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# From Publications to Public Actions: The Role of Universities in Facilitating Academic Advocacy and Activism in the Climate and Ecological Emergency

#### **OPEN ACCESS**

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Thousands of universities have made climate emergency declarations: however the higher education sector is not rising to the collective challenge with the urgency commensurate with scientific warnings. Universities are promoting an increased focus on sustainability through their research, teaching and their own institutional footprints. However, we suggest that such initiatives will be insufficient to catalyse the required transformations in our societies and economies because of (i) the time lags inherent in education and research pathways to impact, and (ii) their failure to address either real-world political processes or the forces invested in maintaining the status quo. We therefore suggest that academics should move from publications to public actions and engage in advocacy and activism to affect urgent and transformational change. We discuss the barriers to engagement in advocacy that academics face, and propose a number of actions that universities should adopt to help overcome them. These include explicitly recognising advocacy as part of the work mandate of academic staff by altering work allocation models, facilitating engaged research sabbaticals, altering hiring and promotion policies, and providing training to enhance the effectiveness of engagement. In addition, universities must defend the right of academics to engage in protest and push back against emerging threats to academic freedom. Such actions would strengthen a rich tradition of academic protest and enhance the contribution of universities to the public good in areas well beyond sustainability, for example race and social justice (Black Lives Matter, decolonising education) and public health.

Keywords: climate change, direct action, higher education, non-violent civil disobedience, protest, public engagement, public goods, sustainability

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# INTRODUCTION: EMERGENCY ON PLANET EARTH

Planetary heating threatens the collapse of human civilisation and ecosystems worldwide (Trisos et al., 2020; Richards et al., 2021), a situation so severe that over 11,000 scientists have declared "clearly and unequivocally" that the Earth faces a climate emergency (Ripple et al., 2020). Alongside the climate crisis, the destruction of nature is causing an equally severe ecological emergency that threatens the extinction of a million species and undermines the conditions for human life (Diaz et al., 2019; IPBES, 2019). We thus face a twin Climate and Ecological Emergency (CEE). An emergency is an urgent situation requiring immediate action, yet, despite thousands of Higher Education (HE) institutions around the world having issued their own "climate emergency declaration" [UNEP (United Nations Environment Programme), 2019] and the widespread recognition that universities play a key role in contributing to the public good, the HE sector is not rising to the collective challenge with the urgency commensurate with the warnings-despite the fact that these warnings emanate largely from academics working in HE-and is largely continuing with business as usual. For example, many universities continue to invest in or receive funding from fossil fuel corporations (e.g., Gayle, 2021), while academic fields such as economics may ignore the CEE almost entirely (Oswald and Stern, 2019). So poor has been the collective response of the HE sector to the CEE that universities have been accused of failing-and even betrayinghumanity (Green, 2021; Maxwell, 2021).

As institutions of education and research, universities have the potential to be "pivotal change agents" in catalysing transitions towards sustainability (Giesenbauer and Müller-Christ, 2020), and over 200 universities have signed the SDG Accord, the HE sector's "collective response" to the UN Sustainable Development Goals (SDG Accord, 2021). The sector's efforts towards sustainability have focused primarily on three areas: (1) promoting solutions-focused research (Schneidewind et al., 2016; Vogt and Weber, 2020), (2) institutionalising "education for sustainable development" (Grund and Brock, 2020; Kopnina, 2020), and (3) reducing their own institutional footprints (e.g., Fissi et al., 2021). Universities can also contribute to the sustainability transition in a fourth way, through engaging with the public and other audiences outside the sector (McCowan, 2020), although such efforts are less well-documented in the literature. All such initiatives are important and demonstrate the HE sector's vital role in contributing to the public good; however, these efforts alone will be insufficient to trigger the transformative changes required at the necessary speed. It takes time for students to reach positions of societal influence and for research to influence policy, so education and research pathways are poorly adapted to an emergency context. Moreover, these approaches are ill suited to the scale of the problem (Facer, 2020), which requires "transformative change, namely a fundamental, system-wide reorganisation across technological, economic, and social factors" (Diaz et al., 2019). While education and research can facilitate and inform the required transformation, they are insufficient to catalyse it because they do not necessarily address either the processes that most powerfully influence political and policy change, or the forces that are so heavily invested in preventing the required transformation.

