On the Potential of New Media to Enhance Environmental Activism in the Australian Context

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Synopsis

Over the last two decades, positive claims have been consistently made worldwide about the potential of new media and more recently social media to enable easier, faster, and more universal political action and enhanced civic engagement. Challenging this potential, perhaps profoundly, however, are issues of expanding corporate media ownership of new media and state digital surveillance. As such, the focus of this study is on discerning more clearly the posited beneficial potential of new media to enhance environmental activism, as also contextualised by the posited limitations to that potential.

The overall aim of this study, as such, is to investigate the potential benefits and limitations of new media for Australian environmental activism regarding environmental protection, as particularly informed by campaigner perceptions of such potentiality. To fulfil this aim, the design of the research comprised two stages of investigation. The first stage comprised an extensive literature review informed by environmental politics, media studies, social movement theory, and science, technology and society (STS) studies. Relevant analytical themes identified from the literature review informed the development of the conceptual framework for downstream research.

The second stage comprised the application of the conceptual framework in collecting and analysing empirical data. Data collection was based on, first, web content analysis of a demonstrative sample of 15 environmental activist groups and organisations in Australia to distil the current usage of new media for environmental activism, the extent of which appeared high. Second, data collection was based on in-depth interviews with 34 environmental activists as representatives, and expert informants, of activist environmental groups and organisations across Australia campaigning to protect the environment on their views on the potential of new media for on-the-ground activism.

In conclusion, the thesis found good potential in new media to enhance environmental activism in Australia to protect the environment. However, key limitations remain, as canvassed in the literature, of increasing concentration of corporate media ownership and digital surveillance. As such, these potential limitations should pose some reasons for caution by environmental activists in...
Australia to ensure that democratic rights of freedom of speech and expression of dissent are protected.

Lastly, the thesis makes an original contribution to the literature in two ways. First, it contributes to strengthening existing knowledge on new media in first the Australian literature and then the international literature, as found at the intersection of environmental politics, media studies, social movements studies, and STS studies. Second, the conceptual framework contributes to theory building in identifying new issues and insights not explored before in the Australian landscape, including the potential impact of fake news, echo-chambers, and abusive behaviours and trolling on civic participation in environmental activism, as well as the limitation most held by Australian activists of reaching out to diverse audiences across an increasingly crowded and competitive digital space for environmental and social issues to be raised.
Statement of originality

This work has not previously been submitted for a degree or diploma in any university. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

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1. Introduction

Since the mid-1990s, ‘new media’ and ‘social media’ as referred to by various scholars have attracted much attention regarding their claimed potential to positively influence society and the political process. However, before we explore such potential for environmental activism in Australia (within global context), which is the topic of this study, the definition of these terms is addressed.

Although the terms new media and social media are sometimes used in an interchangeable way, they refer to two distinct and intertwined concepts (Burke and Sen 2018; Sandoval-Almazan and Gil-Garcia 2014; Wright and Hinson 2014; Aday et al. 2010; Pridmore et al. 2013; Gerbaudo 2012; Siapera 2018). One popular understanding of ‘new media’ is to content accessed ‘anytime, anywhere, on any digital device’ (Margetts et al. 2016: 5; Lister et al. 2009; Pridmore et al. 2013; Flew 2008; Gane and Beer 2008). Overall, new media content is ‘digital’ in its format (in contrast to analogue) and circulates through digital technologies encompassing the internet, digital mobile technology, social media, file sharing systems, blogs, news outlets, wikis, video games (Seo et al. 2009; Siapera 2012; Pridmore et al., 2013; Lievrouw 2011).

In turn, social media are forms of new media, as ‘new media technologies facilitating interactivity and co-creation’ (Filo et al. 2015: 167). Social media thus allows individuals to engage in both one-to-one, one-to-many, and many-to-many decentralised communication by a set of web-based applications where users create and share content publicly or privately on personal profiles and interact with other users or networks.

Examples include Facebook, Twitter, Instagram, micro-blogging websites, messaging applications, and other web applications that use ‘distribution methods that bring together users in a digital sphere’ (Ahmed et al. 2018: 3; Fuchs 2012; Ellison 2007; Papadopoulos et al. 2013; Fuchs 2012; Kaplan and Haenlein 2010; Rambe and Nel 2015; Van Dick, 2013; O’Reilly 2005).

As Siapera (2017: 1) suggested, social media ‘integrate technology, social interaction, and user generated content’. This integration enables online community building, collaborative production and the sharing of information. Accordingly, several scholars, advanced that the term social media signifies ‘the emergence of
specific social qualities (sharing, online cooperation, etc.) supported by the World Wide Web’ (Fuchs et al. 2012: 5; also see Michaelidou et al. 2011; Livingstone and Lievrouw 2011; Siapera 2017).

In sum, social media are a component of the ‘machinery’ of new media. Thus, while this study focuses mainly on the claimed potentialities of social media as a more efficient conduit for communicating and interaction for environmental activism, it also investigates the potentialities of other forms of new media. The latter include news outlets, websites, e-mail communication, and other digital tools that are not necessarily social or interactive. Accordingly, to emphasise, the term ‘new media’ is adopted in this study to indicate that the focus of this study is on new media, which includes social media.

According to Van Aelst and Walgrave (2002), such communication parameters offer a key basis for new media enabling political action to be easier, faster, and universal for public engagement; in particular for those located outside the boundaries of traditional public institutions or political organisations, for example, as citizen-based groups. Thus, in contrast to traditional (mass) media, new media provide a ‘new communication landscape’, populated by interactive networks of individuals and groups who would create, discuss, and share content digitally (Kietzmann et al. 2011: 24; also Drogkaris et al. 2010; Fuchs et al. 2012).

In other words, new media would enable citizens to have their voices heard more by other citizens as well as by government and industry, therefore, arguably, enabling their decisional influence at a higher political level than through traditional media (Coleman and Blumler 2009; Nabatchi and Leighninger 2015). Such influential potential was evident in the rise of relatively recent democratic uprisings, including the 2010 Arab Spring and the 2011 Occupy Wall Street Movement (Askanius 2012; Juris 2012; Gillan et al. 2008; Pickerill and Krinsky 2012).

Positive claims have also been made new media to enhance environmental activism to protect the environment (Anderson 1997, 2014; Graf 2016; Lester and Hutchins 2009, 2013; Hindmarsh and Calibeo 2017; Pickerill 2003). Since the late 1960s, environmental activists have used media to draw public attention to environmental issues, including damming rivers, anthropogenic climate change, overpopulation, pollution, and deforestation (Anderson 2014; Cao 2015; Lester and Hutchins 2009). With new media and the popularisation of social media and its normalisation in society especially over the last two decades particular (Taylor 2014;
Rainie and Wellman 2012), environmental activists have also adopted these media as normal business (Cox and Pezzullo 2015; Pickerill 2003).

As such, Lester and Hutchins (2009: 579) argued that new media were ‘a tantalising source of hope for activists’ to better convey their struggles to a larger audience. In other words, new media have potential to reach and engage with large and diverse audiences from the local to global levels. Such reach has already been demonstrated by several episodes in the environmental protest arena in Australia and globally, from deforestation battles to oil spills (Cox and Pezzullo 2015; Graf 2016; Hindmarsh and Calibeo, 2017; Hopke and Hestres 2017; Hutchinson 2013; Sherman et al. 2014; Penney and Dadas 2014; Segerberg and Bennett 2011).

For example, the 2014 Climate March, reported as the largest climate march in history, mobilised hundreds of thousand people new media in 160 countries, including Australia (Dastagir 2014; Foderaro 201; Thorson et al. 2016; Kirilenko and Stepchenkova 2014). Other global examples include digital pressure exerted on governments and corporations by powerful environmental NGOs like Greenpeace or The World Wide Fund for Nature (WWF) who especially target corporate decisions capable of severely harming the environment.

Concomitantly, several issues have emerged that challenge the potential of new media to enhance civic participation communication. For example, there is the argument that new media - environments would facilitate exposure to ‘like-minded views’; and accordingly make digital interaction less effective for change than face-to-face communication (Wojcieszak et al., 2009: 1080; also Dahlgren 2006; Sunstein 2001). Perhaps more significant challenges include increasing international corporate concentration of media ownership whereby a few large corporations, including those dominating the old (traditional) media, come to largely own digital platforms and the infrastructure of both new media (Bagdikian 2004; Fuchs 2014; Taylor 2014). Such new media ownership has raised profound socio-economic issues of the diversity of services offered to users, as well as potential adverse impact on the formation of public opinion, by way of editorial bias in news reporting, and censorship issues, as already well evidenced in traditional media (Hobbs 2010; Fuchs 2012; Vaidhyanathan 2011).

Second, issues of digital surveillance have already emerged regarding the activities of environmental activists, for example, of anti-fracking activities in Canada (Calibeo and Hindmarsh 2017; Fuchs et al. 2012; Fuchs 2017). Digital surveillance has thus raised issues of privacy, freedom of information, and overall, of civil liberties.
(Monaghan 2014; Jeffries 2011; Welsh 2007). It therefore poses a threatening constraint to the activities of digital activism in democratic societies in addition to authoritarian regimes.

Against this background, the focus of this study on discerning more clearly the posited beneficial potential of new media in Australia to enhance environmental activism, as also contextualised by the posited limitations to that potential. In relation to this research focus, to ‘enhance environmental activism’ refers to strengthening the effectiveness of activist practices using new media as complementing traditional activism strategies in the pursuit of a better protected environment in Australia and worldwide.

To emphasise, on one hand new media have potential as a more democratic and efficient conduit than traditional media for citizens to communicate, organise, and mobilise political environmental action in the interests of environmental protection and transitions to a more sustainable future. On the other hand, concentration of corporate media ownership and digital surveillance pose serious challenges (or limitations, hereafter) regarding such potential.

With the highest Internet penetration rate in the world (69.6%) after the US and Europe, Australia is at the forefront of new media development and usage (Internet World Stats 2017). Australians increasingly access and use the Internet through a diverse range of platforms and technologies (Australian Bureau of Statistics 2017; Sensis 2017). In 2017, 84% of Australians accessed the Internet daily, and 79% are social media users (Sensis 2017).

Notably, in this new digital landscape, Australian environmental activists are also increasingly using new media strategies in addition to more traditional ones such as door-knocking, street leafleting, or holding stalls at local events (Beder 1991; Chen 2013; Lester 2010; Lester and Hutchins 2009; Pezzullo and Cox 2017; Switzer 2003; Tranter 2010). Such raid adoption in Australia new media, and such adoption for environmental campaigning in Australia, make the Australian case study a suitable and valid one for exploration of the topic under investigation.

