













Share

Comment



Environmental Activism in the **Digital Age**

Maëlle Jacqmarcq Edited by Avery Franken and Chanel MacDiarmid

ABSTRACT - The development of new digital technologies was predicted to be a boon for environmental activism. Internet and social media platforms were expected to facilitate broad bottom-up change, enabling activists worldwide to communicate and organize more effectively. However, the emergence of digital technologies may not have revolutionized the methods and impacts of activist organizations, especially for the environmental movement, wherein meaningful change has not yet been realized regarding climate change and nature preservation. Given the many challenges activists face, it is essential to understand how collective action can be undertaken with digital media to produce positive consequences for nature and human relations. Moreover, the neoliberal economic context from which digital technologies emerged and grew further accelerates environmental destruction through overproduction and overconsumption. This paper examines the relationship between environmental activism and digital technologies. While the environmental movement may have benefitted from newer organizational and communication tools on the international stage, the neoliberal economic framework in which digital technologies operate fundamentally contradicts the goals of the environmental movement.

T he emergence of the internet and the growth of social media platforms have been considered powerful new tools for social activism movements, facilitating broad bottom-up change. The environmental movement was initially thought to benefit from the arrival and growth of new digital technologies. It was hoped that tools such as online communication and social media platforms would allow environmental activists to organize more effectively. Spreading information to a wide audience of supporters and connecting with like-minded individuals would be easier as geographical and temporal barriers were reduced, and as the need to pass through established news companies was eliminated. However, the emergence of digital technologies did not revolutionize the methods and impacts of activist organizations. This is particularly true for the environmental movement, whose existence to this day demonstrates the continued urgency of the climate crisis. The environmental movement in this paper will refer to organizations whose general focus is the protection of the environment as well as individuals independently taking part in related activism. Environmental protection through the environmental movement may take the form of advocating for a decrease in global temperature rise, increased biodiversity conservation efforts, and climate justice, among other goals. Mainstream media sources will refer to print media (newspapers) and electronic media (television, radio, cable news), while digital media will refer to media communication that emerged with the internet, such as emails, organization websites, and social media platforms. This paper will examine the impacts that the emergence of online communication and social media platforms have had on the methods and the efficacy of the environmental movement in generating meaningful change for environmental protection from individuals, public actors, and the private sector. Given the significant challenges we are facing in terms of climate change and environmental degradation, understanding how collective action can be undertaken within digital media is important to produce the most positive

consequences for nature and human relations.

The paper will argue that the benefits enabled by digital technologies for the environmental movement, namely more effective organization and communication, are outweighed by the tendency of online activism to be low-risk and lacking real engagement, due to echo chambers and 'slacktivism'. These costs and benefits of digital technologies for the environmental movement are ultimately overshadowed by the structural problems that come from the neoliberal economic context. These problems contradict the initial goals of equal co-creation and horizontal communication of digital technologies and are fundamentally detrimental to the environmental movement. Firstly, the paper will discuss the benefits of digital technologies for the environmental movement: the loss of geographical and temporal barriers to spread information, reaching wider audiences, and the increased independence of environmental organizations to communicate on their platforms. Secondly, the paper will discuss the negative consequences of digital technologies on environmental activism: mainly, that wider audiences translate into the loss of meaningful engagement and impactful activism. Thirdly, the paper will assess the underlying structural issue, which is the dependence of the environmental movement on the neoliberal elite to succeed. This is evidenced in two ways: first, the problem of established corporate media power means that the environmental movement must create spectacular news to fit into this top-down model and receive media coverage, and second, the commodification of nature in the discourse and methods of activism is in contradiction with the preservation of nature itself. Lastly, the paper will conclude that to protect the natural environment, the environmental movement will need to transform the way they currently use digital technologies, to promote strong environmental collective action by recreating what digital technologies were originally hoped to bring: a space of horizontal, bottom-up co-creation where communication is thoughtful and inclusive.

