MAXWELL BOYKOFF University of Colorado Boulder

Digital cultures and climate change: 'Here and now'

ABSTRACT

We are living through momentous times as we confront issues surrounding digital cultures and communications about climate change. There is urgency derived from our recognition that climate change is 'here and now'. Inequalities of power and access – in both digital cultures and in a changing climate – disadvantage individuals and communities who seek to take actions in the face of climate threats. Via digital cultures, creativity is expanding rather than retracting from the challenge of meeting people where they are on climate change in the twenty-first century. Amid signs of progress and hope, there is much more work to be done.

KEYWORDS

climate change digital cultures creativity communication inequality science-policy society

Past and deservedly heralded figureheads of media and journalism public sphere, John Chancellor, Walter Cronkite and Harry Reasoner are firmly relics of twenty-first-century media landscapes. Clearly, the days of 'that's the way it is' journalism have been usurped by new and ambitious digital contentproducers in the 'here and now'. These digital literates or 'digital natives' have capably traversed changing spaces regarding how people access and interact with information – and who has access – in the public arena. Shifting largely from 'one-to-many' to interactive 'many-to-many' webs of communications (Dijk 2006), the digital natives have navigated rocky terrain.

We are living through momentous times as we fundamentally grapple with issues surrounding digital cultures and communications about climate change. Paired with the 'here and now' of digital communications, there is urgency

derived from the recognition that climate change is also 'here and now'. Amid broad-brush statements about a digital ambush led by Generation Z (those born in the mid-1990s through the early 2000s), the 'we' here is in reality very differentiated. At a more granular level, despite high-quality and well-funded scientific research into the causes and consequences of climate change (creative) conversations about climate change in our lives have remained relatively limited in the digital sphere (Boykoff 2019). Nonetheless, increasing participation through digital communications can help enhance engagement with climate change.

There are many inspiring signs of productive intersections between digital cultures and climate change. As just one set of developments, there has been an encouraging emergence of 'serious games' that spark learning, dialogue, participation, engagement, trust and empathy in new audiences (Suarez et al. 2015; Gordon and Schirra 2011). Digital games with important communication messages have helped make climate challenges more meaningful for typically underserved populations at the forefront of climate impacts. 'Serious games' are more widely founded on principles that posit that experiential learning – across digital and analogue modes – helps to improve comprehension and knowledge-sharing (Kemmis and McTaggart 2000; Mitgutsch and Alvarado 2012). Social sciences and humanities research into these areas have found that learning emerges from participatory and transformative endeavours, which help us to more capably understand and deal with challenges in the world (e.g. Osnes 2012; Mendler de Suarez et al. 2012).

Climate themes have not just been limited to these 'serious games'. Entertainment gaming has also begun to provide creative pathways to meaningfully meet new audiences where they are on climate change in the digital media realm (Abraham and Jayemanne 2017). For example, the popular interactive video game *Fortnite* (first released by Epic Games in 2017) has been re-considered less as an 'evil' time sink (Senior 2019) and more as a pathway to effective climate change communication. Within the game, players can find the 'ClimateFortnite' channel and find climate researchers and others discussing global warming while they play. Climate scientist Andrew Dessler has commented,

Scientists do a good job of communicating via traditional routes – talking to journalists and policymakers and writing op-eds. But not everyone listens to policymakers or reads op-eds or follows scientists on Twitter. ClimateFortnite is a great way to reach people who don't get news from traditional sources.

(Watercutter 2018)

In this twenty-first-century landscape of digital communications, those generally comfortable (and able) to engage through digital media have at times been dubbed 'slacktivists' (Smith et al. 2019). Slacktivism refers to a perceived trend where in-person collective organizing and old-school activism is replaced by individual armchairs and new-school isolation. As such, implicit critiques are that the actions taken on the Internet (like signing an online petition or tweeting with a favoured hashtag) consequently displace the physical activism (like marches and demonstrations) necessary to bolster social movements. But, not so fast: in a review of over 100 surveys about youth, civic and political engagement, and digital media activity, Shelley Boulianne and Yannis Theocharis found little evidence that online engagement has displaced physical civic engagement. In fact, they detected the opposite effect where digital activism catalysed off-line political and social actions (2018). That is to say that venues like ClimateFortnite have emerged with potential to provide space for active digital engagement on climate change and should not be dismissed as mere distraction or escapism.

Again, blanket statements about entire generations and movements from legacy to digital media are risky, no doubt. There are critical and cruel realities regarding gaps in opportunity and access to media communications across our global human population (Pezzullo and Cox 2017). Libby Lester has commented that

a public sphere is both legitimate and effective when it (1) provides an opportunity for all those affected to participate in the public debate, (2) provides a space for a diverse range of views to be put and importantly heard, and (3) holds decision-makers accountable through the processes of publicity and the pressures of public opinion.

(2015: 3)

At present we are far from that three-pronged ideal.