Traditional environmental campaigning in Australia dates back to the 1880s. Mass protests started to occur from the early 1970s with the rise of the modern environmental movement (Doyle 2000; Hutton and Connors 1999; Frankland 2008; Markus 2009). A key focus of Australian activists has always been to pressure governments and industry to stop environmental degradation and act to resolve
environmental issues, although in different ways over time, which is where the study’s focus on new media lies.

A key area of environmental campaigning in Australia is about deforestation through land clearing and the associated logging of old-growth forests, as demonstrated by several ongoing campaigns across the country (Buckman 2008; Tranter and Lester 2017; Papadakis 1993; Tranter 2010). For example, campaigns have particularly targeted north-west Tasmania, among other areas, for example, to save the Tarkine forest from being logged (Bolger 2016; Macintosh and Wilkinson 2011). Similarly, in the East-Gippsland region of Victoria, environmental community groups and organisations have been campaigning to save the Kuark Forest, south of the Errinundra National Park, home to much threatened and endangered wildlife (Arup 2016; Beranek and Hill 2016).

Another campaign of note, but more recent in origin than forest protection and widespread across Australia, contests coal seam gas (CSG) development and well siting (Fleming and Measham 2014; Leather et al. 2013; Towler et al. 2016). Local communities comprised of concerned local citizens, environmentalists, and farmers, have raised many concerns in relation to water contamination, environmental degradation, human health, and land devaluation, in addition to issues of CO₂ emissions from CSG mining (Colvin et al. 2015; Lloyd et al. 2013; Lloyd-Smith and Senjen 2011). Also concerning mining, in Queensland, NGOs and community groups are campaigning against multinational company Adani to set up a large coalmine in the Galilee Basin in Central Queensland. Similar is a campaign against the energy giant Santos’ Narrabri Gas Project in the Pilliga forest, north-west New South Wales (Hannam 2017; Miskelly and Daniel 2017).

Against this background, the research aims and questions that inform the focus of the study, as well as the significance of the study, its methodology, and structure of investigation.

**Research aim and research questions**

The aim of this study is to investigate the potential benefits and limitations of new media for Australian environmental activism regarding environmental protection, as
particularly informed by campaigner perceptions of such potentiality. Informing my research aim are six research questions:

RQ1. How can theories of media studies, STS studies, and environmental politics be applied to the study of the potential of new media to enhance environmental activism with an emphasis on better protecting the environment?

RQ2. What successes can be discerned in Australia and internationally regarding the use of new media in protecting the environment?

RQ3. What new media devices and practices are employed to enhance environmental activism, and why and how are these devices and practices deployed strategically, and how do they compare internationally?

RQ4. What connection is made between activist uses of new media and traditional mass media, and why, and to what extent?

RQ5. How are activist practices and perceptions of new media tempered by activist organisational structures (group types), issues (campaigns), and campaign outcomes?

RQ6. On the limitations of new media for environmental activism, are they being addressed, and if so, how, and to what extent?

Significance of the study

Environmental degradation is escalating worldwide, which increasingly pressures the well-being of society and nature (The World Watch Institute 2017; United Nations 2016). In the absence of adequate governmental environmental protection, environmental activists pressure governments and institutions for change. In this endeavour, the media has always been a central conduit for environmental activists to promote environmental issues, raise public awareness of them, and pressure the policy agenda for change to a more environmentally sustainable future. Recently and
increasingly, commentators have advanced that the potential of ‘digital environmental activism’ will more effectively help protect the environment than traditional media (Hindmarsh and Calibeo 2017: 1).

This study is thus significant in contributing to fundamental knowledge on the topic of environmental activism and new media. As such, it first builds on the international literature on the relationship between the media and environmental activism (and communication and social movements); and second, has a specific focus on Australian environmental activism, as informed by the perceptions of a representative array of Australian environmental activists.

This focus was conditioned by Australia having well-established and democratically robust environmental activism with high use of the Internet and new media evident in a broad range of environmental campaigns. In addition, Australian federal legislation began to enable state digital surveillance in 2004. A focus on the potential of new media for environmental campaigning is thus fitting and important for the times we live in.

Research design

Informing the research design of this study is a largely qualitative methodology approach, comprising two stages of investigation: (i) literature review, and, (ii) field work investigation and analysis. The literature review, or theoretical framework, identified relevant fields of study as populated by theories, aspects, practices, concepts, and issues considered most pertinent to the research aim and questions to inform the conceptual framework (Anfara and Mertz 2006; Miles and Huberman, 1994; Ravitch and Riggan, 2012; Maxwell, 2013). The conceptual framework then formed the basis for investigating the background (Chapter 4) and the fieldwork component (Chapters 6-7) of the study and its data analysis back to the literature review (Chapter 8), to reach end conclusions (Kumar 2011; Maxwell 2013; Mertens 2010; Ravitch and Riggan 2012).

The fields of study in the literature review comprised environmental politics, media studies, social movement theory, and science, technology and society (STS) studies. Themes (or topics) considered most salient in this review formed the conceptual framework. Identifying these themes accurately occurred in applying
Owen’s (1984) ‘basic’ thematic analytical approach of applying the criterion of ‘recurrence’, ‘repetition’, and ‘forcefulness’ to the literature. ‘Recurrence’ of a topic occurs in the text when the same thread of meaning is detected in a word or term pattern even when a word choice changes. ‘Repetition’ extends recurrence as it refers to the repetitive mention of the same word or expression in a discourse. ‘Forcefulness’ occurs when particular emphasis (or stress) is put on the use of a particular expression or word.

The conceptual framework for my study (Chapter 4) was then built on three meta-themes, informed by nine themes, identified through the literature review in Chapters 2-4 (using Owen’s approach). The three meta-themes are: (i) environmental politics and activism (ii) new media and environmental activism; and (iii) digital environmental activism in the Australian context. The conceptual framework also informed the development of the interview guide.

As explained in Chapter 5, this interview guide informed 34 face-to-face interviews with environmental activists at the coalface of activism across Australia, with the aim of investigating in more depth the extent to which new media had potential to protect the environment, and the benefits and limitations characterising such potential. The fieldwork in Queensland, New South Wales, Victoria, Australian Capital Territory, Tasmania, Western Australia, and South Australia, occurred between 15 February and 30 March 2017.

In turn, the conceptual framework also informed the development of the interview guide. As explained in Chapter 5, this interview guide informed 34 face-to-face interviews with environmental activists at the coalface of activism across Australia, with the aim of investigating in more depth the extent to which new media had potential to protect the environment, and the benefits and limitations characterising such potential. The fieldwork in Queensland, New South Wales, Victoria, Australian Capital Territory, Tasmania, Western Australia, and South Australia, occurred between 15 February and 30 March 2017. Field data comprised tape recordings and interview transcriptions. The transcriptions were subject to structural coding through NVivo 11 (NVivo 2017) and thematic analysis (with reference to Braun and Clarke 2006; Gibson and Brown 2009; Owen 1984; Regoniel 2010).
Structuring the thesis: An overview

Discussion of the theoretical framework for this study occurs across chapters 2-4. *Chapter 2* provides the first part of the theoretical framework of the study exploring ‘Environmental politics and activism’. This review of the literature on the area of environmental politics – involving theories, aspects, practices, concepts, and issues of social movements, globalisation of environmental risk, environmental citizenship, and technological change – informs the first meta-theme on which my conceptual framework builds on.

*Chapter 3* then provides the second and final part of the theoretical framework exploring ‘New media and environmental activism’ regarding the rise new media in permeating every aspect of society, including environmental activism and the environmental movement. This review of the literature – involving theories, aspects, practices, concepts, and issues of media studies and science, technology, and society (STS) studies – informs the second meta-theme for my conceptual framework, presented in Chapter 4.

*Chapter 4* backgrounds the endeavours and some of the limitations of Australian environmental activism to protect the environment. Its purview goes from traditional campaigning to the advent and still early days of digital activism in laying out the background for its potential to improve environmental activism. This potential is particularly drawn out through two case studies, investigated through the review of the literature on the enduring debate about logging of old-growth forest and the more recent development and siting controversies of coal seam gas mining, with both campaigns evident across Australia. The background provided in this chapter is complemented by a web content analysis of how environmental activists involved in campaigning in these protest arenas used new media. The web content analysis is presented in Chapter 6.

*Chapter 5* provides the research design for the study, which first reiterates the focus of the research, the aim, and the research questions. Then, I discuss the relevance of the qualitative approach to my study, after which I present the two main stages of
investigation. First, literature review and background to the focus of the investigation, and associated development of the conceptual framework and its application. Second, the empirical component of the study, comprising (i) web content analysis and (ii) interview data analysis, by way of developing the interview guide, obtaining ethical clearance for conducting the interviews, interview pilot testing, site selection and respondent selection, interview process, and subsequent data analysis.

Chapter 6 presents web content analysis on the use that a sample of 15 environmental groups and organisations in Australia made of new media for their campaigns. This chapter builds on and complements the background provided in Chapter 4 in relation to the evolution of the environmental movement in Australia, and specifically in relation to two case studies also presented in Chapter 4 on groups contesting logging of old-growth forest and coal seam gas.

Chapter 7 presents the first set of findings of the data analysis of interviews conducted between February-March 2017 with 34 representatives of environmental non-governmental organisations (ENGOs) and community groups campaigning on environmental issues across Australia. The interview guide was comprised of 13 questions under two meta-themes – the benefits and limitations – of new media for environmental activism. This chapter presents the data analysis and findings of the respondent perceptions of the benefits.

In turn, Chapter 8, in following Chapter 7, presents the data analysis and findings of the respondent perceptions of the limitations of new media for environmental activism.

Chapter 9 discusses the key findings of the study and addresses my research questions 2 to 6. In this chapter, the findings presented in chapters 6-8 are discussed compared the international and Australian literature on the topic, to highlight convergences, divergences and variations that emerged, and draw the study conclusions.

Finally, Chapter 10 reflects on the implications of the key findings of the study, on contributions to knowledge that the study has provided, on the research design and implications for future research, and makes some concluding remarks.
Old media corporations including Comcast, Disney, NewsCorp, have been joined by Internet giants Google, Microsoft, Facebook, Apple, Amazon in the ownership of ownership of hardware, web browsing, and social networking platforms (Bagdikian 2004; Taylor 2014).