the "emancipatory and democratizing potential of Strength, Efficacy, and Independence new media technologies," and his idea of 'tactical of Online Environmental Activism media' is defined as a form of communication which The emergence of digital technologies is "participatory," "dissenting," and used by groups altered the way environmental activism operates. of people who feel "aggrieved by or excluded from Traditional campaigning practices were done the wider culture" (580, 581). Tactical media is a by lobbying groups, scholars, or scientific powerful tool for activists to interrupt established organizations in a slow, more effortful manner by news media with their messages. This tool is organizing protests or unconventional actions and reinforced with digital technologies as activists influencing the broader society through books and have "expanded forms of distribution" namely the news media (Elliott 2020). Conversely, digital internet, where their messages can be shared across technologies enabled faster communication between the world in seconds and can potentially gain a lot like-minded but geographically far individuals of traction (581). Using tactical media strategies through emails, organizational webpages, and through digital communication technologies is social media platforms. Effective communication useful for the environmental movement to attract is at the heart of any type of activism in order to mainstream media attention. An example of this share information, to raise awareness, as well as use of tactical media for environmental purposes to coordinate mobilization and organize actions; in can be seen in Neil Smith's ten-day 'tree-sit' in fact, the success of activist activities is dependent 1998 to protest the construction of a road in a on effective communication (Büssing, Thielking, eucalyptus tree forest in Tasmania (586). After and Menzel 2019, 12). Social media platforms and ten days in the tree with a computer and internet other forms of online communication are therefore connection, Smith, who was dubbed "Hector powerful tools for activist movements, allowing the Forest Protector," gained significant media organizations to "extend and accelerate the coverage through the spread of information circulation of information, to mobilize resources, to politicians and news companies by email, raise awareness, facilitate discussion, organize recounting his situation and the context of the forest events and gain public attention" (Sobéron 2019, (586). Although Smith's action was not successful 2). Digital media has allowed the environmental in preventing the construction of the road, it is an movement to transcend the significant geographical example of a tactical media strategy, demonstrating and temporal barriers of traditional activism the effective use of digital technologies at the by disseminating information quickly. This is beginning of the internet era to gain mainstream especially evident in "cross-platform usage", where media attention and to spread information information is spread through "horizontal networks across a country despite spatial isolation. Digital interconnected through different platforms" (3). technologies have thus enabled the environmental Most large environmental non-governmental movement to engage in tactical media strategies in organizations, such as Greenpeace or the World order to disseminate information and communicate Wildlife Fund, now tend to have an online presence across wide geographical areas very efficiently. across multiple social media platforms as well as As previously discussed, the environmental their websites, allowing them to communicate movement has been able to gain public attention with their supporters directly, instantaneously, by using 'tactical media' strategies or creating and across large geographical spaces.

original and rapid content that is then given While online communication reduces coverage by mainstream media sources. The geographical and temporal distances for the environmental movement has also been able to spread of information, digital technologies are gain widespread public attention by using digital also essential spaces for what Geert Lovink calls technologies autonomously, no longer relying on "tactical media action" (Lester and Hutchins 2009, print and electronic media. Instead, environmental 581). Lovink is a scholar whose work focuses on organizations can communicate directly with their supporters as well as a broader audience through their webpages and social media platforms. This is a significant shift in the communication methods of environmental activism, as print and electronic media played an essential role in "environmental politics" before the emergence of the Internet, by "negotiating access, shaping meanings, and circulating symbols" about the environmental movement (Lester and Hutchins 2009, 579). In short, print and electronic media acted as gatekeepers for the environmental movement to gain access to widespread media attention. The emergence of digital technologies such as social media platforms created a clear shift for the environmental movement, as they were able to create and share their own content and information with much lower costs and "devoid of the mediating effect of news journalists and the established news media industries" (579). In addition to allowing the environmental organizations' leadership to have full control over the information they share, the use of social media platforms also allowed this communication to be shaped by the members of these organizations themselves. While mainstream media has a clear direction, where information is delivered to a passive audience, digital media engages the audience through the shared content, effectively making them producers of content. As Akiko Hemmi and Jim Crowther (2013) describe, social media platforms create "two-directional" communication, where both the organization and its supporters can share and personalize the other's content (1). With digital technologies, mainstream media no longer determines the information that is shared about the environmental movement and this information becomes constantly shaped and built upon by the individuals constituting the movement (Lester and Hutchins 2009, 580). This benefit of digital technologies is important for the environmental movement as it fosters solidarity through increased "interpersonal contact" between supporters, as well as opportunities for "individual textual production and innovative forms of civil engagement" (Craig 2019, 165, 167). This ultimately fosters meaningful involvement in the cause for environmental protection.

