en relación con el cambio climático. Sugerimos que los investigadores sigan ampliando los marcos de crítica de la industria de los combustibles fósiles para incluir industrias auxiliares como la editorial corporativa.
Palabras clave: cambio climático, combustibles fósiles, *greenwashing*, trabajo, editores corporativos, ritual

1. Introduction

> Ritual can be seen as a kind of make-believe in two senses of the word. First, in a literal sense, it can have the effect of making one believe in something that one had momentarily doubted; it is an action of faith rather than an action of knowledge. Second, in the usual idiomatic sense of the term 'make-believe', ritual very often is make-believe in the sense of a kind of pretending or a suspension of reality.
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> – Richard Hayes, *Ritual, self-deception, and make-believe* in *Self and deception: A cross-cultural philosophical enquiry*, 1996, p. 9

> The scientific community… must work to change the culture of our institutions, be honest about our values, advocate for climate justice and experiment. Great experiments push at the boundaries of knowledge and propriety. They are risky, volatile, blasphemous.
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> – Rose Abramoff, Opinion: I'm a scientist who spoke up about climate change. My employer fired me, *New York Times*, Jan 10, 2023.

The world's major science publishers distribute science and participate in data management services that are essential for the exploration, production, and distribution of fossil fuels. Scientists frequently refer to the responsibility of the fossil fuel industry for generating and concealing climate change, but rarely do they examine the intimate relations between the fossil fuel industry and the very publishing firms through which climate change research is generally distributed. In this article, we argue that corporate publishers actively

produce the invisibility of these relations through evolving forms of external and internal greenwashing[2] – that is, through shifting marketing and management practices. In this case study, we detail practices that obscure relations with fossil fuel companies at the largest science publisher in the world: Elsevier. Ultimately, we make the case for expanding critical examinations of the fossil fuel industry to include key auxiliary industries.

In 2024 alone, hundreds of studies on the fossil fuel industry's role in producing and denying climate change appeared in journals owned by the largest science publishing firms in the world, including Elsevier, Springer, Wiley, Taylor & Francis, and Sage.[3] Divestment from fossil fuels was a hot topic (e.g., Marupanthorn *et al*., 2024; McDonnell & Gupta, 2024; Plantinga & Scholtens, 2024). In a pair of articles in Taylor & Francis and Wiley journals, geographer Marco Grasso (2024a; 2024b) made the ethical and legal case for the fossil fuel industry to pay reparations. Other journals featured articles on how the fossil fuel industry continues to block or undermine energy transitions (e.g., de Lange, 2024; Letourneau *et al.*, 2024; Murphy, 2024). Related articles explored environmental and human rights abuses perpetrated by the fossil fuel industry in specific regional and local contexts (e.g., Manrique & Orihuuela, 2024; du Toit *et al.*, 2024). An exhaustive accounting of recent articles on the responsibility of the fossil fuel industry for creating and perpetuating the climate crisis is well beyond the scope of this article. We highlight in this introduction that these same publishing firms own journals that, in 2024, also published numerous articles to support fossil fuel expansion, such as research to advance oil exploration (e.g., Tao *et al.*, 2024; Fanglei *et al*., 2024); to render fracking technologies more efficient (e.g., Zhao *et al*., 2024; Wu *et al*., 2024); or to upgrade heavy petroleum and low grade coal (e.g., Shi *et al*., 2024; Yatimi *et al.*, 2024; Yusheng *et al.*, 2014).

The major science publishers own dozens of journals that specifically cater to the fossil fuel industry. To provide a very brief set of examples from three top publishers, Elsevier owns *Petroleum Exploration and Development* and the *Journal of Petroleum Science and Engineering*. Taylor & Francis owns the *Journal of Petroleum Exploration and Production Technology* and the *International Journal of Coal Preparation and Utilization*. Sage owns *Energy Exploration & Exploitation* and the *Journal of Petroleum Exploration and Production Technology*. Whereas IBM, Microsoft Azure, and Amazon Web Services provide significant data storage and management services to the fossil fuel industry, corporate publishers also participate in this marketplace. In 2022, for example, Elsevier closed its spatial data management tool *Geofacets*, designed to facilitate fossil fuel discovery, and joined the Open Subsurface Data Universe (OSDU) Forum, a fossil fuel industry initiative for managing, accessing, and sharing subsurface data. In this article, we discuss practices in corporate publishing that obscure or conceal the roles of publishing firms in the climate crisis.