As described by Internet World Stats (2017: 1), ‘the Internet Penetration Rate corresponds to the percentage of the total population of a given country or region that uses the Internet’.

One of the first high-profile forest battles against forest logging was the Terania Creek campaign in New South Wales. The campaign started at the local level in 1975 and escalated to a robust blockade in 1979, which attracted thousands of protesters from all over Australia, and internationally, and lasted for several weeks (Hutton and Connors 1999). Similarly, between 1983 and 1984 another high-profile campaign against forest logging was organised in Far-North Queensland to save the Daintree Rainforest from being damaged by road development (Markus 2009; Wilkie 2017).
2. Environmental politics and activism

Introduction

Provided in this chapter is the literature review of my study. As such, it provides the relevant literature within which my study sits, in also identifying key aspects, theories, concepts, and ideas as themes – as often interconnected in overlapping relevant and diverse areas in the literature (Anfara and Merz 2006; Regoniel 2010) – that best address my research problem, aim, and questions. These themes, of which there are three, inform the ensuing conceptual framework of my study, as presented at the end of Chapter 4.

As stated by Maxwell (2005: 39), the conceptual framework is a ‘tentative theory of the phenomena’. In this study, to identify and understand the ‘phenomena’ is the potential of new media for environmental activism to better protect the environment; which also reflects the aim of the study. In other words, this chapter on environmental politics and activism informs the first stage of the development of my conceptual framework. The second and third stages are presented in Chapter 3-4.

In identifying the themes, which also relates to the organisation of my literature review as mentioned in Chapter 1, I applied thematic analysis following Owen’s (1984) criteria. The criteria were ‘recurrence’, ‘repetition’ and ‘forcefulness’ in relation to concepts, terms, and words in text that typically characterise and categorise concepts. In the context of environmental politics and activism, the identified themes provide understandings and interpretations of environmental activism that align to the focus and aim of the study. Accordingly, the themes are ‘environmental issues and the globalisation of environmental risk’, ‘social movements’, and ‘environmental activism’.

First, I discuss environmental issues and the globalisation of environmental risk in global context. I look at the ways governments, institutions, and individuals act to address environmental issues and problems. Alongside concepts of globalisation and transboundary collaborations between states to address environmental degradation, this theme also includes the concept of ‘citizenship’, in relation to meanings and values that citizenship has acquired over time according to the fields of environmental protection, sustainability transitions, and social change.
Second, through the theme of *social movements* I discuss citizen engagement in social actions and protest. Here, I focus on social movement theory, which looks at how and why social movements form and evolve over time, and relevant features of social movements including concepts of collective identity, interaction, and networking. Third, I discuss the theme of *environmental activism*. I start by focusing on the environmental movement, especially its composition and the strategies and practices of activists. Then, I introduce and discuss the concept of ‘digital environmental activism’, which explores the extent to which environmental activists use new media for protecting the environment.

**Environmental issues and the globalisation of environmental risk**

Over the last 100 years, the world has seen unprecedented growth in both industrial development and human population (Hayes and Adamo 2014; Steffen et al. 2007). This ‘burgeoning human enterprise’ has increasingly exerted pressure on the environment, and profoundly affected the relationship between human beings and the environment, particularly involving adverse environmental change (Steffen et al. 2007: 617; see also Adamo et al. 2014; Cao 2015). Nevertheless, environmental degradation as a significant issue only became widely acknowledged in the 1960s.

Such issue recognition was mainly due to the emerging environmental movement (in western countries especially), in the 1950s and 1960s, and increasing criticism of the dominant economic growth paradigm’s corrosive threat to, and impact on, the environment, initially, regarding highly visible air and water pollution in US cities (Chasek et al. 2010; Cao 2015). Since then, and due to ensuing advancements in scientific and public knowledge, the public understanding of environmental problems has informed an ever ‘intensifying struggle over global environmental issues’ (Chasek et al. 2010: 2). Chasek et al. (2010: 2) referred to this struggle as a ‘political force, a global environmental movement that undertakes transnational action on various issues’. Accordingly, the international, regional, national, and local contexts and scales of actions to protect the environment is a key area of environmental politics.

Environmental politics is represented at the intersection of the fields of politics, policy, environmental studies, and the social sciences. As noted by Doyle and McEachern (2008: 18), environmental studies derive from the combination of
‘knowledge derived from ecology and a whole range of individual disciplines’, and ‘knowledge derived from social sciences’. The role of politics in environmental studies is understood through the relationships between humans, and between humans and nature (or non-humans).

Less broadly, and pertinent to this discussion, environmental politics also include ‘the environmental consequences of the economic and other activity in question and the state and nonstate actors involved’ (Chasek et al. 2010: 15). More specifically, of focus here is the interaction between social systems and the environment central to understanding how ‘new combinations of individuals inject themselves into politics and challenge dominant ideas … and press for change’ (Doyle and McEachern 200: 85; also, Dryzek 2005); in complex and globalised contexts of digital communication.

The scope of environmental issues such as ‘deforestation, desertification and water scarcity’, which were once ‘predominantly regional or local in cause and effect … now have transboundary or international dimensions of environmental risk’ (Carter 2007). According to Carter (2007: 242, author’s emphasis):

> A “new” range of issues, including climate change, ozone depletion and biodiversity loss, are truly global in that they affect everyone. All states contribute to problems of the global commons and all suffer the consequences, although the extent to which each country is culpable for causing a particular problem and vulnerable to its effects varies enormously.

How might governments worldwide effectively address these and other environmental issues? In attempting to answer this question, some scholars have suggested that transnational action and collaboration between state and non-state actors is increasingly needed, with the United Nations playing a key role (Barrett and Dannenberg 2012; Carter 2007; Connelly et al. 2014; DeSombre 2004; Dunlap and Jogernson 2012; Gulbrandsen 2010; Vogler 2005). However, other scholars argue it is too difficult to achieve effective outcomes through international cooperation; for example, because of the ongoing fragmentation of the international political system, the North-South gap, issues of trust between states, and state self-interest (Hurrell and Kingsbury 1992; Rootes 2008; Weale 1992).

Nevertheless, Carter (2007) suggested that transnational cooperation, involving the combined efforts of governments and national and international
institutions, might be more effective in protecting the environment than single government actions. According to Carter (2007: 242), collaboration is endorsed by states acknowledging their ‘mutual vulnerability’ on several issues, including environmental ones. Collaboration between states to solve transboundary environmental issues has also been actively canvassed by the European Environment Agency (2017: 5) which, regarding the approved Environment Action Programme 2014-2020, stated that environmental issues ‘can only be addressed effectively through international co-operation’.

Regarding how in practice governments and international institutions might act towards the resolution of transboundary environmental issues, some scholars have proposed the notion of ‘international environmental regimes’. These define sets of norms, agreements, rules, and procedures adopted by states to address global environmental issues (Carter 2007; Connelly et al. 2012; Krasner 1983; Pettenger 2014; Young 1989, 2011). According to these authors, to achieve environmental cooperation, states need to comply with agreements and actuate agreed policies when they sign up and ratify these agreements, often cast as conventions and protocols according to international law, as brokered at the United Nations.

Alternatively, in relation to the role of the state in addressing environmental issues, and the capacity of states to adopt ‘green’ policies independently from those adopted by other states, some scholars have also suggested the concept of an ‘environmental state’ (Bäckstrand and Kronsell 2015; Christoff 2005; Duit 2016; Meadowcroft 2005; Mol 2016). According to Mol (2016: 49), the environmental state represents ‘a set of governmental organisations, institutions and practices’ developed since the 1960s by governments to cope with environmental issues. However, Meadowcroft (2005) added that the environmental state can be better understood through a comparison with social welfare state systems. According to this author, as governments retain primary responsibility for the social and economic welfare of their citizens; in environmental states, then, governments should be primarily responsible for addressing environmental issues (Meadowcroft 2012; also, Christoff 2005; Duit 2016).

In such context, Duit (2016: 70) defined the environmental state as ‘a state that accepts the provisioning of environmental collective goods as a core responsibility’, as well as applying green policies to protect the environment. However, Duit (2016: 72) stated that ‘no contemporary state can be considered an environmental state’ in
any ideal sense of the term reflecting the resolution of environmental problems. Instead, Duit (2016: 72) continued, there are ‘a fair number of more imperfect environmental states in today’s world, in which environmental concerns are sometimes, but not always, allowed to trump economic priorities’.

This critical reflection has attracted criticism of the capability of environmental states to protect the environment being in steady decline, particularly due to globalisation and its focus on neoliberalism (Mol 2016; Mol and Buttel 2002; Wapner 1996). Indeed, Wapner (1996) earlier noted, perhaps contradictory, the decreasing ability of states to address global environmental problems has been accompanied by the emergence of transnational actors and supra-national institutions aimed at better protecting the environment. Consequently, Mol (2016) noted that with the decline of the environmental state significantly due to the rise of globalisation, several environmental authorities and groups have emerged to address the new transnational environmental challenges accompanying this situation, including climate change, ocean pollution, overfishing, and the steady loss of biodiversity.

As such, accompanying globalisation are ‘environmentally relevant practices (practices causing environmental devastation as well as practices preserving the environment) … increasingly caused, governed and determined by networks and flows that criss-cross national borders and jurisdictions’ (Mol 2016: 57). Networks and flows, for example, aiming to protect the environment, can involve environmental NGOs, citizen groups, municipalities, and intergovernmental organisations and UN agencies such as the United Nations Environment Programme (UNEP), which operate at the local, national, and/or transnational levels to with the state toward the resolution of environmental issues (Conca 2005; Glasbergen et al. 2007; Falkner 2012; Mol 2016; Spaargaren and Mol 2008).

In more detail, globalisation can be defined as a ‘major force’ transforming institutions and their interactions, as well as human relations, as informed by neoliberalism and its focus on finance, commerce, free trade, and growth (Myint 2011: 396). Globalisation has seen the flow of capital, goods, individuals, ideas, and information around the world vastly increase in speed and volume, which creates new forms of interdependence and exchange (Tarrow 2005). According to Alonso (2009), globalisation increasingly affects all spheres of life, in transforming the political, economic, and cultural spheres of societies. Regarding politics as a key conduit to change, ‘with the formation of multilateral and transnational agencies with control
over political and economic processes … [globalisation increasingly] makes it possible for activists to raise grievances beyond the national sphere’ (Alonso 2009: 10).