With the ability to create one's selfrepresentation and the ability to share this information quickly, the environmental movement has used digital technologies to reach and mobilize a widespread and large audience of old and new supporters. Social media platforms such as Facebook create "horizontal networks" between users who can share campaigns, ideas, and other information internationally, thus widening the reach of anything published about them (Hemmi and Crowther 2013, 2). Similarly, the "user-friendly and flexible forms of communication" that are permitted on social media platforms, such as videos and events, may appeal to wider audiences more effectively than written content which may be less accessible in mainstream media (2). The global environmental organization, Greenpeace, argued that petitions and hashtags are several of the tools offered on social media platforms that allow people campaigning on similar issues to connect and are part of wider campaigns which can create "huge societal change" (Abelvik-Lawson 2020). The "worldwide attention" given in the past year to the 'Fridays for Future' movement -a worldwide movement of youth striking weekly to protest the inaction on climate change, led by Greta Thunberg-and the widespread use of the hashtag #FridaysforFuture on social media is another demonstration of using digital technologies to reach a large audience and gain widespread news attention (Sobéron 2019, 1).

Media attention which reaches a large audience is effective for an environmental movement because it helps to gain new supporters and mobilize old ones. This ultimately fosters change by putting pressure on powerful actors, such as companies or politicians, to change their actions or decisions, by raising awareness, and appealing to a large scope of individuals to make small changes in their daily lives. For example, a video made by Greenpeace in 2014 called "Everything is not Awesome" criticized Lego's partnership with the oil company Shell and was viewed six million times online (Abelvik-Lawson 2020). The video format is a powerful medium to share information and provoke emotion from an audience, and its presence on social media and Greenpeace's website made the message spread quickly across the world. This ultimately resulted in Lego ending its Online activism has been described as 'clicktivism' "multimillion pound, 50-year relationship with the or 'slacktivism' due to the absence of meaningful oil company" due to the pressure of maintaining a engagement and mobilization by online activists, positive corporate image (Abelvik-Lawson 2020). referring to the inability of creating change by simply liking content with a 'click' (Büscher Similarly, Hemmi and Crowther (2013) argue that online activism can be thought of as 2016, 730). Büssing, Thielking, and Menzel (2019) sought to examine the relationship between 'persuasive activism' or 'sub-activism', where online environmental action is effective by being online environmental behavior ('liking' content) a "persuasive strategy of engagement rather than and more demanding offline behaviors, such as a confrontational one", and "unfolds at the level donating money and volunteering, by conducting of subjective experience" (4). One interviewed a quantitative research project about the protection of the Andean bear in Ecuador (4). They found that member of Friends of the Earth Scotland stated online campaigns can be a "low-level entry point that online, small-scale activism is more effective than confrontational offline environmental for environmental action" but only if the individuals in question have the time or money (9). Their activism as it is "more approachable and less lecturing", meaning that "people will listen conclusions are thus in line with the assumptions to us and we'll be able to influence them a of slacktivism: since offline activities such as lot more" (4). Involvement in environmental volunteering or donating money require larger groups through social media contributes to the personal resources, they are more closely correlated creation of "ecological citizenship" among to each other than to online 'liking' (9). Therefore, their results show that digital technologies are individuals, according to Andrew Dobson, which is a form of identity that focuses on the "public only effective in leading to meaningful actions implications" of one's actions, especially in terms in support of the environmental movement if individuals are already predisposed to do so. of one's ecological footprint (Craig 2019, 167). Therefore, the use of digital technologies by the Conversely, Greenpeace argues that online environmental movement has the power to create environmental support leads to meaningful positive environmental change by shaping public activism both offline and digitally. The opinion about companies, politicians, and even organization cites a Georgetown University study one's self in terms of the environmental impact of which stated that online activists are "twice as their behaviors. The reduction of geographical and likely to volunteer their time, more than four temporal barriers, the ability to gain widespread times as likely to contact political representatives, attention without depending on traditional and five times as likely to recruit others to sign news outlets, and the two-directional nature of petitions" (Abelvik-Lawson 2020). The stronger communication on digital media technologies have emphasis made by Greenpeace on the correlation allowed the environmental movement to become between online engagement and offline actions more autonomous, participatory, and far-reaching. may be caused in part by Greenpeace's role as an environmental organization which uses hashtags, videos, and petitions to generate mobilization, **Slacktivism and Echo Chambers: Is** and thus wishes to portray online activism as a **Online Activism Even Activism?** strong gateway to meaningful offline action. As While the emergence of the internet and a large environmental organization, Greenpeace growth of digital technologies initially brought also may find further use in offline activism by hope to activist movements due to their potential being able to monetize online actions, such as to accelerate change, a growing body of literature likes or views by their supporters, something (see Büssing et al. 2019; Büscher 2016; Hemmi and which the smaller Ecuadorian organization studied Crowther 2013) is questioning the power of digital by Büssing, Thielking, and Menzel probably technologies in fostering meaningful activism.

