The relevance of digital activism in expanding the climate justice movement and civic engagement: A case study on Extinction Rebellion

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Abstract

The past two decades have transformed how organisations, movements, and individuals engage in collective action. The increasingly digital activism landscape has a pivotal role in building civic engagement, especially in expanding the climate justice movement and environmental campaigns. Climate justice recognises climate change as an ethical, legal and political issue, combining environmental and social justice with equity in its core to any solution. This study explores the relevance of digital media in activism and how it shapes political thought, raises awareness of environmental issues and promotes behavioural change. In addition to these responses, the study provides a case study on how the Extinction Rebellion (XR) movement approach climate justice and pursue their campaigns, how the public responds, and their meaning to the development of public policies. This study used secondary data to analyse the impact of digital media, and it offers a critique of the role of digital activism in expanding the climate justice movement, suggesting future implications for these tendencies. It uses the Extinction Rebellion movement as a case study to describe such impact.

Introduction

"The climate science has now reached the point that one can definitively say that, failure to very aggressively try to "solve" climate change is not either a rational or moral option for a nation or humanity as a whole".

— Joseph Romm (2015)

Research has made it clear that transformations must occur in order to manage the challenges of climate change (Rockström and Klum 2015). Indeed, the implications of failing to transform toward a more sustainable future are profound (IPCC 2014). People have been expressing their dissent against the status quo through climate justice movements. This includes organising actions in digital and social media, in order to, for instance, shift the political and economic power away from the fossil fuel industries and carbon polluters (Escobar 2015).

With more than 4.39 billion internet users, digital and social media has changed how news has been consumed (DataReportal 2019). As more people around the world become particularly reliant upon the Internet to obtain information, digital and social media are becoming meaningful tools to engage in news, debates, activism and social input related to climate change (World Economic Forum 2016). Additionally, it has allowed the organisation of complex collective actions for climate justice (Dryzek, Norgaard and Schlosberg 2012). It is also the notion that media practices through social actors can reproduce, reorganise and challenge politics. As Giddens (1984, p. 25) defines it, it is the capacity to make a difference.

As a result, digital and social media have become spaces for political protests and innovative forms of activism (Mansell and Hwa 2015). It contributes to the variable ways in which power and participation are being constructed and enacted (Couldry and Powell 2014, p. 1). If all media are 'spaces of action' that 'attempt [...] to connect what is separated', then the Internet has expanded this feature (Zielinski 2006, p.7).

In the face of the seriousness concerning climate change, Extinction Rebellion aims to outplay the balance of power. The movement that is being used as a case study is a grassroots organisation that is spearheading a campaign of mass direct action and peaceful civil disobedience aims at pressuring global governance that addresses climate change (Extinction Rebellion 2018).

This article discusses how digital activism has changed the climate justice advocacy landscape. To better understand this phenomenon, the article uses the theory of self-efficacy to explain behaviour change and civic engagement in climate justice movements, more specifically how the Extinction Rebellion movement has been gaining recognition. It analyses social media data, how Extinction Rebellion has been gaining visibility, how they formulate their actions online, and how the

Internet has given a broader space for spreading information about climate change and its responses. After doing so, the article discusses the future of climate justice in light of ongoing digital impetus and its outcomes in attempting to tackle climate change.

Literature Review

As a phenomenon that affects the whole world, climate change clearly advocates for a sweeping global response. Climate change can be defined as a change of climate attributed directly or indirectly to human activity that alters the composition of the global atmosphere (UNFCCC 2011). One of the most fundamental issues is the equity dimension of climate change, once climate change at its core uncovers the still stark division of resources, development paths and emissions contributions between rich and poor nations (Mearns and Norton 2009). Therefore, climate justice emerges as a response to bring together the equity aspects of climate change, which is the foremost matter of justice and human rights (Adams and Luchsinger 2009, p.12). Climate change is a matter of global social justice, that is the assurance of a systemic and structural social arrangement that promotes equality as a core political and social value (Cuomo 2011, p.693). The majority of the aspects encompassing climate change can be traced along these lines: who is accountable, who will manage the consequences and how, who will persevere and who will bear the hardest effects. Moreover, climate justice is an agenda that seeks to halt global warming by reducing disparities in development and power that drive climate change and persisting injustice (Adams and Luchsinger 2009, p.12). This implies a demand to face the issue beyond borders.