Globalisation impacts environmental activism in several ways. First, as indicated above, globalisation has increased civic awareness and concerns about environmental issues (Sonnenfeld and Mol 2002). Second, and by association, protest actions directed at pressuring governments nationally and internationally have gained a longer reach, one that goes beyond the boundaries of the local or regional areas (Alonso 2009; Ignatow 2008).

Nevertheless, others highlight the importance of the role of local protest activity (Hindmarsh 2014; Rootes 2008, 2013; Tarrow 2005). Rootes (2013: 110), for example, argued that the success of environmental campaigns resides in the inclusion of local concerns into national policies, ‘as stimuli to and targets for translocal mobilisations’. Similarly, other commentators have argued that protesting in a globalised world is not enough to solve environmental issues worldwide (Antonio 2007; Colombo and Porcu 2014; Ritzer and Dean 2015; Yearley 2007). Among them, Yearley (2007: 246-249) argued that the ‘globalisation of the environmental concern’ is ‘probably more influenced by trade and economic policies and actions than by explicitly environmental ones’. According to Yearley (2007), the engine for economic globalisation is the rise and implementation of neoliberal policies. Through their financial focus, these policies subordinate the protection of the environment to economic and industrial production, and have thus contributed greatly in degrading the state of the environment (Alexander 2009; Antonio 2007; Ritzer and Dean 2015).

On the relationship between industrial production, the degradation of the environment, and globalisation during the 1990s, notions of ‘risk’ and the ‘risk society’ emerged (Beck 1992; Giddens 2003; Lash and Wynne 1992). These notions referred to changes in industrial production and technology that, along with globalisation, have generated ‘unknown and unintended consequences’ for societies in the form of global risks, such as those related to climate change, nuclear technology, genetic modification, biological warfare, to name but a few (Beck 1992: 22; see also Giddens 2003; Harding et al. 2009).

According to Beck (2000: 81), ‘risk society’ is the product of a ‘second age of modernity’ or ‘second modernity’, characterised by an increasing transformation in the relationship between States, which have become more interdependent and
interconnected than they were in earlier industrial society modernity. As Beck explained in relation to the rise of second modernity and the role of states (2000: 88):

Whatever constitutes ‘society’ and ‘politics’ becomes in itself questionable, because the principles of territoriality, collectivity and frontier are becoming questioned. More precisely: the assumed congruence of state and society is broken down and suspended: economic and social ways of acting, working and living no longer take place within the container of the state.

According to Beck (2003), second modernity is characterised by a paradox: risk is not contained within the borders of the states, because it is global in nature; however, the responsibility for the production of global risk is not equally shared among states.\(^5\)

In turn, Giddens (2003: 22) described ‘risks’ as ‘hazards that are actively assessed in relation to future possibilities’. Giddens (2003) differentiated between two categories of risk: technological (or manufactured), and external (or natural). While external risks are ‘coming from the outside, from the fixities of tradition or nature’, technological risks are ‘created by the very impact of our developing knowledge upon the world … Most environmental risks, such as these connected with global warming, fall into this category’ (Giddens 2003: 26).

Similarly, on the globalisation of environmental risks, Tait and Bruce (2001: 99) referred to ‘transboundary risks’, and defined them as risks produced under one jurisdiction, which have ‘significant actual or anticipated impacts in another jurisdiction’. According to these authors, such risks are increasingly ‘a source of concern for regulators, politicians and public’; and because global environmental risks affect whole ecosystems, these risks can also be referred to as ‘systemic’ (Tait and Bruce 2001: 99).

In turn, the World Economic Forum (WEF) commented that systemic environmental global risks include ‘both natural disasters, such as earthquakes … and man-made risks such as collapsing ecosystems’ (WEF 2014: 1; also, Kaspenson and Kasperson 2001). Accordingly, global environmental risk is an ‘occurrence that causes significant negative [environmental] impact for several countries and industries over a time frame’ (WEF 2014: 1).\(^6\)
In sum, an increasing number of environmental issues today have transboundary consequences and have gained global recognition. To address these issues, governments aim to collaborate on policy development but obviously the globalisation agenda has strongly added to the problems. Concomitantly, strong environmental pressure, however, has been and is continuously exerted on governments and the UN and other global institutions by environmental NGOs, activists, and citizens worldwide, as discussed below.

While the risk theories of Beck (2000) and Giddens (1999) highlight challenges to the structure and organisation of traditional industrial society, they also help in understanding transformations in citizenship in global context. As such, the concept of ‘citizenship’ has become re-constructed to one of being ‘cosmopolitan’; recently in regard to environmental and digital citizenship (Barry 2006; Cao 2015; Carter 2007; Dahlgren 2006; Hudson and Kane 2000; Jarvis 2007; Kasperson and Kasperson 2001; Longford 2005).

The relationship between citizenship and the environment has been increasingly been explored in the literature in the last 20 years (Cao 2015; Parola 2013). Accordingly, a new type of citizenship has emerged. It is characterised by citizen awareness about ‘how ecosystems support life, and of life’s vulnerabilities’ (Dryzek 2005: 189). This new type of citizenship has been variously defined as ‘ecological’ (Christoff 2005; Dobson 2007), ‘sustainable’ (Barry 2006; Hay 2002), ‘green’ (Hartley 2001), and ‘environmental’ (Dobson and Bell 2006).

In common, these definitions have the idea that individuals are embedded in a framework of ‘environmental citizenship’, which transforms the traditional concept of citizenship because it ‘expands the focus from the individual to the collective’ (Rodrigues 2012: 28). Thus, our actions can be understood as ‘part of a broader societal process historically constructing the harmonious (or not) relationship between these actions and the environment’ (Rodrigues 2012: 28). On this relationship, Carter (2007: 65) suggested that if all individuals took responsibility for their actions in protecting the environment, the effects of environmental citizenship ‘would spill over from the political sphere into the realms of economic and social activity’, thus benefiting society.

Similarly, Cao (2015) argued that citizenship is being transformed where it converges with environmental concerns in relation to the risks and implications of environmental degradation worldwide, and of globalisation (also Dobson and Saiz
2007; Rokka and Moisander 2009). Such convergence, here, refers to ‘environmental citizenship’, the definition of which builds upon ‘the rethinking of the relationship between ecology and democracy brought about by the influence of green political thought’ (Cao 2015: 2). It can be understood through traditional forms of grassroots environmental activism (such as rallies, blockades, or civic gatherings), with new ways and techniques of civic environmental engagement, made possible through technological innovations, such new media. For example, online social pressure, and protest coordination and mobilisation are activities of engagement that can involve everyday citizens as well as activists anytime and anywhere in reaching dispersed audiences worldwide (Hindmarsh and Calibeo, 2017).

Such technological innovation ‘has expanded the bounds of social awareness and political concern’, and created a ‘truly cosmopolitan realm for political action’ (Hudson and Kane 2000: 202; see also Dobson and Bell 2006; Coleman and Blumler 2009; Lester and Hutchins 2012; Mossberger 2009). On the use of digital technologies for civic engagement, another relatively recent type of citizenship has been conceptualised, which is referred to as ‘digital citizenship’ (Coleman and Blumler 2009; Lester and Hutchins 2012; Mossberger 2009; Searson et al. 2015). Mossberger et al. (2008: 1) defined ‘digital citizens’ as citizens able to participate in society online by using the Internet ‘regularly and effectively’. More broadly, digital citizenship ‘describes the characteristics of an individual’s behaviour, especially within collaborative environments, when engaged with digital tools’ to enhance the possibilities for citizens to access information and participate in society (Searson et al. 2015).

Building upon understandings of environmental citizenship and digital citizenship, suggests a hybrid type of citizenship. Hindmarsh and Calibeo (2017: 1) thus referred to ‘digital environmental activism’, which combines the transnational nature and scope of environmental citizenship with digitally enabled activities of digital citizenship through new media. An example was provided by Rokka and Moisander (2009), who focused on the role of web-based communities, as ‘new forms of cultural production, dissemination of environmental knowledge and environmental dialogue through which particular forms of ecological citizenship and consumer culture are being created and sustained’.

Similarly, Edwina and Ayu (2013: 5) highlighted the role of online social communities, as well as blogs, in ‘setting the stage for new collective forms of cultural
production and environmental dialogue’. According to Edwina and Ayu (2013: 16), social media and blogs provide citizens with the ideal platform to share environmental knowledge, which they argued is ‘the first step toward citizen action’.

In such context, Carter (2007: 360) advanced that the ‘growing significance of the Internet’ held potential to ‘expand the repertoire of protest’ locally, nationally, and internationally. Further, as suggested by Van Aelst and Walgrave (2002), such potential might digitally empower more easily those citizens and groups traditionally located outside the borders of political institutions, who can thus engage more powerfully in social discourse and actions to protect the environment.

As also argued by Bimber (1998: 156), new digital technologies have made ‘mobilizing and organizing … more accessible to new political organizers and activists who do not necessarily have financial or institutional connections’. Such potential – or, alternatively, that of digital environmental activism:

Enhance citizenship participation, including environmental activism. Indeed, some have begun to use the expression “digital tree sitting” … digital technology can enhance the sense of global citizenship and provide further opportunities to come up with shared solutions to our environmental predicament (Cao 2015: 248).

Before investigating the potential of new media for environmental activism in Chapter 3, I turn to my second theme in this chapter on social movements.

**Social movements**

On civic action for change in relation to environmental change, this section focuses on the nature of social movements and activism – as intimately informing the emergence and function of the environmental movement; by which to better understand how activism and organisation works regarding social movements. I first look at the substance and composition of social movements, and at the concept of activism. Second, I focus on the formation and composition of the environmental movement – especially in relation to its presence in the mass media, as a key context of this study.

To start with, and to understand what social movements are and their characteristics, Diani and Della Porta (1999), categorised the diverse studies on social
movements into four approaches: (i) collective behaviour, (ii) resource mobilisation, (iii) political process, and (iv) new social movement. First, the ‘collective behaviour approach’ centres on the relatively spontaneous and unstructured behaviour of individuals who act together for a common purpose (Diani and Della Porta 1999; also, Barkan 2012; Blumer 1951). Here, individuals follow shared meanings and beliefs developed through their participation in a social movement. Second, the ‘resource mobilisation approach’ focuses on political and economic aspects that influence individuals who act together in a social movement. Accordingly, this approach looks at the amount and variety of resources that need to be mobilised by social movements to carry out their activities, as well as on any one movement’s dependence on external support for achieving success (McCarty and Zald 1977; Jenkins 1983; van der Heijden 2014).