could not. Nevertheless, it can be expected that

the individuals who 'like' environmental content online will be more likely to engage in offline environmental activism than those who do not partake in online liking, but liking online content remains a much easier task (in terms of time, money, and engagement) than offline activities. Therefore,

b y difficult increase in commensurate environmental consequence Another risk for environmental widely in the of creating an chambers are based environmental will only reach interested already environmental prevent them from and widening the the environmental (Greijdanus et al. idea is directly algorithmic structure media platforms such the platforms show the content they are most

while the environmental movement may have reached a wider audience using digital technologies, it is to conclude whether the audience size has led to a increase in offline activism. as а slacktivism. of of digital technologies activism discussed literature, is the risk 'echo chamber'. Echo on the idea that online organizations individuals who are and committed to actions and will thus 'converting' others public support for movement 2020, 50). This linked with the of social as Facebook: individuals

likely to engage with (liking, commenting, or sharing it for example), which is based on the data generated by what that individual h a s previously engaged with. Hemmi and Crowther (2013) recognize this limitation of communicating and mobilizing online. They argue that "subactivism" on social media platforms does not reach as much of the public compared to print or electronic media due to individuals "primarily communicating with people who are already a part of their extended social network" (4, 5). Due to echo chambers, there is a trade-off when using digital technologies: while these online platforms bring autonomy to the environmental movement,

they have a limited and partial audience reach since they may only attain the people who are already seeking out their message. This audience reach is both advantageous and disadvantageous: while it has the disadvantage of spreading the movement's messages to a smaller number of people, it also has the potential advantage of this smaller group being more passionate and interested, and more likely to engage in subsequent offline activism. Therefore, to effectively foster awareness and attain the vast goal of reversing climate change through broad societal change, the environmental movement must use digital technologies in conjunction with mainstream media, to simultaneously advocate towards a mass audience and direct potential supporters to their unfiltered message online.