In response to climate change, civil society groups, especially young students, have been actively protesting all over the world and these initiatives have been growing stronger. There are now an estimated 485 Extinction Rebellion affiliates across the globe. In 12 months, Extinction Rebellion has become the fastest-growing environmental organisation in the world (The Guardian 2019). They organise meetings, talks and actions through their website and social media. Until this moment, they accumulate 353.046 followers on Facebook, 302.725 followers on Twitter, approximately 528.000 followers on Instagram, and approximately 47.699 subscribers on Youtube. They benefit from new technologies to provide an alternative way of organising actions and social movements. Increasing accessibility and the ability to communicate with thousands of citizens quickly has made the Internet, especially social media, a worthwhile tool to spread social messages, goals and group management (Ang 2011). Today's world of digital activism is

broad-reaching, impactful, and immediate compared to traditional activism (Bennett and Segerberg 2013; Selander and Jarvenpaa, 2016). It is useful to think of digital action repertoires as part of a virtual toolkit of technology artefacts and activities to be used for social change. Social media is particularly important for digital activism, once even low-level action on social media may lead to greater involvement such as volunteering and is intensified if others in a social network are equally involved (Vitak et al., 2011). Reinforcement is a key facet of social media that provides an abundance of reminders, reiterations, and confirmations from one's social network (Nam, 2011). Media affects citizens' perception of their political agency and their political subjectivity. Here, agency is understood in its guise of a reflexive practice conformed to (political) action, or the process of "making sense of the world so as to act within in" (Couldry and Powell 2014, p. 891). Political agency within digital activism contributes to the ability of individuals to reimagine a different future and enhances a sense of purposeful expression of opinions and actions (Milan 2016). By employing multiple mechanisms that the Internet helps people express their agency - such as petitions, campaigns and protests -, the Extinction Rebellion has been able to gain ground and support. Historically, civic participation enables citizens to efficiently pursue common goals, often creating community-wide gains that would be unlikely to emerge absent joint efforts (Dhavan and Dietram 2006). In this context, digital media, and in particular —although not exclusively— social media platforms, as part of social and political domains, enable the expression of political agency and help to shape or transform political subjectivity (Dhavan and Dietram 2006). The notion of political subjectivity widens the scope of 'politicality' to understand the subject itself as a political event (Dewsbury 2007). In other words, it is the mode of being of the subject. That being said, digital activism has not only expanded movements such as the Extinction Rebellion, but it has enhanced a sense of belonging. One can say that people make decisions based massively on whether enacting them will increase the sense of belonging, that is, to feel part of a community by sharing values and goals (Gardner 1991).

Theoretical Framework

This research paper is grounded in the theory of self-efficacy, which posits that psychological procedures, whatever their form, serve as a means of creating and strengthening expectations of personal efficacy (Bandura 1977). Self-efficacy is assigned a central role in Albert Bandura's (1977) Social Cognitive Theory. Self-efficacy is the belief, or confidence, that one can successfully execute

a behaviour required to produce an outcome such that the higher the level of self-efficacy, the more an individual believes he or she can execute the behaviour necessary to obtain a particular outcome (Bandura 1977). In Bandura's theory, people are viewed as self-organising, proactive, self-reflecting and self-regulating rather than as reactive organisms shaped and shepherded by environmental forces or driven by concealed inner impulses. From this theoretical perspective, human functioning is viewed as the product of a dynamic interplay of personal, behavioural, and environmental influences. For example, how people interpret the results of their own behaviour informs and alters their environments and the personal factors they possess which, in turn, inform and alter subsequent behaviour. Self-efficacy beliefs provide the foundation for human motivation, well being, and personal accomplishment. This is because unless people believe that their actions can produce the outcomes they desire, they have little incentive to act or to persevere in the face of difficulties (Klandermans 2004). Individuals are commonly guided by their beliefs in their day-to-day interactions with the world. Self-efficacy beliefs are a critical ingredient in human functioning, as Kant (1797, p.558) addressed, "one should pursue his end, which in itself is a duty, not abjectly, not in a servile spirit [...], but always with consciousness of his sublime moral predisposition", that is, a self-governing reason in each person. This paper proposes that efficacy perceptions influence people's response to climate justice in two ways: First, people who were initially indifferent to climate justice movements and how they started to engage, and those who believe in humanity's collective potential to reduce the threat will develop beliefs that action should be taken. Activism response and self-efficacy are considered to be influenced by people with a history of civic engagement and opinion leaders – people who communicate frequently about the issue and exercise social influence on it (Weimann 1991). Digital activism, thus, reinforces the sense of self-efficacy by reaffirming political agency and power to the individuals.