Third, the ‘political process approach’ sees social movements as strongly embedded in the political context of society. It explores the combination of ‘political opportunities, mobilizing structures, framing processes, protest cycles, and contentious repertoires’, and how these elements together shape and define the rise of social movements, their decline, and outcomes (Caren 2007: 3). Finally, the ‘new movement approach’ looks at social movements from an historical and evolutionary perspective. According to this approach, social movements emerge at a turning point in history. For example, the replacement of traditional working-class conflict in some places by new movements and new ideals (Diani and Della Porta 1999; van der Heijden 2014). Examples of new social movements are the civil rights, environmental, and feminist movements (Doyle 2015; Doherty and Doyle 2006).

In sum, Diani (1992: 13) defines social movements as ‘networks of informal interactions between a plurality of individuals, groups and/or organisations, engaged in a political or cultural conflict, on the basis of a shared collective identity’. As noted by Piatelli (2009), the concept of ‘collective identity’ is a recurring theme in social movement theory (for example Diani and Della Porta 1999; Freeman and Johnson 1999; Gamson 1991; Melucci; 1995; Rootes 2008; Snow et al 2004). On collective identity, Diani and Della Porta (1999: 85) elaborated it is ‘the process by which social actors recognize themselves … as part of broader groupings’. Similarly, Melucci (1995: 50) described collective identity as a process or ‘system of relations and representations’ in groups of individuals. According to these studies, collective identity changed over time according to any evolving structure of social movements.
For example, Adler (2012: 289), in discussing the Mexican movement of the Popular Assembly of the Peoples (also known as APPO) of Oaxaca in 2006, observed that the movement brought together ‘multiple ideologies, issues, agendas, and identities’. However, even if the APPO movement no longer exists, Adler (2012) noticed that initiatives that generated from the movement are still in place today, as well as the new horizon of ‘hope’ that emerged from the movement. As such, this movement, as Adler (2012: 306) reported, is alive today because it represents a ‘great awakening’ whose ‘innovative character, especially in terms of bridging cultural diversity and applying the assembly tradition to the present, is a source of inspiration for many other movements in Mexico and in the world’.

Alternatively, in her recent work on the relationship between social movements and identity, Saunders (2013: 156) suggested that ‘social movements are too heterogeneous to share a collective identity even though activists within a particular movement organisation might’. On a similar note, Rootes (2008: 48) argued that organisations and groups may be interested in ‘collaborative exchanges with groups with similar concerns’, despite having a lack of concrete ‘identity bonds’. Thus, Rootes (2008: 48) continued, ‘groups may join forces to push forward a certain agenda without feeling linked to each other’.

For example, the ‘Lock the Gate Alliance’ – ‘a contemporary national coalition of people’ and 250 local groups from across Australia is atypically comprised of farmers, environmentalists, and everyday citizens. It claims to have united to protect their ‘common heritage – our land, water and communities’ against coal seam gas mining (lockthegate.org.au). Similarly, Diani and Della Porta (2015: 730) argued that environmental movements are often ‘rooted in the shared concern to protect the natural environment that exists among the members and supporters of environmental organizations of various kinds’.

Shared collective concerns can then occur, sometimes at the same time, by individuals within the same social movement, and by any social movement with other groups and movements. To understand how this works, as new media go across boundaries easily, it is useful to look at two streams of such interactions. First, at the internal interactions among participants of the same movement. Second, at the external relations between one social movement and other actors, including other movements, groups, or institutions, as the Lock the Gate Alliance indicates, where the external relationships with other actors and institutions located outside any one movement are
strongly influenced by internally networked interactions (Doyle et al. 2015; Gerlach 2001).10

Seen as a central characteristic of social movements, networking occurs through interactions with other actors inside and outside a movement, both in relation to activities and progress over time. ‘Progress’ in this case refers to developments occurring within a movement, such as the different stages of the movements’ life cycle (Blumer 1951; Christiansen 2009).11 Social movements’ internal and external interactions also create networks of communication whereby new collectives of people interact and network to challenge, confront, or defend dominant ideas and authority (Doyle et al. 2015; Meyer and Tarrow 1998; Snow et al. 2004).

The interaction between individuals and networks that characterise social movements contributes strongly to the development of strategies and activities. As such, activism is a key part of these strategies and activities. According to Martin (2007), social movements can be considered the actual context in which activism is located and understood. As Martin (2007: 19) stated, ‘activism’ is the ‘action on behalf of a cause’ that goes ‘beyond conventional politics’. As such, social movements are the context in which such actions happen.12

In other words, ‘activism’ consists of the actions of individuals engaged in social movements. Activists engage in a large array of non-conventional actions, which can include both non-violent and violent actions.13 Non-violent actions refer to methods of persuasion that seek influence and change, including rallies, marches, speeches, and teach-ins; and, also refer to methods of non-cooperation, such as strikes, boycotts, and international trade embargos; as well as methods of intervention, such as fasting, sit-ins, and non-violent occupations (Martin 2007; Sharp 2005).

In contrast, violent actions can include beatings, fighting, torture, and/or bombing. In between non-violent and violent actions are direct actions directed at physical objects, such as sabotage, arson, and trespassing (Martin 2007). Emblematic environmental protest actions were first attributed to the actions of (US) Earth First, particularly regarding ‘tree spiking’ to save old growth trees, and to the anti-road UK protests in the 1990s (Button et al. 2002; Leader and Probst 2004).

However, activism is now not limited to these types of actions. Connelly (et al., 2012: 95), for example, outlined that social movements ‘engage in a broad range of actions’ including digital technologies and the use of the Internet, which have emerged over the last decade to increase social and political pressure on governments
and industry. For example, in discussing the digital arena of contestation and political pressure in Chapter 3, I note that ‘political consumerism’ and ‘culture jamming’ are two examples of how activists contest industrial production through new media.

In addition, social movements are a learning experience for activists, as outlined by Martin (2007: 22):

Social movements provide a learning environment, with activists drawing on the experience of other groups to find out what works. And they provide a framework or perspective for understanding society, its problems, possible futures, and ways of bringing about change. This framework, or belief system, develops out of the experience of activists … For example, the feminist movement has supported activism through the network of individuals and groups, has fostered learning about tactics, and has offered an understanding of the problem of patriarchy through women sharing their experience and through feminist writers presenting ideas that illuminate and inspire their readers.

To recapitulate, social movements comprise ‘networks’ of individuals, groups, and organisations that share common concerns about issues. These networks of individuals act together, collectively, to achieve common goals or purposes through a diverse array of strategies and actions, which can range from rallies and educative activities to offline and online protests. In addition, networking and interactivity are fundamental characteristics of social movements in helping determine the strategies of social movements. I now turn to my third theme of environmental activism.

**Environmental activism**

This section investigates and contextualises how the environmental movement is a social movement concerned with the protection of the environment, especially how it formed and is composed (Carter 2007; Dryzek and Schlosberg 2005; Hutton and Connors 1999). The review of this literature is essential to explore the rise of environmental concerns about environmental degradation among both citizens and governments, and how it operates in a context of activism, which is strongly linked to
prior themes on environmental issues and globalisation of environmental risk, and concepts of environmental citizenship.

Rootes (2007: v) referred to the environmental movement as the most ‘important’ and ‘durable’ movement of the social and political movements that emerged during the last third of the twentieth century. Based on its definition, and because of the numerous issues and problems that the environmental movement focuses upon, it has, however, been debated whether the environmental movement would instead be better described as the sum of more than one movement (Bosso 1999; Jordan and Maloney 1997; Hutton and Connors 1999; Carter 2007).

Rootes (2008: 7) focused on ‘environmental movements’ in local context, which he described as working through ‘networks’; where ‘local organisations and campaigns are linked to and help to constitute geographically more extensive environmental movements’. Similarly, Saunders (2013) and Doyle and McEachern (2015) referred to ‘environmental networks’ to describe the social actions undertaken by individuals and groups to protect the environment. These actions were not only undertaken at the local level, but also nationally and internationally where the nature of social movements embraces ‘the diversity of environmentalism’ (Doherty and Doyle 2006: 704).

Such ‘diversity’ is reflected by different ‘streams’ of protesters and activists create networks (Doyle and Kellow 1995), which can then flow into or generate diverse groups and/or organisations. The nature of these streams is diverse in terms of composition, scope, target, and strategies. For example, there are both ‘hard core’ activists, who usually take part in confrontational direct actions such as blockades and rallies, and activists who work ‘behind the scenes’ (Martin 2007: 20).14 Further demonstrating diversity is the lack of the movement being a fixed entity or having a fixed ideology. This further subjects the diversity of environmentalism to constant transformation through communication and interaction between participants and groups, inside and outside the movement, like most other social movements.

Doyle and McEachern (2008: 86) also observed that new social movements both construct new themes and utilise ‘left over themes constructed in earlier eras and give them new emphasis and meaning’. This construction of issue identity, for example, is particularly true for the contemporary environmental movement, especially in its action politics. For example, revitalising society and the environment
from the domination of excessive economic growth and industrial interests with poor environmental records (Doyle and McEachern 2008).

Overall, the environmental movement varies in the scope and diversity of its streams and networks, and structures and modes of organisation, which can also be highly flexible (Doyle and McEachern 2008). For example, as environmental issues appear on the public, media, and political agendas, environmental groups often form in raising or addressing them; however, when the issue disappears from the public view, these groups ‘may fade away also’ (Doyle and McEachern 2008: 93). As in the case of local environmental and community groups that campaign on wind farm siting once it is proposed and if the development goes ahead in any case (Hindmarsh and Matthews 2008).

As the social and political paths to the formation of these streams and networks are most often diverse and organisational modes are constantly under redefinition, Doyle and Kellow (1995) referred to the structure of the environmental movement as both formal (as in the case of large NGOs) and informal (smaller, volunteer community or action groups) in their Palimpsest model (Doyle and Kellow 1995). The Palimpsest model provided a visual representation of the composition of the environmental movement as the sum of the different structures that compose it, formally and informally (Doyle and Kellow 1995; also, Doyle and McEachern 2008).\(^\text{15}\)

Also, essential to the formation of the environmental movement was coverage of environmental issues by the mass media, especially in persuasive visual forms (Snow et al. 2004: 613). For example, the successful campaign to save the Franklin River from being dammed in the Australian State of Tasmania’s South West in the early 1980s (discussed further below), was informed by an iconic photo of the Franklin River’s ‘Rock Island Bend’. The photo was placed as an advertisement in The Age and The Sydney Morning Herald newspapers – with the caption ‘Could you vote for a party that will destroy this?’ – in the lead-up to the 1983 federal elections, it provided highly influential. Former Senator John Button ‘described the double-page full-colour advertisement … as the most powerful political advertisement he had ever seen’ (van Vuuren and Lester, 2008: 72).\(^\text{16}\)

Since then, the environmental movement in Australia has always utilised the mass media to communicate itself, enrol and rally supporters, and amplify its demands (Anderson 1997, 2014). As such, the visibility of individuals, actions, and events through the mass media, defined as ‘mediated visibility’ has been a crucial component
of environmental protests both in past and present times, as the Franklin River advertisement demonstrates (Thompson 2005).