We focus on the case of Elsevier for two reasons. First, it is the world's largest publisher of science. With offices across the globe and a staff of 9,500, Elsevier owns and manages 2,900 journals, which publish about 630,000 articles annually, according to elsevier.com. Its homepage adds that Elsevier's parent, RELX is also the world's largest "data analytics company," underscoring its AI and machine learning-supported services for data storage, analysis, and sharing ("For the benefit of society…", n.d.). Second, Elsevier has come under scrutiny in recent years, which we will build upon. Namely, contradictions between Elsevier's official position to fight climate change and its fossil fuel services were signaled in a February 2022 article in the British news outlet *The Guardian*, which reported that "while Elsevier has emerged as an industry leader with its own climate pledges, a spokesperson for the company said they are not prepared to draw a line between the transition away from fossil fuels and the expansion of oil and gas extraction" (Westervelt, 2022). The Union of Concerned Scientists subsequently forwarded a public petition "demanding that Elsevier and its parent company, RELX, detail their plans to align their business practices with their public commitments to address climate change" (Dahl, 2022). Then, in December, 2022, the Elsevier medical journal *The Lancet* published a piece urging

[2] Greenwashing refers to claims that "falsely portray environmental responsibility" (Jones, 2019, pp. 4-5). The term combines 'whitewash' – i.e., acts "to cover up crimes/scandals" with "'green' (environmentally sustainable)" (Jones 2015, p. 523).

[3] By several measures, MDPI should now be included here, and Sage is certainly smaller than the other four. See Clarke & Esposito's discussion and report, https://www.ce-strategy.com/the-brief/big-five/. MDPI publishes *Fuels*, containing fossil fuel research.

Elsevier to stop supporting the fossil fuel industry (MacMillan & Jones, 2022).[4] In turn, in April, 2023, protesters entered the annual RELX shareholders meeting in London to demand that Elsevier cease aiding fossil fuel expansion. Elsevier has previously appeared to alter its business practices in the face of similar public scrutiny – i.e., Elsevier cut ties to the arms trade (see Stafford, 2009), but pressure regarding greenwashing has yet to lead to the elimination of misleading marketing or of the services that Elsevier provides to fossil fuel companies. Thus, this article aims to support the efforts of journalists and social movements to push the company – and, in turn, other industry actors – to cease to provide platforms for research designed to increase fossil fuel extraction[5] or, at the very least, to suspend their greenwashing practices.

In the article, we inquire into the greenwashing practices of corporate science publishers and, in particular, we ask how Elsevier has evolved its greenwashing practices in the face of criticisms. We respond to this question in five stages. First, we outline current literature on greenwashing in political ecology and beyond. Following calls for more political ecologies of labor, we signal the need to expand greenwashing research to include the management of potential worker dissent and activism within firms, as workers at large companies increasingly protest gaps "between speech and performance" (Skoglund & Bohn, 2016, p. 180). Second, we discuss our methodological approach to studying the evolving greenwashing practices of corporate publishers, as well as the challenges involved in studying management practices within firms. Third, we characterize Elsevier's increasingly dynamic green marketing practices. Fourth, we discuss the proliferation of what we refer to as 'greenwashing rituals' inside of Elsevier – i.e., performative spaces and activities for individual worker expression and action on climate, through which management aims to cultivate the experience of a democratic, progressive workplace. We situate these marketing and management practices at Elsevier within the corporate publishing industry more broadly. Finally, in our discussion section, we derive lessons for the study of the corporate governance of labor on climate issues and we encourage researchers to continue to examine the diverse relationships between the production of science and the fossil fuel industry.

2. Political ecologies of corporate greenwashing – inside and out

In political ecology, much has been written of green economy fetishes, particularly of false technological fixes posed by states and corporations (e.g., Chandra *et al*., 2017), through which environmental issues, including climate change, are de-politized (e.g., Symons, 2018; Turhan & Gündoğan, 2017). New – or old (Kolinjivadi *et al*., 2023) – projects of capital accumulation are advanced, without addressing the drivers of climate change in meaningful ways. Authors often refer to "green communication" (Takedomi Karlsson & Ramasar, 2020 p. 352) or 'greenwashing' as a set of discursive tactics to mislead or "mis-represent" (Le Billon, 2021, p. 869), with the objective of "obscuring" (Armoudian & Poulsen, 2023, p. 92) environmentally destructive activities as if they were environmentally harmless or even beneficial (e.g., Banks & Schwartz, 2023, p. 656; Kill, 2016; Sullivan, 2023).

Over three decades have passed since five state Attorney Generals in the United States called for federal action to stem the proliferation of false statements by companies regarding environmental impacts[6], but, nonetheless, today firms continue to project an array of discourses and imaginaries to "obscure problematic records" (Jones, 2015, p. 524) and (mis)characterize themselves as green or, in the words of Stefano Ponte (2008), as "greener than thou." According to one review of research on greenwashing, such business practices have spread to "epidemic proportions" (de Freittas Netto *et al*., 2020, p. 2). As scholars continue to denounce corporate "sustainability spectacle" (Koch, 2022), there is perhaps some evidence that, among consumers, wariness or "green skepticism" (de Freittas Netto *et al*., 2020, p. 2) may be setting in. In addition, anti-greenwashing lawsuits against corporations such as Coca-Cola have emerged (see Tanuvi, 2021). In 2022,

[4] Similarly, human rights organizations have denounced RELX for enabling surveillance and deportation of undocumented immigrants via its product LexisNexis, but RELX has not taken any measures in response (see Currier, 2019).