Research questions

In this research paper, I have explored and answered the following research questions:

1. What are the digital activism mechanisms used by the Extinction Rebellion movement?

2. What is the motivation that leads to civic engagement in the Extinction Rebellion movement?

3. How digital activism has expanded the Extinction Rebellion movement?

These questions also delve into self-efficacy, a sense of belonging, and future implications for climate justice movements in the digital era.

Methodology

Templier and Paré (2015) view the quality of a literature review as a combination of rigour, relevance, and how methodologically coherent one makes the tie between the review's objectives and the elements that make up the review. Because the topic is new, this research aims to describe and explain digital activism and its expansion in the Extinction Rebellion movement, as well as it provides propositions for future research. This research paper is a case study on the Extinction Rebellion movement, which has been using digital activism to expand its actions and raise awareness. Case study as a type of qualitative research, "is a general term for the exploration of an individual, group or phenomenon" (Sturman 1997). Therefore, a case study is a comprehensive description of an individual case and its analysis; i.e., the characterisation of the case and the events, as well as a description of the discovery process of these features that is the process of research itself (Starman 2013). This methodology has been chosen and is well-suited because both digital activism and the Extinction Rebellion can be considered new phenomena. This research paper uses a "Building Block" study, which is a study of particular types or subtypes of a phenomenon, that, when put together, contribute to a more comprehensive theory (George and Bennett 2005, p.73). That is because digital activism does not only encompasses the Extinction Rebellion movement or climate justice, or vice-versa. Moreover, understanding the Extinction Rebellion's expansion may also help to understand digital activism as a whole. I have used insights gained from previous research to make the study, by analysing peer-reviewed articles, journals and recent news - starting from 2019 - regarding the Extinction Rebellion movement. Because the movement is new and few empirical papers are available, the sources include not only traditional academic publications, but also relevant material from the press, blogs, social media, and the organisation's website. To analyse the data, I have adopted a deductive approach to develop hypotheses based on what is already known about digital activism and civic engagement. A deductive approach is concerned with deducing conclusions from premises or propositions (George and Bennett 2005). I used the self-efficacy theory to explain how the Extinction Rebellion movement has been gaining support.

Analysis

1. What are the digital activism mechanisms used by the Extinction Rebellion movement?

Extinction Rebellion (XR) was launched in October 2018, and engaged in various acts of nonviolent civil disobedience in London shortly thereafter, attracting many more participants than its organisers had anticipated. The following April, an estimated 6000 people caused much more extensive disruption in the capital, blocking five major bridges across the Thames, supergluing themselves to trains and buildings such as the Stock Exchange, and planting trees in Parliament Square. These actions gained a large national and international publicity. According to the organisers, 'as the news spread, our ideas connected with tens of thousands of people around the world. The XR project was resonating with a deeply felt need for community and solidarity' (Extinction Rebellion 2018). Extinction Rebellion plans civil disobedience blockades to scale—with the aim, if they can raise the numbers of participants, of shutting down cities, not just for an afternoon but for days on end (Gilding, 2018). These consistent actions, XR asserts, have the purpose to grow the debate on the depth of the climate emergency. The protests led to parliamentary debates in the UK and political responses in many other countries, for instance, President Emmanuel Macron has established a Citizen's Assembly where citizens will be advising on how France can cut its carbon emissions to tackle the climate emergency (Taylor 2019). In the UK, the media has mentioned climate change since April more than it has at any other time in the last five years— including during the Paris Agreement negotiations in 2016 (Barasi 2019). In order to organise and grow their manifestations, XR has been managing their actions through the Internet, thus through digital activism. These media enable peer-to-peer communication between users and can be linked to each other, allowing users to transmit their ideas and images to large numbers of people. Their publications on social media aim to invite other citizens to engage in local manifestations and to raise awareness of the climate emergency. They communicate their actions on Facebook Events, local Facebook groups and Facebook pages. "Extinction Rebellion Sisterhood" on Facebook has 4,548 members and has had 463 posts in the last 30 days. The "XR Volunteers" for instance, has 5,898 members and has had 628 posts in the last 30 days. Such groups serve as the main tools to engage with the participants before, during and after the actions. It posts videos and photographs of previous actions to encourage other people to join the following activities. The activists have also used email, Instagram, Facebook and Twitter to document the flow throughout the events, logistics, police access, alert each other to police movements, and seek legal help for those who had been arrested. Additionally, they organise monthly online Welcome Sessions on the Zoom platform to explain to those who are interested in joining the movement, they teach about what exactly is the movement, their principles and values, and how to get