Another early and powerful example was to enrol the mass media to disseminate now famous environmental commentary works like Rachel Carson’s *Silent Spring* (1962) (Cao 2015: 16). This book alarmed readers worldwide on the dangers of the systemic use of DDT and other highly toxic biocides in intensive US agrifood production systems, and their adverse impact on the environment. Another notable example of the beneficial influence of the mass media for increasing societal perceptions of adverse environmental impact is in relation to disasters. In January-February 1969, for example, in the disastrous Santa Barbara oil spill, ‘200,000 gallons of crude oil bubbled to the surface and was spread into an 800-square mile slick by winds and swells’ (Santa Barbara View 2012: 1). The media coverage of it awakened the environmental consciousness of many US citizens to the point that they demanded protection of the environment through legislation, as reported by Gillis (2012: 1):

The National Environmental Policy Act, the Environmental Protection Agency, the Clean Water Act and even Earth Day were enacted in the years immediately following this disaster. Many proponents of these and other eco-decrees would directly credit the spill as spurring them into action.

Nevertheless, only six months later, a fire in the Cuyahoga River, also in the US, occurred. The river, ‘choked with toxic sludge and covered in layers of oily industrial residue and debris’, often caught fire (Haab and Whitehead 2014: 100). Yet, even if the most dramatic fire occurred in 1952, it was only in 1969 that the Cuyahoga River became ‘the poster child for the birth of the modern American environmental movement’, especially because of the attention paid to it by *Time Magazine* (Dykstra 2008: 1).

Following these worldwide media exposures and a rapidly growing environmental movement, 1972 was the first time environmentally concerned citizens committed themselves to protect the environment through a political party. Members of the Lake Pedder Action Committee, campaigning to save Lake Pedder in the Australian State of Tasmania from flooding by a hydro-electricity dam, gave birth to the first Green Party in the world: the United Tasmania Group (Pybus and Flanagan, 1990: 34).
Nevertheless, and regardless of the ‘National Park status’ granted to Lake Pedder more than a decade before, the Tasmanian government allowed its Hydro-Electric Commission, to ‘drown’ the lake to supply the Gordon Power Station, following a scheme announced in the mid-1960s. Although many concerned Tasmanians opposed the dam through grassroots initiatives such as petitions and rallies, the lake was eventually flooded in 1972 (Garden 2005; Williams 2012).

Although this struggle was unsuccessful, it was ‘a seminal moment in Australian movement history’ (Lester and Hutchins 2009: 585). In acquiring media and protest skills, key Lake Pedder activists took part in the follow-on campaign to save the iconic Franklin River in South-west Tasmania from similar damming. The construction works for the dam began in 1982 despite strong opposition from the public, the United Tasmania Group, and the Tasmanian Labour Party (Crotty and Roberts 2009). Tasmanian citizens, but also many protesters from other countries, expressed opposition through robust demonstrations and blockades, which gained increasing attention from domestic and overseas media.

In 1983, The Franklin River blockade registered 2613 protesters. More than 250 journalists registered to access the site, increasing the pressure on the federal government to respond to the issue (Lines 2008; Rankin 2002). With some 1272 people arrested during the campaign, as reported by the media, the Franklin River protest and the subsequent saving of the Franklin, became defined as ‘the first environmental campaign to attain global stature’ (Hay 1991: 64).

Still a reminder of those days, and which still attracts regular media attention, is the ongoing annual celebration of ‘Earth Day’. It began in the US as informed by the proposal of Democratic Senator Gaylord Nelson for a national teach-in on environmental issues. On 22 April 1970, it generated more than 12,000 events across the US with millions of attendees, who became the first so-called ‘green generation’ (Rome 2103; also, Lemann 2013).

Despite the critical role played by the mass media in the early stage of the formation of the environmental movement, the mainstream mass media have usually more emphasised political and economic matters rather than environmental ones (Roll-Hansen 1994; Hansen 2010). Indeed, most environmental problems are largely seen as a necessary or ‘newsy’ ‘add-ons’ within ‘key media frames of “drama, aberration, and controversy”, as informed by principles of selection and salience for media
content’, for media reporters to make their news stories more entertaining and appealing (Roll-Hansen 1994: 332; see also Hindmarsh 2014).

As such, the economy and entertainment have been more the motive and strength of television and other media to shape mass culture (Castells 2010). In this regard, exploring the reasons for such media phenomenon, Castells (2010) referred to the audience’s efforts to obtain and process information in an increasingly complex and connected world. In addition, Castells (2010: 359) referred to a ‘minimum effort syndrome’ that now characterises our society to attune to rapid news and easily accessible sources such as TV-mediated communication.

The minimum effort syndrome seems to explain ‘the rapidity and pervasiveness of [the media’s] dominance as a communication medium as soon as it appeared on the historical scene’ (Castells 2010: 359). Moreover, in relation to ‘the notion of mass culture, arising from mass society’, Castells (2010: 359) argued that it was ‘a direct expression of the media system resulting from the control of new electronic communication technology by governments and corporate oligopolies’.

The oligopolistic control of information and communication through traditional forms of mass media is widely acknowledged and criticised (Castells 2007, 2010; Croteau and Hoynes 2006; Schiller 2007). Similarly, dominating digital mass media – including web news and entertainment services, and online platforms and telecommunication infrastructures – is a relatively small group of corporate actors. These include Google, Microsoft, Apple, Yahoo, Facebook, America On Line (AOL), Amazon, in addition to the former owners of the traditional media infrastructures such as Verizon, American Telephone & Telegraph (AT&T), and Orange; as discussed in the following chapter.

**Conclusions**

In this chapter, I have provided the first part of my theoretical framework; where the theories, ideas, concepts, history, and practices explored were contextualised in the field of environmental politics. Following exploration of this field according to my research aims, and thematic analysis of it according to Owen’s (1984) approach, I identified three key themes to best explore regarding my research topic:
‘environmental issues and globalisation of environmental risk’, ‘social movements’, and ‘environmental activism’.

In sum, ‘environmental issues and globalisation of environmental risk’ focused on the global dimension of environmental degradation, which requires both local and global actions for it to be minimised. Accordingly, global action to address environmental issues has occurred at the institutional and governmental levels, as well as at the grassroots and local levels. Second, in relation to transnational environmental problems, investigation included the concepts of ‘global environmental risk’ and ‘risk society’. These provided an understanding of how ‘citizenship’ has changed over time, in relation to the citizens’ awareness of environmental risks in globalised contexts. In contemporary context, this led to identifying and conceptualising the concept of ‘digital environmental activism’, which combines digital citizenship and environmental citizenship (Hindmarsh and Calibeo 2017).

I then explored the second theme of social movements to better understand and contextualise the nature and activities of the environmental movement and activism. To organise and express dissent, activists are often organised in ‘social movements’, which vary according to several factors including location, size, duration, and level of institutionalisation. A key characteristic of social movements is that they have a robust networked and interactive structure, which well informs the nature, activities, and activism of the environmental movement.

‘Environmental activism’ was the third theme that emerged during the review and analysis of the literature. In addition to the traditional tools used for organising and coordinating normal organisation business and a range of activities, protests, environmental activists, there is now a suite of digital tools available to enhance the strength of protest, advance demands, keep informed, pressure governments and industries, and rally supporters. Informing this new phase of activism is the concept of digital environmental activism (Hindmarsh and Calibeo, 2017).

In the next chapter, Chapter 3, I explore the literature on new media regarding the nature of these media, and organisational and mobilising uses available for environmental activists to protect the environment. I first focus on the way individuals communicate, share ideas, mobilise, and pressure government and industry through new media, and on the characteristics that make these media ‘new’ in comparison to the traditional means of communication.
Second, and in the context of science, technology and society (STS) and media studies, I explore new media as a socio-technological system, which is the interaction between the technological infrastructure of the Internet and the social infrastructure of human user operation for communication. Horizontal communication (of the many-to-many), in addition to the traditional forms of vertical communication (one-to-many), typical of the mass media, was highlighted, as I discuss in the next chapter, as possessing characteristics that well align to the loosely bounded operational structure of the environmental movement. As such, horizontal communication appears to provide good potential for environmental campaigners to enhance environmental protection. However, quite significant issues and problems appear to challenge such potential: corporate control of new media, and digital surveillance of citizens and environmental activists. I now turn to Chapter 3 as the second stage of my theoretical review and contribution to my conceptual framework for the study.

Notes

1. On the EU decision on the General Union Environment Action Programme to 2020, see http://goo.gl/avrSOk
2. Pettenger (in Harris 2014) and Young (1989; 2011) provide an overview on the formation and effectiveness of international environmental regimes.
3. ‘Neoliberal’ refers to a theory ‘of political economic practices that proposes that human well-being can be best advanced by liberating individual entrepreneurial freedoms and skills within an institutional framework characterized by strong private property rights, free markets and free trade’ (Harvey 2005: 2). Since the 1970s, almost all states have embraced these practices. Neoliberalism ‘values market exchange as “an ethic itself, capable of acting as a guide to all human action”’ (Harvey 2005: 2). In this perspective, the protection of the environment is subordinate to the needs of the economy; accordingly, environmental issues are social costs of progress (Colombo and Porcu 2014).
4. For example, Yearley (2007) suggested that industry often opposes environmentalists’ claims on issues such as the reduction of industrial pollution, because they are an obstacle to production.
5. According to Beck et al. (2003; also Matten 2004), second modernity, or ‘reflexive modernization’, is characterized by an ongoing transformation of politics, society and economy (Matten 2004). Beck et al. (2003: 5) explained, ‘reflexive does not mean that people today lead a more conscious life’ but refers to the ‘undermining of every aspect of the nation state’. The challenge to the first modernity is due to the following processes:
economic globalisation, individualisation, transformation of gender roles, and flexibility in the employment practices, global ecological crisis and the related acknowledgement of limited resources (Beck et al. 2003: 7-8).