The difficulty of digital technologies in generating meaningful engagement has led scholars to question whether online activism can truly be called 'activism'. Activism is defined as "a doctrine or practice that emphasized direct vigorous action especially in support of or opposition to one side of a controversial issue" (Merriam-Webster 2020). This stereotypical vision of activism which focuses on effortful action is agreed upon by interviewed members of Friends of the Earth Scotland who described "true" activism as involving high stakes, confrontation, and

militancy

(Hemmi and Crowther 2013,

Only one of these interviewees described their environmental activity on the organization's Facebook page as "environmental activism"; instead, all the others referred to their activities as simply campaigning or communicating (3). This

4).

conception of activism is a narrow one because campaigns and communication are important the Digital Environmental Movement aspects of activism and essential to generate change The environmental movement has since they are the basis of any form of organization reduced geographical and temporal barriers and advocacy to render a population more sensitive in communicating information and has been to a given message. Nevertheless, Hemmi and able to share content to a large audience more Crowther (2013) argue that online activity allows autonomously as a result of digital technologies. members to be "environmentally concerned but not However, the increase of meaningful activism, militant, politically engaged but not ideologically which effectively raises awareness and leads to driven, participating and active, but without bodily change both online and offline, is not proportional risk" (5). It is important to understand the nuance to the increase in audience levels due to slacktivism between these different forms of environmental and echo chambers. Furthermore, the structural activity in order to distinguish the line between model of digital technologies and consequently the what is true activism and what is not. Also, it is structural model of online environmental activism necessary to remember that online activism may depend upon the neoliberal economic context be a way for people to participate and support in which both emerged. This is an economic a cause safely, people who otherwise would model that prioritizes individual gains over group be at disproportionate risk of state violence if sharing, wealth accumulation over harmony with they took part in more confrontational activist nature, and commodification of natural resources methods. For example, Extinction Rebellion over their preservation. The current elite-centered has recognized that their reliance on direct, high economic model is environmentally unsustainable stakes militancy, essentially being arrested as a and contradicts the initial intentions to make method to protest the lack of environmental policy digital technologies a horizontal space of equal in the UK, is flawed, as it puts people of color at co-creation. Therefore, while there is strong higher risk of police violence despite partaking evidence for both the benefits and costs of the in similar activities (Extinction Rebellion 2020). digital sphere for the environmental movement, In addition to the lack of confrontational perhaps the most pressing issue to be addressed militancy, online environmental activity may be is whether the contradictory underlying structure more focused on creating one's digital identity and may preclude the success of the movement, presenting oneself as environmentally engaged even putting the above costs and benefits aside.

rather than helping to foster meaningful change. The traditional model of media coverage Gladwell argues that "the growth of 'social that is characteristic of neoliberalism, based on topmedia activism' may be misleading as it may down established corporate media deciding what merely express how individuals are constructing information will receive news attention, has not their own identities rather than expressing strong been fundamentally altered by the growth of digital commitments to social movement goals" (Hemmi technologies. The rise of the internet promised and Crowther 2013, 6). Therefore, due to the more equal access to public attention, allowing risks of slacktivism and echo chambers and the individuals to share their content, independent from potential for individuals to use environmental established electronic and print news corporations. movement to form their digital identity, the Activists hoped that this would be a powerful tool environmental movement's use of online activism to generate change independently, building on each has the risk of limiting its potential audience other's messages, in harmony with the idea of natural reach, which makes it more difficult to generate diversity evolving through cycles. However, Lester widespread offline activism. It also has the risk and Hutchins (2009) argue that digital technologies of overlooking the "substance of traditional have instead become a tool used by environmental activist engagement", which may be the only activist organizations primarily to get the attention meaningful way to promote societal change (6).