involved. To join the "rebellion", one must register through their webpage by indicating their name, email and country, - phone number and postcode are optional. From then on, those who register will receive an email with all the information necessary to join the group. On the email, there will also be a link to a map that shows all the affiliations all over the globe, which then links to their Facebook page, where they will also be informed about the next events. The activists have also used email, Instagram, Facebook and Twitter to document the flow throughout the events, logistics, police access, alert each other to police movements, and seek legal help for those who had been arrested.

The Internet enables the in-flow and out-flow of information simultaneously through a "virtually defined [...] emerging cyberworld that knows no physical boundaries" (Salmon, Fernandez & Post, 2010, p.159). Therefore, it provides various opportunities to public mobilisation across borders through digital activism. It is evident that Extinction Rebellion has been adopting a combination of both civil disobedience in active protests, such as mass arrest, and digital activism in the virtual world. According to Shirky (2011), the evolution of the digital communication landscape has increased freedoms that can help loosely coordinated groups demand change. One of the most striking aspects of the Extinction Rebellion is its loose structure and lack of leaders. It is largely a grassroots, across the global, decentralised movement. According to one of the organisers, "anyone who takes action in pursuit of "XR's three goals and adheres to its ten principles, which includes non-violence, can claim to do it in the name of XR" (Kobie 2019). In other words, they are characterised by collective and effective methods of group mobilisation and organisation, both online and offline, rather than individual acts of leadership by one or more superior ruler.

2. What is the motivation that leads to civic engagement in the Extinction Rebellion movement?

The term civic engagement refers to the process through which civil society is invited to participate in ongoing political, economic and social efforts that are meant to bring about change. Civic engagement is acting upon a heightened sense of responsibility to one's communities. Pippa Norris (2001) defines 'civic engagement' as having three dimensions. She suggests first that civic engagement enhances 'political knowledge', i.e. what people are able to learn about public affairs, through the free flow of and access to information. Second, it could increase 'political trust', i.e. the public's support for the political system, by enhancing accountability and transparency of political processes and representatives. And third, civic engagement could certainly improve

'political participation', i.e. activities designed to influence government and the decision-making processes, but allowing greater consultation, and the potential to organise, mobilise and act. When considering digital activism, the Internet can be seen as an equalising, democratic force. However, it is important to note that whilst some barriers to civic engagement are removed by digital activism, others are raised. Global inequalities may be amplified by the Internet, whereas technological barriers to participation are more likely to affect those who have already been excluded because of their age, gender, race, disability, and economic and cultural capital (Hill 2010). Extinction Rebellion, in particular, has long been criticised for being 'too middle-class, too white, or otherwise insufficiently conscious of their relative privilege', when blocking important roads down which other people need to get to work (Hinsliff 2019).