See the full version of the 2014 World Economic Forum report at http://goo.gl/xdYb5Z.

However, such definition of digital citizenship has raised some criticisms in relation to access to the Internet and issues of digital divide (Best 2010; Bimber 2012; Kularski and Moller 2012; Longford 2005; Oyedemi 2015; Resta et al. 2011). For example, Oyedemi (2015: 455) argued that if the Internet ‘expands the possibilities for citizens to gain access to information and participate in society through digital means … the lack of access to a technology that enhances participation in society compromises citizenship’.

In Freeman and Johnson’s (1999) analysis of new social movement theory, collective identity is characterised by three elements. First, individuals who see themselves as belonging to a group share the awareness that their interests conflict with the ones of their opponents (Melucci 1989; Touraine 1985). Second, individuals are conscious of the movement’s goals, environment of action, and available means (Cohen 1985). Third, collective identity is aimed at challenging the dominant societal order and its representations (Freeman and Johnson 1999; Melucci 1989).

The APPO movement formed in 2006 to protest against the alleged illegitimacy of the new governor of Oaxaca (Adler 2012; Costa 2015). For more information on the Oaxaca 2006 protests, see: http://goo.gl/vTfPrX

Also found in the environmental movement and organisations is the loosely bounded structure of social movements and their interactive feature (Price et al 2014; Saunders 2008).

On the lifecycle of social movements, in his foundational work ‘Social Movements’, Blumer (1951: 203) elaborated on the ‘four stages’ of social movement, as ‘social ferment’, ‘popular excitement’, ‘formalization’ and ‘institutionalization’. Though the themes characterising these stages have remained the same, over time, scholars have elaborated more on them as the four stages of Emergence, Coalescence, Bureaucratization, and Decline (see Christiansen 2009; and Della Porta and Diani 2006).

Conventional participation in politics refers to several activities, including voting, participating in election campaigns, volunteering, making campaign donations (Martin 2007; Norris 2011).

Non-conventional actions stand for activities that go beyond ‘conventional behaviour’: for example, if singing in a choir ‘is not activism … singing as a protest, for example in a prison or a church, certainly can be’ (Martin 2007: 21).

As explained by Doyle (2015: 53), being ‘radical’ refers to ‘get to the roots of things, and in politics it usually refers to people and ideas who seek to change the status quo fundamentally’.
The term ‘palimpsest’ indicates ‘a parchment from which writing had been imperfectly erased to make room for another text’ (Doyle and Kellow 1995: 90).

The advertisement can be visualised here https://goo.gl/t2ZB63
3. New media and environmental activism

Introduction

Following on from the prior chapter, in which a literature review on environmental politics and activism was presented, this chapter turns to new media and environmental activism. The first aim is to review literature on new media to understand the nature, emergence, operation and impact, and structure for communication in these media. As such, this investigation focuses on the relationship of new media to social movements and environmental activism for (i) potentially enhanced ways to protect of the environment; and (ii) potential barriers to that through concentration of media ownership, and online surveillance (also referred to as cyber surveillance) of digital environmental activists. The second aim is to present four key themes discerned from media studies and science, technology, and society (STS) studies to add to those of Chapter 2 to form the conceptual framework for the study.

To inform this investigation I first provide a background section on ‘New media: changes in communication strategies’, as informed by media studies – on the emergence of new media and the impact of their adoption on media audiences. To better understand such impact, I compare the new communication structures of production and distribution of information to those of the (traditional) mass media. This includes diverse formats used in mass media (analog) and new media (digital) to distribute content; and horizontal and vertical communication.

Following this, I provide a section on ‘New media and society’, which presents the four key themes I have discerned from the media and STS studies literature that contribute to my conceptual framework. The themes are: (i) new media as a sociotechnological system; (ii) new media and activism; (iii) new media and environmental activism; and (iv) challenges to new media. Finally, a conclusion is presented that brings together the themes of Chapter 2 and this chapter se part of the conceptual framework, presented at the end of Chapter 4.

New media: Changes in communication
The last 40 years have seen an unprecedented global rise in the use of digital technologies, a rise theorised in the literature as a ‘digital revolution’ (Kaplan 2015; Jenkins and Thorburn 2003; Zysman and Newman 2006), a ‘digital age’ (Baym 2015; Negroponte 1995; Shepherd 2004), or a ‘network society’ (Castells 2010, 2015; van Dijk 2006). These theories look at the relationship between the emergence of digital technologies and the impact of such emergence on society (Bijker and Law 1992; Borgman 2007; Boyd 2011; 2014; Fuchs et al. 2012; Loveless and Williamson 2013).

This impact and emergence is explored in media studies, a transdisciplinary field also informed by theoretical contributions from social science, the humanities, cultural studies, political science, technology studies, and psychology (Balnaves et al. 2009; Jensen 2008; Severin and Tankard 2001; Watson 2003). Due to the transdisciplinary nature of media studies, Watson (2003: 3) likened it to ‘a circular building’ with ‘multiple entrances’. According to Watson (2003), these ‘multiple entrances’ include content theory (analysis and production of texts, and semiology); output theory (analysis of communicators and institutions, and the social, political, and economic contexts where they are located); response theory (audience and effects theory); and, medium theory (analysis of the adopted technology that delivers the message).

In studying these entrances, the areas of media studies that I found most relevant to my research topic and aims relate to the process through which media information is produced and distributed on new media, and the implications of such process for audiences and society – here, the implications for environmental activism. The term ‘media’ generally refers to the transmission of information to large audiences; hence, media are ‘any means by which messages are transmitted’ (Hartley 2011: 170).

When messages are transmitted through radio, printed press, and television, they are referred to as mass (or traditional) media. In contrast, ‘new media’ distributes information through digital devices. However, the definition of new media is constantly under re-development as the technology is continuously adjusting through technological advances of the numerous technical components that comprise it (Gorman and McLean 2009; Jensen 2008; Hartley 2011; Lievrouw 2006; Manovich 2001; Meikle and Young 2011).
A key difference between mass media and new media is found in the composition of the audience and its relationship with the media. Regarding the mass media, it distributes information and entertainment to a ‘mass audience’ (Fourie 2001; Gerhards and Schafer 2010; Ferree et al. 2002; Severin and Tankard 2001). The relationship between the mass media and the audience has been widely explored over the last 40 years, especially in relation to the formation of public opinion and to the ability of individuals to critically process information presented by the mass media (Bittner 1977; Curran 2002, Corner 1995; Gerbner 1973; Hall 1990; Livingstone 2005; O’Shaughnessy and Stadler 2012; Shanahan and Morgan 1999).

Some scholars highlight that mass audiences are simply passive receivers of information (Anders 1957; Gerbner 1973; Klapper 1960; Noelle-Neuman 1984; Rouner 1984). Others argue that mass audiences are active, rational, and selective, and able to filter and critically interpret mass media information (Blumer and Katz 1974; Gamson et al. 1992; Gillespie 2005; Levy and Windahl 1984; Rubin 1994).

However, some media audiences have changed over time, especially following the emergence, and rise in popularity, of new media. In the mid-1980s, for example, computers ‘began to be equipped with interactive graphic interfaces’ (Lister et al. 2009: 2; also, Kent et al. 2016; Jensen 2005; Lister et al. 2003; Livingstone 2005). In addition, from the mid-1990s both mass and new media diversified in form and content (Livingstone 2005); for example, the number of media devices personally owned by individuals increased, as global and specialised television channels, and cell phones, began to appear. According to Livingstone (2005), such diversification facilitated a trend towards the ‘individualisation’ of the audience, also known as ‘demassification’ (Gillespie 2005; Jenkins 2006; Livingstone 2005; Macnamara 2013; Rosen 2009). As highlighted by Macnamara (2013: 165):

Mass media [were] bypassed by millions of micro-media such as blogs, microblogging (for example Twitter), social networks (for example Facebook and MySpace) and video and photo sharing sites (for example YouTube and Flickr). What [was] referred to as “new media” and “social media” … provided plurality and plenty in voice, but led to the break-up of mass audiences pre-assembled through traditional media concentration, regulation and mass marketing.
Another difference between new media and traditional mass media was found in the ‘format’ in which content circulates through the media (Dewdney and Ride 2006; Manovich 2001; Meikle and Young 2011). First, the mass media ‘were developed as analogue technologies’, signals ‘transmitted in a continuous wave’ (Hartley 2011: 96, author’s emphasis). Analog transmission stores and reproduces the original sounds, words, or pictures (that constitute the ‘analog wave’) on physical objects. As such, analog transmission is considered a ‘representation’ (or analogy) of the original message. Conversely, the content circulating on new media in digital format ‘is distributed as a code to be converted by the reception equipment’, such as a computer or smartphone (Hartley 2011: 96). Digital content has several advantages compared to the analog format typical of the mass media; for example, as Davis (2001: 13) noted:

Information in digital form is orders of magnitude easier, faster, and cheaper to reproduce than is information in analog form (for example, hard copy). Digital copies are also perfect, so each copy can in turn become the seed for additional perfect copies, quite unlike the situation with traditional media such as photocopies.

Accordingly, due to the technological nature of digital content, new media facilitate the exchange of information between audiences, as particularly characterised by horizontal communication (Meikle and Young 2011). This is because, horizontal communication (many-to-many) allows both a single user and many users to communicate to each other in a split second, whereas mass media communication is characterised by the very slow ‘vertical communication’ (one-to-many).

Horizontal communication on new media thus enables rapid ‘interactivity’ as digital information can be produced, modified, and disseminated new media unlimited times and reach larger and more diversified audiences at high speed (Fuchs et al. 2012; Jenkins 2006; Leadbeater 2008; Mackay 2013; Macnamara 2013; Tapscott and Williams 2008). As similarly stated by Jensen (1999: 129), interactivity is the ability ‘to let the user exert an influence on the content and/or form of the mediated communication’, as enabled by new media.
The most descriptive example of new media enabling interactivity is social media (Ariel and Avidar 2015; Jensen 2008; Rafaeli and Ariel 2007). Social media are not synonyms of new media, as Pridmore et al. (2013: 2, author’s emphasis) outlined:

“Social media” are forms of new media, but not all forms of new media are social media. New media can be seen to cover everything that has been changed in the now digitized sharing of information. Of course, social media is a part of that … While new media allows for sharing, the development of social media and its interactive components has made the ability to comment, respond, share, critique, change and add to information possible on a broad scale … Social media is necessarily interactive, focused on social connections, and is designed with social connections in mind.