Inequalities of power and access – in both digital cultures and in a changing climate – clearly disadvantage individuals and communities who seek to act in the face of climate threats. Digital limitations are exacerbated by many grim paradoxes such as the fact that those most impacted are often those with the least influential voices in the public sphere. William Gibson has said 'The future is already here; it is just not evenly distributed'. Therefore, treatments of 'we' and of 'us' must be approached carefully when appraising the promises and perils of digital cultures and climate communications. Emergent digital cultures have the power to reconsider collective identities and to recalibrate human-environment interactions to potentially empower grassroots and citizen-centred actions around the world in a changing climate.

With these dynamics in mind, the 'here and now' remains an important time in history, and digital communications have proven powerfully useful to social groups and movements otherwise excluded from traditional means of economic and cultural power. Collective imagination is on the rise. Via digital cultures, creativity (as applied imagination) is expanding rather than retracting from this core challenge of meeting people where they are on climate change in the twenty-first century. Amid some signs of progress and hope, there is much more work to be done.

REFERENCES

- Abraham, B. J. and Jayemanne, D. (2017), 'Where are all the climate change games? Locating digital games' response to climate change', *Transformations*, 30, pp. 74–94.
- Boulianne, S. and Theocharis, Y. (2018), 'Young people, digital media, and engagement: A meta-analysis of research', *Social Science Computer Review*, https://doi.org/10.1177/0894439318814190. Accessed 25 November 2019.
- Boykoff, M. (2019), Creative (Climate) Communications: Productive Pathways in Science, Policy and Society, Cambridge: Cambridge University Press.
- Dijk, J. van (2006), The Network Society, London: Sage Publications.

- Gordon, E. and Schirra, S. (2011), 'Playing with empathy: Digital role-playing games in public meetings', Proceedings of ACM Conference Communities and Technologies, Brisbane, Australia, 29 June–2 July, n.pag..
- Kemmis, S. and McTaggart, R. (eds) (2000), *Participatory Action Research: Handbook of Qualitative Research*, London: Sage Publications.
- Lester, L. (2015), 'Three challenges for environmental communication research', *Environmental Communication*, 9:3, pp. 392–97.
- Mendler de Suarez, J., Suarez, P. and Bachofen, C. (2012), *Games for a New Climate: Experiencing the Complexity of Future Risks*, Boston, MA: Pardee Center Task Force Report.
- Mitgutsch, K. and Alvarado, N. (2012), 'Purposeful by design? A serious game design assessment framework', in Proceedings of the International Conference on the Foundations of Digital Games, Raleigh, North Carolina, 29 May–1 June, 2012 ACM, pp. 121–28.
- Osnes, B. (2012), 'Voice strengthening and interactive theatre for women's productive income-generating activities in sustainable development', *Journal of Sustainable Development*, 5:6, pp. 49–56.
- Pezzullo, P. C. and Cox, R. (2017), *Environmental Communication and the Public Sphere*, 5th ed., Newbury Park, CA: Sage Publications.
- Senior, J. (2019), 'How I learned to stop worrying and love Fortnite', *New York Times*, 6 April, p. SR9.
- Smith, B. G., Krishna, A. and Al-Sinan, R. (2019), 'Beyond slacktivism: Examining the entanglement between social media engagement, empowerment, and participation in activism', *International Journal of Strategic Communication*, 13:3, pp. 182–96.
- Suarez, P., Otto, F., Kalra, N., Bachofen, C., Gordon, E. and Mudenda, W. (2015), 'Loss and damage in a changing climate: Games for learning and dialogue that link HFA and UNFCCC', Working Paper Series No. 8, The Hague, The Netherlands: Red Cross/Red Crescent Climate Centre, n.pag.
- Watercutter, A. (2018), 'I learned about climate change by watching Fortnite on Twitch', Wired Magazine, 9 October, https://www.wired.com/story/fortnite-twitch-climate-scientists/. Accessed 28 September 2019.

SUGGESTED CITATION

Boykoff, M. (2020), 'Digital cultures and climate change: "Here and now"', Journal of Environmental Media, 1:1, pp. 21–25, doi: 10.1386/jem_00003_1

CONTRIBUTOR DETAILS

Maxwell Boykoff is the director of the Center for Science and Technology Policy, which is part of the Cooperative Institute for Research in Environmental Sciences at the University of Colorado Boulder. He also is an associate professor in the environmental studies programme. Max earned his Ph.D. in environmental studies at the University of California Santa Cruz and his undergraduate Bachelor of Sciences in Psychology at the Ohio State University. Max has ongoing interests in cultural politics and environmental governance, science and environmental communications, science-policy interactions, political economy and the environment and climate adaptation. He has consequently has produced many peer-reviewed journal articles, book chapters and books in these subjects. Contact: Center for Science and Technology Policy Research (CSTPR), 1333 Grandview Avenue, UCB 488, Boulder, CO 80309, USA. E-mail: boykoff@colorado.edu

Web address: http://sciencepolicy.colorado.edu/boykoff/

https://orcid.org/0000-0002-7474-2387

Max Boykoff has asserted his right under the Copyright, Designs and Patents Act, 1988, to be identified as the author of this work in the format that was submitted to Intellect Ltd.