To understand the motivations leading people to join Extinction Rebellion, one may first understand what contributes to engagement in activism. Scholars have shown that people seek to join organisations and local activist groups to create a meaningful sense of belonging and agency (Baumeister and Leary 1995; Yoshitaka 2016). All forms of political dissent suggest a belief or presumption of agency, that is, the ability of individuals to imagine a different future and a sense of purposeful expression of opinions or actions that are at variance with dominant or commonly held beliefs. As civic engagement concerns "people's connections with the life of their communities" (Putnam 1995, p.665), involvement in socio-political activities, which encompasses both civic engagement and activism, can be driven by a sense of belonging. This sense is not only important for individual psychosocial well-being and positive identity formation; it is also directly linked to an individual's level of civic engagement (Yuval-Davis 2006). Belonging consists of "an unfolding space of attachment, affiliation, and recognition" (Gorman-Murray et al., 2008 p.172). In other words, civic engagement is primarily determined by feelings of acceptance and belonging within a group (Putnam, 2000). Kirk Alexandra, a 49 years-old administrator, said in an interview: "I found out about XR around the same time. And I felt, 'Wow, this is what I have been waiting for'. This is a really well researched, well thought out movement with a message and a philosophy" (Taylor, Zhou and Smee 2019). Thus, being part of XR may be associated with a sense of belonging due to the fact people share common values and goals.

Ben Burdett, a 40 years-old carpenter, said in the same interview that he has joined because he felt the need to do something regarding climate change: "When the UN report came out, I had this 'oh my goodness' kind of moment – but probably with stronger language. I felt 'I gotta do something' (Taylor, Zhou and Smee 2019). My kids are very young, so I started going to the school strikes" In

this context, political agency refers to acting on political, economic and social structures in order to promote social change. Digital media has an emancipatory potential for individual autonomy and agency as the basis for political participation and social change. Digital media, although not the only tool used by XR, form the space where such agency is fostered in ways that are 'self-actualising' rather than 'dutiful' (Bennett, Wells, and Rank 2009). Scholars have found that perceptions of the seriousness of climate change as a global issue were predicted by (1) Certainty and evidence that climate change is occurring; (2) Certainty and evidence that it will have a negative impact on the earth and on humanity; (3) Recognition that humans are the agent of the issue; (4) Belief that humans can reduce the threat. For those who participate primarily to promote social change, participation hinges on beliefs that activism is effective, it can succeed, and that one's participation will increase the likelihood of success (Burstein et al. 1995; Finkel et al. 1990)

3. How digital activism has expanded the Extinction Rebellion movement?

The Extinction Rebellion has been using digital activism directly and indirectly. Directly by creating mailing lists, producing digital content on platforms such as Facebook, Instagram, Twitter and Youtube. Indirectly by getting attention from leading news channels such as The Guardian, ABC News, BBC News, and Daily Telegram. On the virtual side, Extinction Rebellion constantly and consistently posts new information on social media. Every few hours or minutes, a new Tweet is published and in many different languages, which shows that XR has been trying to reach awareness on a global scale, either of the movement or of its motivations. Every two days, XR has a new Instagram post on its official page and the hashtag "#ExtinctionRebellion" has more than 207,000 posts. Every few hours, there is a new video on Youtube mainly about the protests and interviews. On the website, there is always an update on weekly events all over the globe and prompt information. Only on The Guardian, there are 324 articles about Extinction Rebellion, a movement that has started a year ago. The transformative impact of media on climate activism has moved civic engagement to the centre of contemporary politics (DeLuca and Preebles 2002). The use of digital and social media to disseminate calls for action can be seen as a response to political agency and self-efficacy. Yet, this form of activism serves two purposes: as a strategy for accessing the mass media and as an inbound mobilisation call. Digital and social media are therefore promising spaces for expressing concerns, opinions, and common values and goals. Digital and social media encourages greater knowledge of climate change, mobilisation of climate change

activists, space for discussing the issue with others, and online discussions that frame climate change as a negative for society.