[5] Here, we prioritize the ethical responsibility of scientists and science-related industries to mitigate climate change over the principle of scientific autonomy (see Douglas, 2003).

[6] In 2012, the U.S. Federal Trade Commission (FTC) published voluntary guidelines to "help marketers" make "truthful and non-deceptive" claims (U.S. FTC, 2012). Of course, such claims are not accidental but rather represent marketing strategy in the context of climate crisis (Delmas & Burbano, 2011).

greenwashing was featured in the first debate in the COP27 in Sharm el-Sheikh, Egypt: UN Secretary General António Guterres declared, "We must have zero tolerance for net-zero greenwashing" (Mohammed, 2022).

Yet, as we illustrate in the case of Elsevier in section 3, companies have been quick to evolve and diversify greenwashing practices. Indeed, much contemporary literature on greenwashing attempts to categorize an increasingly heterogeneous set of practices.[7] For example, sociologist Ellis Jones (2015, p. 524) identifies six strategies in corporate marketing:

1) "misdirection" (highlighting positive actions to distract from negative ones);
2) "self-aggrandizement" (referencing standard practices as if they were exceptional);
3) "ambiguity" (vague language);
4) "magnification" (exaggerating positive impacts);
5) "proclamations" (unverifiable claims); and
6) "implied association" (associating with environmentally-responsible actors).

Such taxonomies are useful within and beyond academic spaces for identifying evolving practices and, in turn, for naming and shaming companies (see Yadin, 2023).

In section 4, we highlight evolving and underexamined practices of greenwashing *within* firms, as workers increasingly mobilize to denounce greenwashing and climate complicity. Workers at Google, Amazon, and Microsoft have held climate walkouts (Calma, 2019; 2020); prominent unions have protested climate change complicity (Sax, 2020); and even financiers have denounced their own investment firms (Eccles, 2023). Such examples have attracted widespread attention in the media, precisely because climate activism has more commonly been associated with sites outside of the workplace, from broad-based marches for environmental justice (Holifield, 2015; Sheuch *et al.*, 2024) and targeted actions along the circuits of fossil fuel production (Valdivia & Lyall, 2018; Radonic & Kelly-Richards, 2015) to protests and proceedings associated with international climate negotiations (De Moor *et al*., 2021; Weiss *et al*., 2017) and legal challenges (Manzano *et al*., 2016; Ortiz, 2022). In the literature on climate change resistance, there seems to be a relative paucity of worker activism – at least, activism that emerges into the public sphere. However, in this article, we show that it is important for researchers interested in greenwashing not only to document evolving marketing practices in the public sphere but also to examine the micropolitics of management practices *vis-a-vis* worker climate politics within firms.

Since the 1980s, as trade unionism began to retreat globally (Ipsen & Tapia, 2017), keywords such as "Workplace Democracy" (Mason, 1982) and "participatory management" (Bainbridge, 2008) emerged in corporate governance, referring to a variety of management-structured practices that ostensibly included workers in decision-making through goal setting, grievance mechanisms, and other feedback pathways. The stated objectives of such worker participation included reducing conflict and increasing productivity and worker retention (Drago & Wooden, 1991). Given this decades-long history of workplace democracy thinking and practice, it might seem curious that in the year 2016 the *Wall Street Journal* published an article entitled "Workplace Democracy Catches On," referring to a sudden spread of management consultation with workers – specifically in corporate USA – on issues ranging from holiday parties to hiring. Singer and Ron (2023) suggest that this expansion might be related to a broader trend in so-called "woke-washing" (also, see Vredenburg *et al*., 2020) or the association of brands with progressive values and activism, as a marketing strategy. Woke-washing generally refers to external marketing, but Singer and Ron correlate this strategy to an expansion in participatory management practices.[8]

[7] In 2007, the NGO TerraChoice first enumerated the "Six Sins of Greenwashing" (later revised to Seven Sins) (see Alves, 2009).

[8] There are ongoing debates among business, marketing, and communications experts about the efficacy of "corporate activism" for driving profits (see Detavernier, 2019). At the very least, a recent study suggests, "companies that use corporate activism have lower market risk" (Blanco *et al*., 2023, p. 1).

In section 4, we turn to forms of performative worker expression and action designed to defuse climate critiques within companies. Environmental politics are both the "process of cultural mobilization" (Watts & Peet, 1996, p. 6) and the production of *immobilization*. As Solnit and Young Lutunatabua (2023) suggest in their recent compilation *Not Too Late*, climate change deniers are perhaps of less concern than they once were; but the conscientious citizen who is 'immobilized' is of growing concern. We highlight management practices to immobilize workers through the enactment of climate discussion and action within delimited, company-sponsored spaces. Labor geographer Neil Coe (2021) recently suggested that political ecology might offer useful insights into the complex relations between labor and climate change, insofar as this tradition explores diverse spaces and scales of power that shape human-environment relations. He concludes that "a political ecology of labour, if you like – has rich potential" (Ibid., p. 457). We take up this call, as we track greenwashing practices from the public sphere into the underexplored corporate governance of labor. Although researchers and activists have often reduced complicity with the fossil fuel sector up and down the corporate chain of command – including workers – to the inexorable principle of profit maximization (e.g., Frost, 2023)[1], companies seem to be taking seriously the potential of workers to exert pressure on them to mitigate climate change, and they are implementing new management practices to preempt or respond to that pressure.