# FROM PUBLICATIONS TO PUBLIC ACTIONS

Although an explicit theory of change is lacking, academia appears to operate under the assumption that if academics generate information, then society's leaders will use that information to make wise decisions that promote the public good (see e.g., Rosen, 2019). However, it is naïve to assume that policy and political decision-making are informed solely by evidence, because government decision-makers are additionally (and indeed primarily) influenced by special interests seeking to maintain the status quo and prevent policy-change, in particular corporate lobbyists (Brulle, 2016; Wetzels, 2020). For example, in 2020 the oil and gas sector spent over \$136 million in political contributions and \$110 million on lobbying in just one country, the United States (OpenSecrets.org, 2021). Governments are also influenced by public opinion; however, special interests also seek to forestall popular demand for sustainability transitions through the funding of climate change counter-movement organisations to manipulate public opinion by casting doubt on the realities of climate science or the urgency of transformative action (Lamb et al., 2020; Brulle et al., 2021).

There have therefore been growing calls for academics (Frid and Quarmby, 2012; Gardner and Wordley, 2019; Green, 2020) and universities (McCowan, 2020) to step beyond their traditional roles and influence policy more actively through advocacy and activism. We amplify these calls, because we believe that with knowledge comes responsibility. Just as the general public are urged by security agencies to sound the alarm if they become aware of a danger, so scientists have a duty to speak outand take appropriate action-in a time of planetary emergency. As renowned climatologist Michael Mann states "it would be an abrogation of our responsibility to society if we remained quiet in the face of such a grave threat" (Mann, 2014). Academics also benefit from both a trusted position within society and a platform for sharing their views, both of which can be seen to confer even greater responsibility to act in accordance with their knowledge of the CEE. Advocacy can be defined as publicly adopting a position and working to promote it, for example through lobbying, campaigning and engaging and organising the public; activism is a subset of advocacy that uses more direct forms of action to influence policy, such as protest and non-violent civil disobedience. While advocacy largely works within the system and depends on the "proper channels" of influence, activism tends to operate outside it; however, we note that there is in fact no consensus in academia on what the "proper channels" consist of, and that the theory of change for connecting research to action should itself be a topic of open research and experimentation.

One powerful mechanism to rapidly influence policy is non-violent civil disobedience, which has been a driver of major 20th century changes including universal suffrage, independence from empire, and civil rights for people of colour. In recent

years, and particularly since 2018, a number of popular climate and environmental civil disobedience movements have sprung up around the world, including the Greta Thunberg-inspired School Strikes/Fridays for Future, Extinction Rebellion, and national movements such as Sunrise Movement (USA) and Ende Gelände (Germany). While it is difficult to attribute causality, these movements have doubtless helped stimulate a step change in public discourse over climate, including unprecedented media coverage and public concern (Gardner and Wordley, 2019; Thackeray et al., 2020). This is also translating into political rhetoric and action; the European Parliament and at least 38 countries have declared a climate emergency (Harvey, 2020), and to date nine countries (China, Denmark, France, Hungary, Japan, New Zealand, South Korea, Sweden, and the UK) have enshrined net-zero targets into law (Murray, 2020). Despite this success, or, more cynically, because of it, governments around the world are criminalising protests: these measures have been opposed in an open letter by several hundred academics (Taylor, 2021).