Conclusion

This study suggests that digital activism - although not the only tool - has been a fundamental aspect that has led Extinction Rebellion to its acclaim. It has been argued that self-efficacy, a sense of belonging and agency are the main motivations that makes people engage on climate justice movements, such as Extinction Rebellion. Self-efficacy due to the fact that people believe that they can promote change, sense of belonging because that makes them feel part of a group and agency, that is, a purposeful expression of opinions and actions. Social media, such as Facebook, Instagram, Twitter and Youtube, have been the main instruments used by the Extinction Rebellion movement to spread information, logistics, and most importantly, to share their values and goals. This paper concludes that Extinction Rebellion, and many other movements, have been using digital activism to promote their opinions and to encourage others to join. Digital spaces fundamentally need the interconnections between people in order to function, in a similar way to physical spaces. Nonetheless, the power of online action should not be overlooked in considering the range of possibilities available to those interested in effecting meaningful social change. Further research should provide an insight on age, gender, race and class dimensions that may affect the accessibility to information. Secondly, future research should analyse quantitative data on Extinction Rebellion's social media and their online engagement. Next, a potential limitation of this study is its relatively narrow focus on how Extinction Rebellion has evolved and grown, which could be better explained through a quantitative study. Additionally, while a focus on digital activism was justified and useful in this case, an understanding of the interaction between digital activism and activism in the real world must not be overlooked in the long run. Another potential limitation of the study is the recent nature of the movement, which therefore is too soon to provide conclusions. Finally, it should be noted that while digital and social media have allowed the advance of climate activism, movements such as Extinction Rebellion serves as an example and incentive for other movements from different areas and purposes, to grow and organise itself virtually, and from this, to promote a real-world change.

Bibliography

Adams, B. and Luchsinger, G. (2009). *Climate justice for a changing planet*. Geneva: UN Non-Governmental Liaison Service (NGLS), pp.12-36.

Ang, L. (2011). Community relationship management and social media. *Journal of Database Marketing & Customer Strategy Management*, 18(1), pp.31-38.

Bandura, A. (1977). Self-efficacy: Toward a unifying theory of behavioral change. *Psychological Review*, 84(2), pp.191-215.

Barasi, L. (2019). Guest post: Polls reveal surge in concern in UK about climate change. *CarbonBrief*. [online] Available at: https://www.carbonbrief.org/guest-post-rolls-reveal-surge-in-concern-in-uk-about-climate-change [Accessed 20 Oct. 2019].

Baumeister, R. and Leary, M. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin*, 117(3), pp.497-529.

Bennett, W. L., and Segerberg, A. (2012). The Logic of Connective Action - Digital media and the personalization of contentious politics. *Information, Communication & Society*, 15(5), 739– 768. https://doi.org/10.1080/1369118X.2012.670661

Bennett, W.L., C., and Rank, A. (2009). Young citizens and civic learning: Two paradigms of citizenship in the digital age. *Citizenship Studies*, 13(2), pp. 105-120.

Burstein P., Einwohner R., Hollander J. (1995). The success of political movements: a bargaining perspective. In: Jenkins JC, Klandermans B (eds) Politics of social protest: comparative perspectives on states and social movements. *University of Minnesota Press*, Minneapolis, pp. 275–295.

Couldry, N. and Powell, A. (2014). Big Data from the bottom up. *Big Data & Society*, 1(2), p.205395171453927.

Cuomo, Chris J. (2011). "Climate change, vulnerability and responsibility." *Hypatia* 26: 690-714.

DataReportal. (2019). *Digital 2019: Global Digital Overview — DataReportal – Global Digital Insights*. [online] Available at: https://datareportal.com/reports/digital-2019-global-digital-overview [Accessed 20 Oct. 2019].

DeLuca, K.M. and Peebles, J. (2002). 'From public sphere to public screen: democracy, activism, and the 'violence' of Seattle', *Critical Studies in Media Communication,* 19 (2), pp.125-151.

Dewsbury, J. D.. (2007). "Unthinking Subjects: Alain Badiou and the Event of Thought in Thinking Politics." *Transactions of the Institute of British Geographers*, 32 (4). JSTOR, www.jstor.org/stable/4626264 pp. 443–459.

Dhavan V. Shah and Dietram A. Scheufele. (2006). Explicating Opinion Leadership: Nonpolitical Dispositions, Information Consumption, and Civic Participation, Political Communication, 23(1), doi: 10.1080/10584600500476932, pp. 1-22.

Dryzek, J., Norgaard, R. and Schlosberg, D. (2012). Climate Change and Society: Approaches and Responses. *Oxford Handbooks Online*, [online] p.10. Available at: http://10.1093/oxfordhb/9780199566600.003.0001 [Accessed 20 Oct. 2019].