3. Methodology

This study involves two domains of data: climate-related marketing and management. Thus, it required two research strategies. First, we compiled public statements by Elsevier and other publishers regarding their positions on climate change and, subsequently, investigated the goods and services they sell to the fossil fuel industry. Much of this research entailed internet searches for press releases, social media posts, and product websites. Second, we sketched management practices by drawing on public management declarations, annual reports that included descriptions of internal events and activities, and statements directed towards potential job applicants.

Approaching worker experiences of those practices was more challenging. Institutional ethnographies often involve interviews and participant observation within organizations to reveal how otherwise concealed social spaces and powerful institutions shape the broader world (Smith, 1987; Billo & Mountz, 2016), but they often present unique challenges in terms of access. Studying labor relations can be fraught with risks for participants, who might face retaliation and, therefore, shape their comments accordingly or avoid commenting altogether. Moreover, the global oil and gas sector is well-known for its opacity (Appel *et al.*, 2015; Lyall, 2018) and, in the face of climate activism, diverse actors that provide services to this industry carefully guard access to information regarding those services (Mufson, 2022).

We followed Campbell's (2012) call to innovate in the face of limited access (also, see Lyall & Havice, 2019). To examine worker experiences of management strategies to shape their perceptions, we took inspiration in Reich and Bearman's (2018) approach to studying Walmart, taking into account anonymous, online job-reviews. We considered reviews at Indeed.com and Comparably.com and, in particular, and we analyzed over 2,100 reviews on Glassdoor.com, written by middle-class professionals located primarily in North and South America, Europe, and Asia. These reviews featured freeform narratives of current and former Elsevier employees. Some reviews were irrelevant to our analysis; others were too vague or too brief to offer much for interpretation. However, this strategy enabled us to explore a range of worker experiences of management practices across diverse national contexts, without exposing participants to potential retaliation.

Finally, we should emphasize that this case of greenwashing was brought to our attention by a former Elsevier employee who is related to one of the article's co-authors and who has filed suit against Elsevier, "alleging that he was fired after raising greenwashing concerns" (Hudson, 2024). Therefore, we chose to draw entirely from data that are in the public sphere to navigate a conflict of interest that would be problematic if the study design had featured interviews, surveys, or other methods to collect from Elsevier workers or other actors data that are not readily accessible in the public domain.

4. Contemporary greenwashing dynamics in corporate publishing

Elsevier's mission statement indicates that the firm "helps researchers and healthcare professionals advance science and improve health outcomes for the benefit of society" ("For the benefit of society…", n.d.). In recent years, Elsevier has provided services to a majority of *Fortune 500* oil and gas companies ("R&D; Solutions for Oil and Gas", n.d.) and some large coal companies (Hall, 2021). It has distributed science that serves the purpose of making more efficient the processing and use of fossil fuels, and it has been one of the largest publishers of books, articles, and other publications meant to help firms to identify new areas "worthy of exploration" ("Petroleum Exploration and Development", n.d.) and to develop new technologies for extracting and processing heavy petroleum, thereby augmenting the global registry of available oil, gas, and coal reserves ("Deepwater Sedimentary Systems", n.d.). Elsevier's parent company RELX[9] hosts conferences for the oil and gas sector ("RX Events Finder", n.d.) and has, in recent years, hosted conferences for the coal industry (e.g., "Australia's largest regional mining event", n.d.; "WA mining conference", n.d.), facilitated "risk management" services to remove political and social obstacles to exploration in emerging markets ("Risk management resources", n.d.), and sponsored a Political Action Committee (PAC) that backs politicians who question climate change science, champion exploration, and block legislative action that might limit global temperature increases to 1.5°C this century ("RELX group", n.d.).

Simultaneously, Elsevier endorsed the 2015 Paris Agreement, affirming its support for "global efforts to mitigate climate change through the rapid reduction of greenhouse gas emissions" and the restriction of global warming to 1.5°C ("Climate change statement 2019", n.d.). The UN Global Compact, for which Elsevier is a "lead participant," maintains that no company function is "conflicting with company sustainability commitments and objectives" ("United Nations global compact", n.d.). Elsevier and RELX have endorsed a range of other climate commitments geared towards the private sector, such as the United Nations' Race to Zero[10]; The Climate Pledge[11]; the Aldersgate Group[12]; the Global Partnership for Sustainable Development Data[13]; and the We Are Still In declaration.[14] The company holds prominent or lead positions in several green corporate initiatives, as a founding member of the Responsible Media Forum[15] and the SDG Publishers Compact.[16] The goals and language of such diverse initiatives vary somewhat, although the common goal is to stem climate change. In addition, The Elsevier Foundation has sponsored grants and workshops to promote sustainability research and the Elsevier Sustainability Science Hub is a platform that houses data for informing sustainable development.