Nevertheless, despite the apparent effectiveness of environmental activist movements in catalysing change, there appears to be only limited engagement with them by academics (Gardner and Wordley, 2019), or engagement only at an abstract, theoretical level. We suggest that such reluctance may stem from three main areas. First, some academics may perceive that they are expected to remain detached and neutral observers, and risk losing scientific credibility (or attracting scorn from their colleagues) by advocating for policy positions (Nelson and Vucetich, 2009; Donner, 2017). As a result, those who do engage in advocacy, and particularly activism, may relegate these activities to their personal lives and thus carry them out as private citizens, rather than explicitly as academics. However, research suggests that participation in advocacy does not affect the public's attitude to research (Motta, 2018) or the perceived credibility, trustworthiness or honesty of scientists (Kotcher et al., 2017; Cologna et al., 2021), though it may slightly worsen negative attitudes towards scientists among political conservatives (Motta, 2018).

Secondly, there are institutional barriers which result in academics not being sufficiently rewarded for such engagement. These include a hypercompetitive academic environment where professional reputations and university hiring and promotion decisions are judged by a narrow focus on high-impact publications rather than other forms of real-world impact (Fochler et al., 2016; Pells, 2019), and the increasing precarity of academic employment (Lempiäinen, 2016), which may leave academics both overstretched and unwilling to engage in activities which do not directly contribute to their career prospects.

Academics may also be actively dissuaded from engaging with such movements, or even sharing their personal reflections on them within their teaching, by government statements (see e.g., Busby, 2020), staff within their institutions, unsympathetic media coverage, and the rising "McCarthyism" of organisations such as Turning Point USA/UK, which hosts websites calling on students to report lecturers for "political bias" (Fazackerley, 2020). Some academics may also be put off from engaging in activism by the perceived lack of opportunities with which they

feel comfortable. For example, many may not be willing to place themselves in positions where they risk arrest. However, nonviolent civil disobedience involves a spectrum of approaches and may employ an array of tactics that do not require law breaking, such as projecting scientific papers in public places, the withdrawal of cooperation or labour, performance art, and walk-outs: academics should therefore seek opportunities to participate in ways that are appropriate for their personal circumstances. Moreover, academics that are unwilling or unable to engage in frontline activism may nevertheless offer practical support (as well as public endorsement) to those who do.

# FACILITATING ENGAGEMENT, ADVOCACY, AND ACTIVISM

Given the urgency of the CEE, we suggest that universities must expand their conception of how they contribute to the public good, and explicitly recognise engagement with advocacy as part of the work mandate of their academic staff. The limited existing research suggests that such a position would be supported by both academics and the public (Cologna et al., 2021). To encourage this, universities should broaden work allocation models to allow at least 10% of time for advocacy and engagement with policy processes, including public engagement and education, and working with campaigning organisations and elected officials. Promoting engaged research sabbaticals would allow such activities to be ramped up in the run-up to key political events, such as the conference of the parties to the UN Framework Convention on Climate Change or UN Convention on Biological Diversity, allowing academics to devote their energies at key times when the opportunity for impact is maximised. In addition, the criteria used in promotion decision-making should be further diversified to include specific criteria related to advocacy and engagement, including advancing scientific evidence for policymaking, communicating science for advocacy, and engaging with community groups and activist organisations. By incorporating advocacy into the work mandates of their academic staff, universities would explicitly reject the notion that political engagement should only be carried out in academics' spare time, as private citizens. Moreover, it would help overcome any stigma that activist academics may face from colleagues. However, this alone will not be sufficient, so universities should take an active role in combatting and mitigating such stigma, as they have done to break down discrimination based on race, gender and sexuality.