Escobar, A. (2015). Degrowth, postdevelopment, and transitions: a preliminary conversation. *Sustainability Science* 10(3):451-462. [online] Available at: http://dx.doi.org/10.1007/s11625-015-0297-5 [Accessed 20 Oct. 2019]

Extinction Rebellion. (2018). *About Us*. [online] Available at: https://rebellion.earth/the-truth/about-us/ [Accessed 20 Oct. 2019].

Finkel S., Muller E., Opp K-D. (1990). Personal influence, collective rationality, and mass political action. *Am Polit Sci Rev*, 83(3), pp.885-903.

Gardner, J. (1991). *Building community*. Washington, D.C.: Independent Sector.

George, A. and Bennett, A. (2005). *Case Studies and Theory Development in the Social Sciences*. MIT Press, pp.73-89.

Giddens, A. (1984). *The Constitution of Society*. 1st ed. Berkeley and Los Angeles: University of California Press, pp.25-61.

Gorman-Murray A, Waitt G, Gibson C. (2008). A queer country? A case study of the politics of gay/lesbian belonging in an Australian country town. *Australian Geographer*. 39(2), pp. 171-191.

Hill, S. (2010). Models of Online Activism and their implications for democracy and climate change. [online] London: *Foundation for Democracy and Sustainable Development,* pp.18-24. Available at: http://www.fdsd.org/site/wp-content/uploads/2014/11/Online-activism-democracy-and-climate -change.pdf [Accessed 20 Oct. 2019].

Hinsliff, G. (2019). Extinction Rebellion has built up so much goodwill. It mustn't throw that away. *The Guardian*. [online] Available at: https://www.theguardian.com/commentisfree/2019/oct/17/extinction-rebellion-canning-town-well-off-people [Accessed 20 Oct. 2019].

IPCC. (2014). *Climate Change 2014: Synthesis Report. Contribution of Working Groups I, II and III to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change* [Core Writing Team, R.K. Pachauri and L.A. Meyer (eds.)]. IPCC, Geneva, Switzerland.

Iqbal, N. (2019). How Extinction Rebellion put the world on red alert. *The Guardian*. [online] Available at: https://www.theguardian.com/environment/2019/oct/06/how-extinction-rebellion-put-world-o n-red-alert-year-since-it-was-founded [Accessed 20 Oct. 2019].

Kant, I., and Wood, A. (1996). The metaphysics of morals (1797). In M. Gregor (Ed.), *Practical Philosophy* (The Cambridge Edition of the Works of Immanuel Kant, pp. 353-604). Cambridge: Cambridge University Press. doi:10.1017/CBO9780511813306.013

Klandermans, B. (2004). The demand and supply of participation: social-psychological correlates of participation in social movements. In: Snow D, Soule S, Kriesi H (eds) The Blackwell companion to social movements. Blackwell, NY, pp. 360–379.

Kobie, N. (2019). "How Extinction Rebellion evolved its tactics for its London protests". *Wired UK*. [online] Available at: https://www.wired.co.uk/article/extinction-rebellion-london-protest [Accessed 20 Oct. 2019]

Mansell, R. and Hwa, P. (2015). *The International Encyclopedia of Digital Communication and Society*. Oxford, UK : Wiley-Blackwell, pp. 1027-1034.

Mearns, Robin; Norton, Andrew. (2009). *Social dimensions of climate change : equity and vulnerability in a warming world (English)*. New frontiers of social policy. Washington, DC: World Bank. [online] Available at: http://documents.worldbank.org/curated/en/970361468324546268/Social-dimensions-of-climate-change-equity-and-vulnerability-in-a-warming-world [Accessed 20 Oct. 2019]

Milan, S. (2016). Political Agency, Digital Traces, and Bottom-Up Data Practices. *International Journal of Communication*, 12, pp.507-527.