Whereas official statements affirm that Elsevier's position on climate change is aligned with the scientific community, *Elsevier's climate action report* for 2021-2022 states, "…experts accept that fossil fuels will continue to be a part of the transition and a net zero energy future" (p. 22). Elsevier representatives have detailed this problematic position: "…the IPCC and IEA (International Energy Agency) indicate that fossil fuels will continue to play a role in the energy mix for many years to come" (Martin, 2022). The IPCC and IEA, however, have been clear that fossil fuel exploration must halt. In 2021, the IEA's executive director stated, "there can be no new investments in oil, gas and coal, from now – from this year" (Harvey, 2021; also, see Carrington, 2022).

Elsevier is not alone among major publishers that engage in greenwashing. For example, Sage has signed pledges "to limit warming to 1.5°C" ("Sage signs the UK Publishers Association…", n.d.), while continuing to publish journals for the oil and gas industry, such as *Energy Exploration and Exploitation*. In 2021, Springer Publishing Company signed the Business Ambition for 1.5°C campaign, while continuing to publish the *Journal of Petroleum Exploration and Production Technology*, among many other journals and books geared towards

[9] In 2015, Reed Elsevier re-structured in the face of falling profits and the parent company became RELX.

[10] www.relx.com/media/press-releases/year-2021/net-zero

[11] www.theclimatepledge.com/

[12] www.aldersgategroup.org.uk/

[13] www.data4sdgs.org/

[14] www.wearestillin.com/signatories

[15] www.stories.relx.com/cr-at-relx/index.html

[16] www.un.org/sustainabledevelopment/sdg-publishers-compact/

fossil fuel exploration. Taylor & Francis is a signatory to the UN's SDG Publisher's Compact and the UK's Publishers Association's Climate Action Pledge, among other pledges, and yet, for example, it publishes *Petroleum Science and Technology*, which features processes to "enhance petroleum recovery," ("Petroleum Science and Technology", n.d.) as well as the *International Journal of Coal Preparation and Utilization*, which examines the "processing of oil shales and tarsands," ("International Journal of Coal Preparation…", n.d.), among other topics that would facilitate fossil fuel expansion.

In the case of Elsevier, such evident contradictions have attracted growing criticism from external and internal actors and, in turn, Elsevier has seemingly adapted its greenwashing. In 2020, a prominent editor applied pressure externally by resigning from Elsevier's internal climate advisory board and publishing a Tweet on August 18 that read, "If you discovered that your organisation had a Political Action Committee that gave money to US Congressional politicians who were anti-science, climate sceptics, and supporters of US disengagement from WHO, what would you do?"[17] RELX subsequently suspended the company's political action committee; yet, according to an NGO that tracks money in politics, Elsevier later reactivated this PAC ("RELX group", n.d.). In turn, as mentioned in the introduction, RELX and Elsevier faced a series of public denunciations in *The Guardian* and from the Union of Concerned Scientists, climate protesters, and its own journal editors. In 2022, Elsevier publicly announced in its "roadmap to address climate change" that, among other measures, it would "activate" energy journals to focus on energy transitions; it might require environmental impact statements from authors, in some cases; it would discontinue the journal *Upstream Oil and Gas Technology* in 2024; and it would "[c]ontinue to review journal and book portfolios, together with editors, to ensure appropriate alignment with the UN SDGs" ("Taking responsibility on climate", n.d.).

However, as detailed in the introduction, today Elsevier continues to sponsor multiple journals that inform new fossil fuel projects, including journals that have been founded since the public circulation of this "roadmap" in 2022, such as *Deep Resources Engineering*, which, for example, has recently forwarded methods for advancing fracking and coal mining into new areas (e.g., Cai *et al*., 2024; Gong *et al*., 2024). In the face of criticism, Elsevier has also re-named journals such as the *Journal of Petroleum Science and Engineering* (now *Geo-Energy Science and Engineering*), even though the journal continues to promote "hydrocarbon exploration and production" and features editors who work for oil majors ("Geoenergy science and engineering", n.d.). In 2022, Elsevier closed its spatial data management tool *Geofacets*, designed to facilitate fossil fuel exploration, but then joined a consortium for consolidating subsurface data called the OSDU Forum, which was started by oil majors – five of whom were sued by the city of Chicago in 2024 for "discrediting science" with "catastrophic consequences" (Chase, 2024). Thus, as Elsevier tries to push re-branding a step ahead of bad press, its greenwashing practices have become increasingly dynamic, characterized by a mix of discursive posturing and occlusion. In the following section, we follow the evolution of greenwashing practices into the spaces of labor, as management has increasingly attempted to circumscribe worker perceptions and actions on climate through performative rituals.