Given the emergency context, academics should also be supported to redirect their work on campus to assist the social movements addressing the CEE. For example, academics could be facilitated to conduct action research on how to publicise, grow or maintain protest groups, as well as help them identify strategically important targets or refine their theories of change. Likewise, universities can restructure their formal curricula to ensure that teaching for all students covers topics relating to analysis of the role of protest as part of democratic engagement. Ideally, we would begin to see project based learning focussed on activism. As the US National Task Force on Civic Learning

and Democratic Engagement found, "by teaching students to address real-world issues in concert with others, some colleges are helping students move from civic knowledge to civic action, thus better preparing them to serve their communities and the nation as informed, active citizens when they graduate" (NTFCLDE (The National Task Force on Civic Learning and Democratic Engagement), 2012). Educational establishments which best promote this have a clear sense of mission, promote activism as a form of civic engagement in both informal and formal curricula, facilitate networking between students with overlapping interests, and hire staff with experience of and a commitment to activism and who can help socialise students to become familiar with forms of activism in their community (Kezar and Maxey, 2014). Hodson (2014) notes that students are best served by learning both through action and from action and argues for a three phase apprenticeship approach of modelling (teacher demonstration), guided practice (teacher assisted), and application (independent student action). Such an approach of action-based learning has great potential for renewing our democracies though boosting social agency and civil awareness amongst students (Biddix, 2014).

To enhance the capacity of academics to be effective advocates, universities can create structures to provide specific training. For example, the Interdisciplinary Centre for Sustainability at Université de Lausanne aims to foster collaborations and build links between the university and society at large, by providing academics opportunities to engage with politicians and civil servants, and build links between the university and civil society organisations. The Climate and Development Lab at Brown University engages students in real-life climate policy-making, writing influential briefs and meeting with politicians (Ciplet et al., 2013). More training could include community engagement, advocacy, ethics, scientific integrity, media communication, as well as historical, international and local examples of civil disobedience and its role in achieving social progress, as a way to raise awareness of the historical legitimacy of such tactics as part of scholarly life.

While the facilitation of advocacy aligns well with many universities' goals of achieving greater impact and community engagement, the question of academic involvement in nonviolent civil disobedience is more complex because it is unusual for public bodies to be seen to encourage law-breaking. Nevertheless, universities can provide their staff with the security to engage in civil disobedience by explicitly guaranteeing that they will not discriminate against staff with a criminal record for non-violent protest. For example, a clause guaranteeing this right could be inserted into employment contracts, as part and parcel of academic freedom. Beyond the employers themselves, labour unions such as the University and College Union in the UK have an important role in both defending the rights of members to engage in civil disobedience, and providing them with the security to feel able to do so. Moreover, such a defence of academic freedom must not be limited to guaranteeing the rights of staff from an institutional point of view. The leaders of higher education institutions must also actively and vocally fight attempts to stifle academic freedom by governments, the press, and organisations such as Turning Point USA/UK. This appears to be a growing concern around the world; for example, the governments of the UK, China, France, Hungary, Russia, Turkey and many other countries have sought to limit the freedom of both academics and their institutions through a range of repressive policies (Roberts Lyer and Susa, 2019).

Lastly, universities can strengthen the ties between academics and civil society organisations and grassroots movements by permitting the use of their facilities, free of charge, for mobilising and community building activities (Marginson, 2011). Many towns and cities lack public spaces suitable for talks, screenings and training, yet universities possess these in abundance and they often lie under-used outside office hours. The erosion of access to public space on campuses is a consequence of the corporatisation of the HE sector, but permitting the use of facilities by groups in which staff and students participate is a simple way both to contribute to change and generate goodwill within their local communities.

Nevertheless, while universities have an important role in facilitating greater engagement and advocacy by the whole academic community, their willingness to do so may be limited by the increasing corporatisation and marketization of higher education institutions. In effect, these institutions may have too much "skin in the game" to actively promote forms of engagement that call into question the neoliberal agenda they increasingly are having to comply with. In an environment that is increasingly intellectually conformist, monocultural and bounded within disciplinary silos, it is the margins that provide the most fertile ground for ideas and actions that seek to disrupt the status quo, and it may be unrealistic to expect that change will be driven solely by the centre. Therefore, engaged academics must also push the boundaries from the margins and pressure their employers to implement the types of policies we have suggested. While we recognise that some of the suggestions are rather incremental and managerial, and therefore themselves unsuited to an emergency context, we offer them as a starting point for further discussion and anticipate that the roles of academics and universities will continue to evolve through experimentation and public debate as the planetary emergency deepens.