The Underlying Neoliberal Context of

of established mainstream news sources (592). The model of media power has remained the same despite the growth of digital technologies: Environmental groups are using the internet in a way that reaffirms the historical and cultural dominance of print and electronic news media, adapting to the agenda and priorities of journalists, as opposed to forging new models of media power embedded within the specific networking capacity of the internet and web. (Lester and Hutchins 2009, 580) The authors argue that there is a "popular assumption" that the established news media hold "a privileged and naturalized role in representing and anchoring 'reality'" (Lester and Hutchins 2009, 591). This is an issue because environmental campaigns that do not gain news media coverage are believed to be unable to attract broad public support as access to a mass, impartial audience may only be attained through mainstream news coverage. Therefore, environmental organizations use tactical media to "intervene in and influence" the mainstream news outlets (582). Since these major news sources are based on novelty and significant events, the environmental movement must systematically re-strategize to "find alternative access points" into the mainstream news media (583). Some of the tactical tools they use are the coordination of strategic actions combined with "symbolic resonance" (583). The earlier example of 'Hector the Forest Protector' demonstrates this combination: the strategic action of Smith sitting in a tree temporarily prevented the logging of the forest and it gained national news coverage by also being a symbolic image of a single man preventing the destruction of the forest. Another example of this unchanged model of media power is the Fridays for Future movement. Per popular belief the movement started gaining popular attention as a result of its use of the hashtag #FridaysforFuture on social media; in reality, the movement began to gain considerable traction only after Greta Thunberg's UN speech in December 2018 (Road 2019). This shows that environmental activists still rely on news coverage from mainstream media sources to receive widespread public attention; even the attention gained on social media platforms is determined by the platforms' algorithms, which are shaped by the

type of news people are most likely to engage with, pointing to an inherent bias towards corporate, mainstream news sources. Similarly, online digital media platforms such as Facebook are interested in maximizing online user engagement, which means that the platform's algorithms will also favour these established corporate news sources. This model of corporate power is problematic because it denies environmental activist organizations the autonomy of sharing information in a bottomup, independent way, and means their attainment of public attention is dependent on them passing through the established corporate media model.

The neoliberal economic model which exists at the structural base of digital technologies may also be harmful to the environmental movement as it makes it dependent on the commodification of nature in its discourse and methods of activism, contradicting the natural world itself. Environmental activism inevitably must create some human representation of nature to impart common understandings of the natural world to others. However, Büscher (2016) argues that the representations of nature present online are almost entirely commodified to fit within the economic model of consumerism and profit-making and this commodification of nature happens in what Büscher calls 'nature 2.0' (727). Nature 2.0 is "a nature that is humanly produced" through co-creation, active modification, and production by individuals on social media and other online communication spheres (727, 728). An example of nature commodification is the ecological search engine called Ecosia. By selling user data and creating advertising space, they give the majority of their revenue to "rainforest sustainability programs" (731). Firstly, the representation of the Amazon rainforest as the "lungs of our planet" hides a more complex reality of local gold-diggers and farmers who rely on the forest for their income. This representation of nature is distorted to promote Western consumerism of the search engine and to generate profit (732). Secondly, individual interactions or searches on Ecosia are represented as being positive for conservation efforts. However, in reality, user data ends up fueling the capitalist economy by allowing the search