5. Greenwashing rituals

In this section, we propose that greenwashing literature should expand to include the management strategies used to shape spaces for worker expression, and activities for worker action on climate in ways that justify, enable, or otherwise perpetuate anti-climate forms of production. We detail attempts by Elsevier management to cultivate among workers the general experience of a democratic, progressive company and to create specific experiences of climate change mitigation within their daily working and personal lives.

Elsevier sponsors a host of internal spaces that simulate or mimic 'public spheres'[18] of open debate, such as digital 'town halls,' in-person and online events, committees, and newsletters. In recruitment materials,

[17] According to *Open Secrets*, an NGO that tracks money in politics, the political action committee to which he referred gave money to the campaigns of key anti-climate action politicians, such as Mitch McConnell, Tom Cotton, Marsha Blackburn, Roy Blunt, Steve Daines, David Perdue, Thom Tillis, Cory Gardner, James Lankford, Ron Johnson, and Marco Rubio ("RELX group", n.d.).

[18] Habermas (1991[1962]) discussed the emergence of a "public sphere" in the coffee shops, salons, and other public spaces of 18th century Europe, where "private people gathered together as a public […] articulating the needs of society with the

potential Elsevier applicants read: "We're a team. We work towards our shared purpose and mission, not personal agendas. We listen attentively and seek to understand different perspective[s]" ("Life at Elsevier", n.d.). Management characterizes worker participation in terms of liberal principles of inclusion and free speech. Accordingly, in his response to criticisms of greenwashing at Elsevier from editors at *The Lancet* journal, the Executive Vice-president of Global Communications for Elsevier concluded, "We have made solid progress but know that there is more to do. We will continue to collaborate with the communities we serve and share our progress and learnings, and we welcome feedback from all stakeholders" (Erkal, 2022, p. 2193). Management argues that such open discourse has enabled the advancement of progressive causes within the company. Most of the 35 management-sponsored employee associations or "resource groups" are designed to generate visibility for worker diversity (e.g., sexual, gender, racial, and ethnic), to offer distinct forms of support, and to facilitate free expression. Annual resource group events are scheduled towards these ends ("Greater inclusion and diversity…", n.d.).[19] In terms of climate change, Elsevier has also begun to sponsor spaces for education and dialogue. In 2021, management started "Sustain," characterized as "an employee-driven resource group to further embed sustainable principles and practices throughout the company" ("Press release…", 2021) or, in other words, to embed a "sustainability mindset into our business culture" ("Elsevier's climate action report", n.d., p. 7).

Other corporate publishers have similarly created organizations for workers to learn about and discuss responses to climate change. Taylor & Francis, Sage, and Wiley, for example, have sustainability employee resource groups. According to business scholars, such groups have proliferated throughout corporate governance over the last decade as a "useful mechanism for empowering employees" (Rolf *et al*., 2016, p. 18), resulting in "higher levels of job satisfaction" and feelings of "validation" (Welbourne *et al*., 2017, p. 1826).

The analysis of Elsevier job reviews reflects a range of worker experiences of corporate-sponsored spaces for expression. On the one hand, many current and former employees do seemingly harbor a view of the firm as committed to free speech that furthers progressive causes. A software engineer in London observes, "There is a good emphasis on the Employee Resource Groups and inclusion...," suggesting that Elsevier management, "... Listens to the voice of their staff… Takes regular feedback…" A new employee in Amsterdam says that "Everyone is free to share their thoughts and ideas," adding that open communication engenders an "Open, flexible, respectful culture." A salesperson of eight years comments, "They genuinely care about employees well-being and actively support equality at all levels." And a senior consultant in the Berkeley office gushes, "The fact that Elsevier has not tried to squash our somewhat rebellious, rabble rousing, and out right disregard for 'authority' culture is, okay, pretty amazing." From a management perspective, a business director in England concludes, "A progressive employer, with a worthy mission."[20] Yet, despite claims that its corporate responsibility is "owned by our more than 33,000 people across the business," (RELX, 2021), none of RELX's divisions have formal, democratic mechanisms for aligning company policy with worker values, and this seems evident in many job reviews. A current employee of three years says, "When employees bring up concerns in town halls, management doesn't commit to specific improvement or change. Ideas are ignored…" Another current employee of more than three years complains, "Company loves to be perceived as modern through events and newsletters… " A former development editor in London vents, "Employee opinions are frequently sought… but very little – if anything – ever comes of it…" Such workers are clearly unconvinced regarding the simulation of public spheres.

But beyond spaces of dialogue and visibility, Elsevier has recently begun to sponsor activities for workers to directly experience and engage in climate change mitigation in their working and personal lives. First, Elsevier set out to reduce the emissions most directly related to business activities. In effect, office spaces

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state" (p. 176). According to Habermas, the public sphere is open to all citizens, as opposed to the closed or exclusive spaces that a company might structure for workers and, for Habermas, the public sphere generates public opinion that guides democratic decision-making. He argued that such a sphere was essential for legitimate governance.

[19] Elsevier's Diversity and Inclusion page describes "Mandela Day," for example, as "an occasion for us all to take action and inspire change" ("Greater inclusion and diversity…", n.d.).