#### CONCLUSIONS

This essay draws from and builds on a rich and growing literature on the role of researchers in a world increasingly in crisis. Although the position of researcher has traditionally been viewed as limited to the neutral, impartial, and detached generator of knowledge (Power, 2019), a range of approaches have been developed that see the researcher play an active role in the use or implementation of the knowledge they generate to promote its translation into public goods. These include action research (Lewin, 1946), engaged scholarship (Van de Ven, 2007), transition management (Rotmans et al., 2001), transdisciplinary process-oriented research (Bulten et al., 2021), and transformative science (Schneidewind et al., 2016). While these approaches reject the notion of the researcher as an impartial generator of knowledge, they are limited to the behaviour of researchers while engaged in their professional research activities, and say little about their behaviour as citizens and academics outside the research context. Academic activism,

in contrast, extends beyond our role as researchers; it applies to our public lives as academics regardless of whether or not we are currently engaged in research, and irrespective of our disciplinary specialism. If engaged scholarship and similar approaches are about the production of knowledge, academic activism is about acting appropriately on it in an emergency context.

We suggest that the traditional academic roles of research and teaching are not sufficient to drive transformative change in a time of rapidly accelerating global crises, so those with the greatest knowledge and understanding of these crises have a moral obligation to provide leadership, and engage in advocacy and activism. Given this, universities must reconsider their role in society and adapt their operational models to explicitly recognise engagement in policy and political processes as part of the work mandate of their staff, and adopt mechanisms to facilitate and reward it. Such academic activism is part of a rich tradition; for example, academics such as Albert Einstein, E.P. Thompson, Barry Commoner, Carl Sagan, Catharine MacKinnon, Noam Chomsky, and Cornel West are or were renowned advocates for a range of causes, while Sagan, Chomsky, and West (along with others such as former NASA scientist James Hansen) have been arrested in the course of their activism. There is therefore historical precedent for such actions, but they require greater support from universities if they are to become more acceptable and mainstream among academics. Nor are such actions limited to environmental and climate issues, as 2020 has seen the rise of academic advocacy and activism related to the Black Lives Matter movement and longstanding calls to decolonise university curricula, as well as in response to the UK government's handling of the COVID-19 pandemic (i.e., the creation of the Independent

#### **REFERENCES**

- Arlettaz, R., Schaub, M., Fournier, J., Reichlin, T. S., Sierro, A., Watson, J. E. M., et al. (2010). From publications to public actions: when conservation biologists bridge the gap between research and implementation. *BioScience*. 60, 835–842. doi: 10.1525/bio.2010. 60.10.10
- Biddix, J. P. (2014). Development through dissent, campus activism as civic learning. New Dir. High. Educ. 167, 73–85. doi: 10.1002/he.20106
- Brulle, R. J. (2016). The climate lobby: a sectoral analysis of lobbying spending on climate change in the USA, 2000 to 2016. Clim. Change 149, 289–303. doi: 10.1007/s10584-018-2241-z
- Brulle, R. J., Hall, G., Loy, L., and Schell-Smith, K. (2021). Obstructing action: foundation funding and U.S. Climate change counter-movement organisations. *Clim. Change*. 166:17. doi: 10.1007/s10584-021-03117-w
- Bulten, E., Hessels, L. K., Hordijk, M., and Segrave, A. J. (2021). Conflicting roles of researchers in sustainability transitions: balancing action and reflection. Sustain. Sci. doi: 10.1007/s11625-021-0 0938-7. [Epub ahead of print].
- Busby, M. (2020, September 27). Schools in England told not to use material from anti-capitalist groups. *The Guardian*. Available online at: https://www.theguardian.com/education/2020/sep/27/uk-schools-told-not-to-use-anti-capitalist-material-in-teaching (accessed March 9, 2021).
- Ciplet, D., Roberts, J. T., and Edwards, G. (2013). The climate and development lab: an experiment in engaged education for global just sustainability. *J. Sustain. Educ.* 5.
- Cologna, V., Knutti, R., Oreskes, N., and Siegrist, M. (2021). Majority of German citizens, US citizens, and climate scientists support policy advocacy by climate researchers and expect greater political engagement. *Environ. Res.* Lett. 16:024011. doi: 10.1088/1748-9326/abd4ac