Nam, T. (2011). Internet effects on political participation: an empirical study on the reinforcement vs. mobilization effect. Government Information Quarterly, 29, pp. 90-S97. https://doi.org/10.1145/1930321.1930385

Pippa, N. (2001). Digital divide: Civic engagement, information poverty, and the Internet worldwide. *Cambridge: University Press.*

Putnam, R. (1995). Tuning in, tuning out: The strange disappearance of social capital in America. *PS: Political Science and Politics.* 28(4), pp. 644–683.

Rockström, J. and Klum, M. (2015). *Big World, Small Planet: Abundance within Planetary Boundaries*. 1st ed. New Haven and London: Yale University Press.

Romm, J. (2015). *It's Not Too Late To Stop Climate Change, And It'll Be Super-Cheap*. [online] ThinkProgress. Available at: https://thinkprogress.org/its-not-too-late-to-stop-climate-change-and-it-ll-be-super-cheap-8865694dbbd2/ [Accessed 20 Oct. 2019].

Salmon, C.T., Fernandez, L. and Post, L.A. (2010). Mobilizing public will across borders: Roles and Functions of communication processes and technologies. *Journal of Borderlands Studies,* 25 (4), pp. 159-170.

Starman, A. (2013). The case study as a type of qualitative research. *Journal of Contemporary Educational Studies*, pp.28-43.

Selander, L., and Jarvenpaa, S. L. (2016). Digital Action Repertoires and Transforming a Social Movement Organization. *MIS Quarterly*, 40(2), pp. 331-352.

Shirky, C. (2011). The political power of social media: Technology, the public sphere, and political change. *Foreign Affairs*. [online] Available at: http://www.foreignaffairs.com/articles/67038/clay-shirky/the-political-power-of-social-media [Accessed. 20 Oct. 2019].

Sturman, A. (1997). Case study methods. In: J. P. Keeves (ed.). *Educational research, methodology and measurement: an international handbook* (2nd ed.). Oxford: Pergamon, pp. 61-66.

Taylor, M. (2019). What are Extinction Rebellion's key demands?. *The Guardian*. [online] Available at: https://www.theguardian.com/environment/2019/oct/08/what-are-extinction-rebellion-key-demands-climate-emergency [Accessed 20 Oct. 2019].

Taylor, J., Zhou, N. and Smee, B. (2019). *Extinction Rebellion: who are the protesters, and why are they doing it?*. [online] The Guardian. Available at: https://www.theguardian.com/environment/2019/oct/12/extinction-rebellion-who-are-the-protesters-and-why-are-they-doing-it [Accessed 21 Oct. 2019].

Templier, M. and Paré, G. (2015). "A Framework for Guiding and Evaluating Literature Reviews," Communications of the Association for Information Systems: Vol. 37 , Article 6. DOI: 10.17705/1CAIS.03706 [online] Available at: https://aisel.aisnet.org/cais/vol37/iss1/6

United Nations Framework Convention on Climate Change. (2011). *Fact sheet: Climate change science - the status of climate change science today*. [online] Available at: https://unfccc.int/files/press/backgrounders/application/pdf/press_factsh_science.pdf [Accessed 20 Oct. 2019].

Vitak, J., Zube, P., Smock, A., Carr, C. T., Ellison, N., and Lampe, C. (2011). It's Complicated: Facebook Users' Political Participation in the 2008 Election. Cyberpsychology, Behavior, and Social Networking, 14(3), 107–114. https://doi.org/10.1089/cyber.2009.0226

World Economic Forum. (2016). *Digital Media and Society Implications in a Hyperconnected Era*. Shaping the Future Implications of Digital Media for Society. [online] Available at: http://www3.weforum.org/docs/WEFUSA_DigitalMediaAndSociety_Report2016.pdf [Accessed 20 Oct. 2019].

Weimann G. (1991). The influentials: back to the concept of opinion leaders? Public Opinion. 55(2), pp. 267-279.

Yoshitaka Iwasaki. (2016). The role of youth engagement in positive youth development and social justice youth development for high-risk, marginalised youth, International Journal of Adolescence and Youth, 21:3, 267-278, doi:10.1080/02673843.2015.1067893

Yuval-Davis, N. (2006). Belonging and the politics of belonging. Patterns of Prejudice. 40(3), pp. 197-214.

Zielinski, S. (2006). *Deep Time of Media*. 1st ed. MIT Press, pp.7-11.