[20] Conversely, some outright rejected company attempts to promote progressive values. For example, one employee of eight years in New York decried an "Extremely 'woke' culture that sometimes overshadows the day to day work."

have witnessed their lightbulbs changed to LED lights; plastic cups have been replaced by biodegradable cups; charging stations and bike sheds have been installed in parking lots ("Elsevier's climate action report", n.d., p. 13). Annual reports and online forums tout adjustments in business travel and commuting, office infrastructure, company vehicles, and printing materials. The annual "Sustain Festival," the "SDG Inspiration Day," and other internal spaces feature speeches by leadership regarding steps taken towards achieving carbon neutrality in business activities by 2040 ("Press release…", 2021).[21] In addition, management now sponsors voluntary activities among workers that are designed to mitigate climate change in their communities and households. The weeklong "Sustain Festival" of 2021 featured cooking classes for workers to lower carbon emissions and reduce food waste in their kitchens. In 2022, Sustain hosted a "climate race" that involved 250 workers "competing to make improvements towards a sustainable lifestyle" and who reported "1500 specific actions" that would equate to the reduction of "124 tonnes of greenhouse gas annually." ("Elsevier's climate action report", n.d., p. 19). In 2023, 880 RELX workers participated in a monthlong, corporation-wide climate race that featured an app ("Giki Zero") that taught workers about climate change and about "steps to lower their carbon footprint, which they recorded" ("Racing towards a more sustainable…", n.d.; also, see Hand, 2023). RELX is also sponsoring "green teams" – i.e., "employee-led environmental groups representing 53% of employees" – that partner with charities to plant trees or otherwise "achieve environmental improvements at the local level" (RELX, 2023, p. 65). It remains an open question as to what ends such climate actions at RELX and Elsevier are designed to meet – and what effects they have in terms of labor relations. Are such efforts simply meant to shape customer perceptions? Do a substantial number of workers perceive themselves as 'empowered' climate actors through these activities? Or do they serve to conceal the "public secret" (Taussig, 1999) of profit maximization – i.e., to conceal that which all workers learn not to utter, if they are to advance at Elsevier? We turn to these and other open questions regarding political ecologies of labor in the following discussion section.

6. Discussion

We argue that town halls, employee groups, Sustain Festivals, climate races, and other Elsevier-sponsored spaces and actions for worker participation in climate change mitigation introduce greenwashing strategies into the governance of labor, principally in terms of "misdirection" (highlighting positive actions to distract from negative ones) and "magnification" (exaggerating positive impacts) (Jones, 2015). Elsevier misdirects attention to the reduction of emissions most directly related to business activities and exaggerates the potential mitigating effects of "small changes" in the "daily lives" of workers themselves ("Elsevier's climate action report", n.d., p. 19). Cooking classes to reduce food waste become part and parcel of "longstanding (and successful) efforts of liberal governments and corporations to individualize responsibility for systemic ills" (Boscov-Ellen, 2020, p. 164). Much has been written about attempts to individualize responsibility for the climate crisis. "This common framing of the problem," writes ethicist Jacob Blumenfeld (2023)," as one of consumer choices and carbon footprints… assumes that one can separate the climate crisis from its material basis in how the global economy functions, in how goods are produced and distributed today, and for whom" (169). In short, calls for individual action tend to say "little about the sources of climate change" (Flangan & Raphael, 2023, p. 249; also, see Patel & Moore, 2017, p. 204)[22].

It is tempting to conclude that Elsevier management cultivates obedient, individualized subjects of corporate-climate governance. As moral actors, people often do tend to seek out ways to (re)frame the pursuit

[21] Elsevier's Climate Advisory Board, an external group of experts, has provided guidance on best practices towards achieving carbon neutrality.

[22] In their conclusions to *A History of the World in Seven Cheap Things*, Jason Moore and Raj Patel (2017) write, "footprint thinking teaches us to consider the drivers of planetary crisis as grounded in the aggregations of 'people' and 'consumption' rather than in systemic dynamics of capitalism" (p. 204). Conversely, ethicist Dan Boscov-Ellen (2020) concludes that "Those directly protecting or promoting the interests of fossil capital… should be considered particularly causally responsible irrespective of their [individual] emissions" (p. 165).

or defense of self-interest as virtue (Bourdieu, 1990; Mauss, 1954).[23] But we suggest that researchers approach the question of corporate governing *effects* cautiously. Some workers clearly reject Elsevier's attempts at shaping their perspectives of the company, and perhaps we cannot make definitive conclusions about seemingly credulous workers either. As anthropologist Michael Taussig (1999) has argued, people often act as if some things are not known (or cannot be known), even though they are widely understood – such "public secrets", he explains, remain un-enunciated for people to sustain the institutions upon which they depend. Might workers reject Elsevier's greenwashing and still maintain a "cynical distance" (Zizek, 1989, p. 24)[24] from critique or activism to sustain their employment or advance in their careers? Such questions are theoretical, but they are also empirical. How might we further study worker experiences of corporate governance of labor in relation to climate change? The methodological challenges of accessing workers and spaces of corporate management are significant. Here, we have taken initial steps into this fraught area. The "methodologically plural" (Bridge *et al*., 2015, p. 8) field of political ecology is an appropriate tradition to build upon to pursue questions regarding the (micro)politics of climate change in the workplace.