SAGE group of scientists to provide independent scientific advice). Beyond the rapidly changing biophysical realities of the planet, society must address a pressing range of social issues including soaring inequality, continuing discrimination against women, people of colour and non-binary people, and the rise of far-right political movements. These worrying trends increasingly threaten to undermine the public good to which universities seek to contribute, highlighting a critical need for the HE sector to rapidly adapt its operations and reconsider its theories of change. While academia and activism may be perceived by some as uneasy bedfellows, emergency times call for emergency actions.

#### DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

#### **AUTHOR CONTRIBUTIONS**

CG conceived the paper. CG, AT, WR, and JS wrote the paper. All authors approved the final version.

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- Diaz, S., Settele, J., Brondizio, E. S., Ngo, H. T., Agard, J., Arneth, A., et al. (2019). Pervasive human-driven decline of life on Earth points to the need for transformative change. *Science* 366:eaax3100. doi: 10.1126/science.aax3100
- Donner, S. D. (2017). Risk and responsibility in public engagement by climate scientists: reconsidering advocacy during the Trump era. *Environ. Commun.* 11, 430–433. doi: 10.1080/17524032.2017.1291101
- Facer, K. (2020). Beyond Business as Usual: Higher Education in the Era of Climate Change. Oxford: Higher Education Policy Institute.
- Fazackerley, A. (2020, March 10). "McCarthyism in the UK": academics fear shaming for leftwing views. *The Guardian*. Available online at: https://www. theguardian.com/education/2020/mar/10/mccarthyism-uk-universitiesacademics-fear-shaming-for-leftwing-views (accessed March 6, 2021).
- Fissi, S., Romolini, A., Gori, E., and Contri, M. (2021). The path toward a sustainable green University: the case of the University of Florence. *J. Clean. Prod.* 279:123655. doi: 10.1016/j.jclepro.2020.123655
- Fochler, M., Felt, U., and Müller, R. (2016). Unsustainable growth, hyper-competition, and worth in life science research: narrowing evaluative repertoires in doctoral and postdoctoral scientists' work and lives. *Minerva* 54, 175–200. doi: 10.1007/s11024-016-9292-y
- Frid, A., and Quarmby, L. (2012). Take direct action on climate inaction. Nature 487:38. doi: 10.1038/487038a
- Gardner, C. J., and Wordley, C. F. R. (2019). Scientists must act on our own warnings to humanity. *Nat. Ecol. Evol.* 3, 1271–1272. doi:10.1038/s41559-019-0979-y
- Gayle, D. (2021, April 20). Oxford University receives £11m from fossil fuel firms, report finds. *The Guardian*. Available online at: https://www.theguardian.com/environment/2021/apr/20/oxford-University-receives-11m-from-fossil-fuel-firms-report-finds (accessed April 26, 2021).
- Giesenbauer, B., and Müller-Christ, G. (2020). University 4.0: promoting the transformation of higher education institutions toward sustainable development. Sustainability 12:3371. doi: 10.3390/su12083371

Green, A. J. K. (2021). Challenging conventions—a perspective from within and without. Front. Sustain. 2:662038. doi: 10.3389/frsus.2021.662038