engine to place more advertisements, indirectly previously discussed, and commodifying nature will not solve the environmental crisis. Therefore, encouraging more consumption and destruction of the environment. The commodification of nature in it will be essential moving forward to reimagine online discourses and activist methods fits within the way digital technologies are structured economically, to reduce negative business incentives the neoliberal vision which represents competition and promote positive nature conservation efforts. and profit as ways of "saving nature". However, Various scholars have discussed potential the representation of nature through these capitalist forces is "impersonal" and "sliced into small bits alternatives to structure digital technologies in that can be trademarked and sold" which goes accordance with environmental efforts. Lester against the true representation of nature as wild, and Hutchins (2009) highlight the importance peaceful, and diverse (736). Therefore, while the of "sustainable self-representation" reinforced emergence of digital technologies spurred hope for by direct and on-going communication between the environmental movement to provide a space users, where online users participate in the creation of citizen journalism through "community-driven for bottom-up mobilization for nature preservation, the neoliberal economic context soon shifted the wikis, blogs, vlogs and video-hosting sites" structural mechanisms of digital technologies. (591). Investing in such types of participatory Instead, environmental organizations remained communication models would lead to news that is dependent on their messages being expressed "more likely to be incremental than spectacular," through the same elitist model of media power and but this digital collective self-representation resorted to nature commodification to succeed at fits better with the goals of the environmental raising public awareness, at the cost of positive and movement, "both philosophically and practically" sustainable representations of the environment. (591, 592). It is essential to create an open digital space where all individuals can contribute to the dissemination of news and mobilization. Büscher How to Save Digital Environmental (2016) makes similar claims about the importance Activism and the Planet of horizontal self-representation on social media In order to promote strong and effective platforms. He suggests that 'eco-blogging' could collective action for the environment, digital be a "form of pedagogy to critique established, technologies must find a way to operate within the consumeristic online communication" among neoliberal economic structure in a way that fosters equal individuals (734). Currently, there are horizontal, bottom-up communication and activism, significant efforts made in this direction as news in line with the ideals upon which they were websites such as The Correspondent and Drilled originally created. In today's economic context, News are reader-funded and collaborative, and nature conservation efforts are increasingly being are thus able to be ad-free, participatory spaces "subjected to capitalist market dynamics" such as of journalism. Similarly, independent podcasts ecotourism or payments for ecosystem services funded by listener contributions through Patreon, (Büscher 2016, 728). Similarly, environmental such as the Critical Frequency podcasts and the organizations compete among one another for Yikes podcast, enable bottom-up discussion on the attention of media outlets and potential online pressing climate issues, free of corporate funding. conservation supporters, instead of the collective Environmental problems are increasingly salient; efforts needed to reach environmental goals (733). therefore, fostering forms of self-representation Büscher argues that part of the problem lies in the is desirable to avoid elite news "diluted by the "highly marketized environment where 'social interests of the state, capital and/or corporate media" connections' and 'doing good' in the like-economy and to promote sustainable communication and consist solely of individual actions" (733). collective action (Lester and Hutchins 2009, 592).

The neoliberal market model poses significant An important aspect of sustainable and challenges for the environmental movement, as ongoing self-representation by the environmental

movement online is about shifting the structural way we relate to each other on these digital technologies, promoting thought-out, expressive communication. The neoliberal economic context with its evergrowing desire for profit has a fundamental impact on how we use digital technologies today. Communication and relationality on these platforms are structured to be commodified and result in the types of engagement such as surfacelevel 'likes' and feeding into echo chambers. It dissuades users from engaging in thought-out, expressive communication, and ultimately goes against the goals of the environmental movement. Wael Ghonim (2015) argues that real change on social media can be achieved by promoting civility and thoughtfulness in online discussions. and making it socially acceptable to change one's mind on a subject, rather than the short and sharp opinions given in response to complex issues; he argues that it is important to talk with each other instead of at each other. Similarly, the scholar Zeynep Tufekci (2010) argues that effective social change can be achieved through slow and sustained work and protest, and embracing technology should not ignore the power of these gradual benefits. Thoughtful and civil online discussions that allow users to change their minds will allow such conversations to slowly raise awareness in favor of the environmental movement. This will ultimately lead to broad cultural shifts in our society's beliefs about environmental protection, beliefs that will become deep and non-commodified due to the nature of communication, which are necessary to tackle this large-scale crisis. With these attributes, the internet has the potential to become "an organized open forum for deliberative democracy" (Hemmi and Crowther 2013, 1). However, to achieve effective collective action and revive horizontal digital communication, we must promote deliberative expression, patience, and open-mindedness in our online conversations, especially when these are about our selfrepresentation and the representation of nature.

Conclusion

The emergence of digital technologies has impacted the environmental movement by increasing the speed and scope of its messages worldwide. Despite having a theoretically broader reach, the nature of digital technologies' platforms has meant that audiences reached online are often limited to those already seeking out the environmental movement's messages, and offline engagement does not necessarily lead to more effortful offline activism. Nevertheless, in many ways, it is difficult to characterize the size and nature of the impact of the growth of digital technologies on the methods of the environment movement. Due to the neoliberal economic context within which social media platforms and other online communication technologies grew, corporate news continues to dominate mainstream media coverage as well as the digital sphere, where digital platform algorithms favor these established news companies to maximize online engagement. The perpetuation of this elitist model of media power within the digital sphere shapes the actions and content of environmental organizations and prevents them from being completely autonomous in the content they generate. Additionally, the representation of nature in neoliberal terms is detrimental to environmental goals as it aims to generate profit from the preservation of nature, when the act of seeking profit can be seen as promoting overproduction and over-consumption, beyond nature's limits. The goals of the environmental movement will be best promoted by fostering the initial hopes of digital technologies: providing an open space for deliberation, creation, and self-representation among individuals. Achieving this space of healthy communication will help to cultivate effective activism and an environmentally sustainable future.