Here, we conclude with two broad lessons for such inquiries. First, a defining characteristic of the "pluralist" (Watts & Peet 1996, p. 11) tradition of political ecology is its fine-grained approach to power relations and its consequent affinity for a range of critical social theories. Yet, some theories of power have gained more prominence than others. "Over the last two decades," observe Svarstad and Benjaminsen (2018), "in political ecology we have increasingly seen a move in power perspectives towards poststructuralist thinking about 'discursive power', inspired by Foucault" (p. 350).[25] Pivoting away from this literature, we draw attention to how embodied, daily workplace and 'lifestyle' rituals potentially also (re)shape subjectivities across extra-discursive or 'more-than-ideological' landscapes of power (e.g., Beasley-Murray, 2010). Moreover, we highlight the importance of distinguishing between *attempts* to regulate "individual conduct and rationality" (Gidwani, 2008, p. 180; also, see Ekers, 2015), on the one hand, and their lived *effects*, on the other hand. In the words of social theorist Lawrence Grossberg (2010), one must be careful to distinguish between "dreams of power and regulation with the realities of power, intention with effect" (320, endnote 17; also, see Lyall *et al*., 2018).

Secondly, the politics of knowledge production has long been central to political ecology (e.g., Watts & Peet, 1996). The production of knowledge about the natural world is "inseparable from social relations of power" (Bridge *et al*., 2015, p. 7). Yet, political ecology has generally understood "production" as social construction (e.g., Escobar, 1999; Leff, 2015, p. 66). Our research underscores the need to pay attention to the production (and distribution) of knowledge in a literal sense. There is much to be examined regarding how knowledge industries shape human-environment relations and propagate fossil fuel exploration and extraction. We would encourage researchers to stretch the category of energy worker beyond the gas fields and oil pipelines and into the diverse spaces of science production and distribution, including the corporate publishing firms, universities, and funding agencies that generate essential data and data infrastructures for the fossil fuel industry. Of course, our research also suggests that there is more and urgent work to be done by academics themselves to support and grow non-proprietary platforms, such as the *Journal of Political Ecology* (also, see Batterbury & García Silva, 2024 & forthcoming), despite a journal ranking system that continues to favor established, corporate-owned, expensive journals.

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[23] Pierre Bourdieu (1990) posited this claim in the following, characteristically roundabout prose: "In an economy which is defined by the refusal to recognize the 'objective' truth of 'economic' practices, that is, the law of 'naked self-interest' and egoistic calculation, even 'economic' capital cannot act unless it succeeds in being recognized through a conversion that can render unrecognizable the true principle of its efficacy" (p. 118).

[24] Slajov Zizek (1989) has advanced the hypothesis that the ability to enjoy dominant social fantasies depends on embracing institutions whose claims to legitimacy are not believed but are accepted "as necessary" (p. 36).

[25] For example, political ecology has deployed the Foucauldian concept of 'governmentality' to analyze how specific discourses of environmental regulation re-shape subjectivities and align them with the interests of state and capital (e.g., Agrawal, 2005). "Power, thus, is not necessarily repressive, prohibitive, or exclusionary…" writes Gabriela Valdivia (2015), "but produces social truths, reality, and individual subjects" (p. 468).

7. Conclusions

In this article, we have shown how corporate publishers attempt to actively conceal their relations with the fossil fuel industry through increasingly dynamic greenwashing strategies in the public sphere and through evolving 'greenwashing rituals' among workers. In other words, we have examined external forms of greenwashing and, following calls for political ecologies of labor, *internal* forms. In the case of Elsevier, the world's largest publisher of science, we have detailed the contradictions between its green marketing, on the one hand, and the array of services that it provides to oil, gas, and coal companies, on the other hand. In the face of growing criticisms, Elsevier management has, among other strategies, re-branded journals, funded sustainability grants, and articulated a defense of science publications that inform ongoing fossil fuel exploration and extraction, despite Elsevier's pledges and commitments that should require the company to cease supporting fossil fuel exploration and extraction, and despite the consensus of the scientific community that it claims to support and to follow. In turn, we have explored Elsevier-sponsored rituals of 'workplace democracy' and of management-circumscribed or structured forms of worker expression and action on climate change. This examination has opened questions about the demobilizing effects of such embodied rituals, carried out by workers in their daily work and personal lives. We would encourage researchers to continue to investigate such effects through political ecologies of labor; to expand critical studies of the fossil fuel industry's roles in the climate crisis to include key auxiliary actors, such as corporate publishers; and to support non-proprietary, open-access journals, such as the *Journal of Political Ecology*.

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