- Green, J. F. (2020). Less talk, more walk: why climate change demands activism in the academy. *Daedalus Fall* 2020, 151–162. doi: 10.1162/daed\_a\_01824
- Grund, J., and Brock, A. (2020). Education for sustainable development in Germany: not just desired but also effective for transformative action. Sustainability 12:2838. doi: 10.3390/su12072838
- Harvey, F. (2020, December 12). UN Secretary General urges all countries to declare climate emergencies. *The Guardian*. Available online at: https:// www.theguardian.com/environment/2020/dec/12/un-secretary-general-allcountries-declare-climate-emergencies-antonio-guterres-climate-ambitionsummit [accessed February 25, 2021].
- Hodson, D. (2014). "Becoming part of the solution: learning about activism, learning through activism, learning from activism," in Activist Science and Technology Education, eds J. Bencze and S. Alsop (Dordrecht: Springer), 67–98.
- IPBES (2019). "Global assessment report on biodiversity and ecosystem services," in *Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services*, eds E. S. Brondizio, J. Settele, S. Díaz, and H. T. Ngo (Bonn: IPBES secretariat).
- Kezar, A., and Maxey, D. (2014). Collective action on campus toward student development and democratic engagement. New Dir. High. Educ. 167, 31–41. doi: 10.1002/he.20103
- Kopnina, H. (2020). Education for the future? critical evaluation of education for sustainable development goals. J. Environ. Educ. 51, 280–291. doi:10.1080/00958964.2019.1710444
- Kotcher, J. E., Myers, T. A., Vraga, E. K., Stenhouse, N., and Maibach, E. W. (2017). Does engagement in advocacy hurt the credibility of scientists? results from a randomized national survey experiment. *Environ. Commun.* 11, 415–429. doi: 10.1080/17524032.2016.1275736
- Lamb, W. F., Mattioli, G., Levi, S., Roberts, J. T., Capstick, S., Creutzig, F., et al. (2020). Discourses of climate delay. Glob. Sustain. 3:e17. doi:10.1017/sus.2020.13
- Lempiäinen, K. (2016). "Precariousness in academia: prospects for University employment," in *The New Social Division*, eds D. della Porta, S. Hänninen, M. Siisiäinen, and T. Silvasti (London: Palgrave Macmillan), 123–138.
- Lewin, K. (1946). Action research and minority problems. J. Soc. Issues 2, 34–46. doi: 10.1111/j.1540-4560.1946.tb02295.x
- Mann, M. E. (2014, January 17). If you see something say something. New York Times. Available online at: https://www.nytimes.com/2014/01/19/opinion/ sunday/if-you-see-something-say-something.html (accessed April 26, 2021).
- Marginson, S. (2011). Higher education and public good. *High. Educ. Q.* 65, 411–433. doi: 10.1111/j.1468-2273.2011.00496.x
- Maxwell, N. (2021). How universities have betrayed reason and humanity—and what's to be done about it. *Front. Sustain.* 2:631631. doi: 10.3389/frsus.2021.631631
- McCowan, T. (2020). The Impact of Universities on Climate Change: A Theoretical Framework. London: Institute of Education.
- Motta, M. (2018). The polarizing effect of the March for Science on attitudes towards scientists. PS Polit. Sci. Polit. 51, 782–788. doi:10.1017/S1049096518000938
- Murray, J. (2020, November 5). Which countries have legally-binding netzero emissions targets? NS Energy. Available online at: https://www. nsenergybusiness.com/news/countries-net-zero-emissions/ (accessed March 6, 2021).
- Nelson, M. P., and Vucetich, J. A. (2009). On advocacy by environmental scientists: what, whether, why, and how. Conserv. Biol. 23, 1090–1101. doi:10.1111/j.1523-1739.2009.01250.x
- NTFCLDE (The National Task Force on Civic Learning and Democratic Engagement) (2012). A Crucible Moment: College Learning and Democracy's Future. Washington, DC: Association of American Colleges and Universities.
- OpenSecrets.org (2021). Oil and Gas: Summary. Available online at: https://www.opensecrets.org/industries/indus.php?cycle=2020andind=E01 (accessed March 6, 2021).
- Oswald, A., and Stern, N. (2019, September17). Why are economists letting down the world on climate change? *VoxEU.org*. Available online at: https://voxeu.org/article/why-are-economists-letting-down-world-climate-change (accessed April 26, 2021).
- Pells, R. (2019, June 20). Hypercompetition reshapes research and academic publishing. *Times Higher Education*. Available online at: https://www.