References

Abelvik-Lawson, Helle. 2020. "Online Activism: How Petitions and Social Media Campaigns Have Changed the World." Greenpeace UK. April 9. https://www.greenpeace.org.uk/news/ online-activism-how-petitions-and-socialmedia-campaigns-have-changed-the-world/

- Büscher, Bram. 2016. "Nature 2.0: Exploring and Theorizing the Links between New Media and Nature Conservation." New Media & Society 18, no. 5: 726-43.
- Büssing, Alexander Georg, Annelene Thielking, and Susanne Menzel. 2019. "Can a Like Save the Planet? Comparing Antecedents of and Correlations between Environmental Liking on Social Media, Money Donation, and Volunteering." Frontiers in Psychology 10: 1-15.
- Craig, Geoffrey. 2019. "Local Sustainability Groups and Social Media." In Media, Sustainability and Everyday Life. London: Palgrave Macmillan UK, 165-95.
- Drilled News. 2020. "Climate Accountability." Drilled News. https://www.drillednews.com/.
- Elliott, Lorraine. 2020. "Environmentalism His tory of the Environmental Movement." Encyclopedia Britannica. https://www. britannica.com/topic/environmentalism.
- Extinction Rebellion. 2020. "Statement on Ex tinction Rebellion's Relationship with the Police." Extinction Rebellion UK. July 1. https://rebellion.earth/2020/07/01/statementon-extinction-rebellions-relationship-with-thepolice/.
- Ghonim, Wael. 2015. Let's Design Social Media That Drives Real Change. TEDGlobal. https:// www.ted.com/talks/wael ghonim let s design social media that drives real change.
- Greijdanus, Hedy et al., 2020. "The Psychology of Online Activism and Social Movements: Relations between Online and Offline Collective Action." Current Opinion in Psychology 35: 49–54.
- Hemmi, Akiko, and Jim Crowther. 2013. "Learn ing Environmental Activism through Social Networking Sites?" The Journal of **Contemporary Community Education Practice** Theory 4, no. 1: 1-7.
- Lester, Libby, and Brett Hutchins. 2009. "Power Games: Environmental Protest, News Media and the Internet." Media, Culture & Society 31, no. 4: 579–95.
- Loach, Mikaela, and Jo Becker. 2020. "The YIKES Podcast." 2020. https://radiopublic.

com/the-yikes-podcast-6nKDQq.

- Merriam-Webster. 2020. "Definition of Activism." In Merriam-Webster Dictionary. https://www.merriam-webster.com/dictionary/ activism.
- Podcast Network. 2020. "Critical Frequency." https://www.criticalfrequency.org/.
- Road, Maven. 2019. "Fridays For Future: The Social Media Impact of Greta Thunberg." Medium. September 10. https://medium.com/@ mavenmkt/fridays-for-future-the-social-mediaimpact-of-greta-thunberg-c8523d3313f8.
- Soberón, Mariana Arjona. 2019. "#ViralEnviron mentalism—Digital Landscapes of Environmental Activism, Fridays for Future and Beyond."
- The Correspondent. 2020. "The Correspondent." 2020. https://thecorrespondent.com/.
- Tufekci, Zeynep. 2010. "It's the (Democracy-Poi soning) Golden Age of Free Speech." WIRED. January 16. https://www.wired.com/story/freespeech-issue-tech-turmoil-new-censorship/.