- timeshighereducation.com/news/hypercompetition-reshapes-research-and-academic-publishing (accessed February 25, 2021).
- Power, A. (2019, November 14). The ideals of the Middle Ages are still holding back scholars. *Times Higher Education*. Available online at: https://www. timeshighereducation.com/comment/47839 (accessed April 26, 221).
- Richards, C. E., Lupton, R. C., and Allwood, J. M. (2021). Re-framing the threat of global warming: an empirical causal loop diagram of climate change, food insecurity and societal collapse. *Clim. Change* 164:49. doi:10.1007/s10584-021-02957-w
- Ripple, W. R., Wolf, C., Newsome, T. M., Barnard, P., and Moomaw, W. R. (2020). World scientists' warning of a climate emergency. *BioScience* 70, 8–12. doi: 10.1093/biosci/biz152
- Roberts Lyer, K., and Susa, A. (2019). Closing Academic Space: Repressive State Practices in Legislative, Regulatory, and Other Restrictions on Higher Education Institutions. Washington, DC: International Centre for Not-for-Profit Law.
- Rosen, J. (2019, December 17). Climate change fears propel scientists out of lab and into the world. Los Angeles Times. Available online at: https://www. latimes.com/environment/story/2019-12-17/scientists-become-advocateson-climate-change (accessed April 26, 2021).
- Rotmans, J., Kemp, R., and van Asselt, M. B. A. (2001). More evolution than revolution: transition management in public policy. *Foresight* 3, 15–32. doi: 10.1108/14636680110803003
- Schneidewind, U., Singer-Brodowski, M., and Augenstein, K. (2016). "Transformative science for sustainability transitions," in *Handbook on Sustainability Transition and Sustainable Peace*, eds H. G. Brauch, U. O. Spring, J. Grin, and J. Scheffran (Cham: Springer International Publishing), 123–136.
- SDG Accord (2021). Current Signatories. Available online at: https://www.sdgaccord.org/ (accessed March 6, 2021).
- Taylor, M. (2021, April 27). Environment protest being criminalised around world, say experts. *The Guardian*. Available online at: https://www.theguardian.com/ environment/2021/apr/19/environment-protest-being-criminalised-aroundworld-say-experts (accessed April 29, 2021).
- Thackeray, S. J., Robinson, S. A., Smith, P., Bruno, R., Kirschbaum, M. U. F., Bernaccchi, C., et al. (2020). Civil disobedience movements such as School Strike for the Climate are raising public awareness of the climate change emergency. Glob. Change Biol. 26, 1042–1044. doi: 10.1111/gcb.14978
- Trisos, C. H., Merow, C., and Pigot, A. L. (2020). The projected timing of abrupt ecological disruption from climate change. *Nature* 580, 496–501. doi: 10.1038/s41586-020-2189-9
- UNEP (United Nations Environment Programme) (2019). Higher and Further Education Institutions Across the Globe Declare Climate Emergency. Available online at: https://www.unep.org/news-and-stories/press-release/higher-and-further-education-institutions-across-globe-declare (accessed March 09, 2021).
- Van de Ven, A. H. (2007). Engaged Scholarship: A Guide for Organizational and Social Research. Oxford, University Press Oxford.
- Vogt, M., and Weber, C. (2020). The role of universities in a sustainable society. Why value-free research is neither possible nor desirable. Sustainability 12:2811. doi: 10.3390/su12
- Wetzels, H. (2020, August 20). How the agriculture lobby is sabotaging Europe's Green Deal. OpenDemocracy. Available online at: https://www.opendemocracy. net/en/oureconomy/how-the-agricultural-lobby-is-sabotaging-europes-green-deal/ (accessed February 25, 2021).
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