However, the ‘first generation web’ (Web 1.0) was not so interactive: it was an online platform for one-to-many communication, mainly vertically organised, by which a few actors such as businesses, individuals, and organisations ‘held a one-way dialogue with people over the Internet’ (Beattie 2011: 1).

Subsequently, it is with the ‘second generation web’ (Web 2.0) that the Internet has developed into a tool for interactive communication. This is because Web 2.0 advanced the ‘maturation of the Internet as a communications medium, one user-centred, decentralised and collaborative’ that promoted interaction between its users as a selling point (Musser and O’Reilly 2007: 13). Social media, ultimately, have ‘grown out of Web 2.0 and the creation of the user generated web’ (Beattie 2011: 1). Thus, although social media are not synonymous with ‘Web 2.0’, they fit ‘neatly under the Web 2.0 evolution’ (Beattie 2011: 1). That said, what is the impact that interactivity and horizontal communication – enabled by new media – has on society and on environmental activism?
New media and society

This section, on new media and society, is comprised of four themes, informed by media studies and STS studies on (digital) technological change and the impact of such change on society: (i) new media as a sociotechnological system, (ii) communication strategies between activists through new media (iii) new media and environmental activism, and (iv) challenges to new media. I now discuss them in turn, with the first two themes also informing each other.

New media as a sociotechnological system

The use of new media is embedded into the daily routine of many people, perhaps most of us. According to a recent report by the United Nations (ITU 2016), almost half (47%) of the world’s population uses the Internet. Most of these users (68.3%) are social media users, which is ever expanding (Statista 2016). Along with the mass media, new media have become ‘everyday media’ (or communication) tools for everyone to interact with others, work, or information (Couldry 2012; Isentia 2014; Lester and Hutchins 2009; Manovich 2009).

On the relationship between society and new media, Fuchs et al. (2012) referred to the Internet as a complex and globalising sociotechnological system. Sociotechnological systems are understood as the ‘interplay of humans, organizations, and technical systems’, thus highlighting intimate and pervasive relationships between modern technological innovation and society (Dalpiaz et al. 2013: 1; also, Dickson 1988; Ellul 1967).

Technological innovation – the emergence or improvement of one technology over another – is the socio-technological (or socio-technical) product of the interaction of several factors, such as technological, economic, political, societal, and cultural ones. In other words, the societal system in which one technology is developed is ‘shaped by the social circumstances within which it takes place … In this way, technology is a socio-technical produce, patterned by the conditions of its creation and use’ (Wajcman 2002: 351).

As noted by Wajcman (2002: 354), technology and society are ‘bound together inextricably’ and ‘are made of the same stuff – networks linking human beings and non-human entities’ (also Latour 1999; Miller 2013; Sorensen et al. 2005). The digital
networks that interconnect humans and machines (and humans to each other) constitute the Internet: a technological infrastructure embedded in a broader social infrastructure of practices, values, behaviours, social arrangements, and relationships – otherwise known as a sociotechnological system (Hindmarsh 2014; Miller et al. 2008; Star 1999).

In addition, Fuchs (2005) suggested that as the Internet is a sociotechnological system it could also be considered a ‘self-organising’ one. The concept of ‘self-organisation’ is encountered in different areas, from the social sciences to the ‘natural sciences’ like biology, chemistry, and physics, and more technically, computer science. Self-organised systems are decentralised in their structure, with no control or constraint imposed from outside; the structure of self-organised systems is ‘intrinsic’ to them and generated by local interactions between their components (Di Marzo-Serugendo et al. 2011: 8; also, Fuchs 2003, 2005; Heylighen 2008; Ismael 2009).

As argued by Ismael (2011: 7), ‘we have self-organization when we have emergence of order on the global level from the individualistic dynamics of components without any central coordination and without specific action from outside’. In the case of social systems, the components are interactive human and non-human agents whose relationships can be understood as a network with a decentralised structure that, again, emerges and develops ‘out of local interactions’ (Heylighen 2008: 6).

Accordingly, since online networks and connections can generate global interactions, the Internet can thus be considered in some ways as a self-organising, sociotechnological system (Fuchs 2005; also, Granic and Lamey 2000). And according to Fuchs (2005), the technological component of the Internet – the interconnected network of computers that stores and protocols information – is coupled to the communicating actions of individuals. Individuals thus reproduce the technological system of protocols and storage of knowledge by producing, communicating, and consuming new information.

Sociotechnological systems also, not surprisingly, have implications for sustainability and environmental change. This is because large-scale technological systems lie at the heart of many of the planet’s most pressing sustainability challenges (Miller et al. 2008: 5), where:
The complex challenges of sustainability facing 21st century societies are ... bound up ... not just in technological systems and their impacts on the environment and society but more importantly in the ways in which technological systems are integrated into the ways individuals and groups live, their designs and ambitions, and their goals for themselves and for their children’s futures.

In such context, Star (1999) paid attention to the ethnography of infrastructures and human organisation in information systems in relation to enabling transparency, social and distributional justices, and accessibility and change. Like Fuchs (2005), Star (1999: 308) argued that ‘infrastructure’ is ‘part of human organization’, especially infrastructure that is embedded into social arrangements and, which thus shapes, and is also shaped by, the way individuals use technology.

In being integrated into individuals’ everyday life, sociotechnological systems influence the way they relate to each other (as well as the way they relate to the environment). As observed by Rainie and Wellman (2012), people’s sense of time and space has changed with digital devices and the Internet (Wellman and Rainie 2012; Castells 2010). The boundaries between work and home, for example, have become increasingly blurred over the last two decades, as more categories of workers are enabled/required to work from home or outside what was before considered normal working hours (typically 07:00-15:00 or 09:00-17:00) due to mobile computing and smartphones (Rainie and Wellman 2012).

Concomitantly, people’s reliance on smartphones has been continuously growing. A recent study by the Pew Research Center (Smith 2017) showed that in 2017 over 77% of adult US Americans owned a smartphone, a trend that has more than doubled since 2011; with almost 50% considering their smartphone an intricate part of their lives (Rainie and Perrin 2017). Such dependency reinforces how perceptions of space and time have changed for many individuals, who are, for example, connected to the Internet 24/7 and expect the same of others (Wellman and Rainie 2012); which also informs the concept of ‘networked individualism’:

The shift to a personalized, wireless world affords networked individualism, with each person switching between ties and networks. People remain connected, but as individuals rather than being rooted in the home bases of
work unit and household. Individuals switch rapidly between their social networks. Each person separately operates his networks to obtain information, collaboration, orders, support, sociability, and a sense of belonging. (Wellman 2002: 16, author’s emphasis).

The individualised networking structure of new media can also be considered to have much potential to strengthen civic mobilisation and social action, as discussed in Chapters 1 and 2 as a proposition of this study; especially in the case of the environmental movement where groups and individuals are less embedded in fixed structures (Castells 2007; Dahlgren 2006; Rainie and Wellman 2012). In the next sections the sociotechnological context in which the potential of new media for environmental activism resides is explored more in depth. As such, I first focus on communication strategies between activists, to subsequently focus on more specifically on the communication practices of environmental activists.

New media and activism: Communication practices and strategies
Social movements, traditionally, rely on the mainstream media to gain public visibility and extend the reach of their campaigns and protests (Blanco 1997; Foxwell-Norton and Lester 2017; Poell and van Dijck 2015). Being granted space on mainstream media, however, was often subject to the need for the newsworthiness of events and issues of mainstream news reporting (Blanco 1997; McCurdy 2012; Donson et al. 2004; Lester and Hutchins 2009; Rosie and Gorringe 2009).

Newsworthiness, in relation to protests, for example, is influenced by several factors including novelty; location of the protest; potential of the protest for conflict, drama, or sensationalism; and, presence of high-profile participants or celebrities (Foxwell-Norton and Lester 2017; Koopmans 2004; Lee 2014; McCurdy 2012; Rucht 2002). To enhance media influence and presence, social movement activists adopted communicative strategies such as holding press releases and conferences, establishing strategic relationship with journalists, and sometimes organising ‘spectacle driven media stunts’ (McCurdy 2012: 249; also, Freire et al 2017).

On the relationship between activists and the mass media, Rucht (2004: 31) grouped activist tactics into four broad categories reflecting the different ways activists react and respond to how mainstream media report on activist activities. Rucht (2004: 27) dubbed these categories ‘the quadruple “A”’, namely abstention, attack,
adaptation, and alternatives. ‘Abstention’ referred to activists deciding to not engage with the mass media and focus on ‘inward-communication’ activities as a form of protest for not being given any media space. ‘Attack’, on the contrary, described extreme reaction or violent critique of media reporting. ‘Adaptation’ referred to a more collaborative approach of activists working with mainstream media reporting. Lastly, ‘alternatives’ indicated activists finding ways to develop independent media, to counterbalance the production and distribution of information via mainstream media (Freire et al. 2017; Rucht 2004; McCurdy 2012).

In relation to this study, in particular, the focus was on the possibilities available to environmental activists to develop independent channels for communication in the overall media space. ‘Independent’ forms of media are referred to in different ways, including ‘alternative media’ (Atton 2002; Downing 2011; Harlow and Salaverría 2016; Haunss 2015; Fuchs 2010; Mattoni et al. 2012; Pickerill 2007; Poell and Van Dijk 2015). Atton (2002: 13) described these media as ‘non-commercial’, unconventional, anti-institutional, horizontal, radical, and characterised by an oppositional or contestational nature not typically found in mainstream media (also Lievrouw 2011).

Situated in a so-called ‘space of counter culture’, alternative media attempt to counterbalance the narrow agenda and discourse of the traditional mass media. The aim is to enable other conduits to ‘alternative’ stories such as independent newspapers, underground radio stations, and small presses (Mattoni 2012: 2; also Freire et al. 2017; Fuchs 2010). As Harcup (2013: 11) commented upon:

> From chalking slogans to online subversion, via the flyposting of printed posters, the evidence is that ways have always been found to articulate and circulate messages offering alternatives to mainstream discourse: counter-hegemonic messages … which, by their very existence, offer a critique of the way things are … (Harcup 2013: 11).

With the rise in popularity of the Internet between the late 1980 and early 1990s, alternative media became more prominent (Forde 2011; Lee 2018). In addition to more established organisations – such as the Red Cross, which could afford to invest in information technology (IT) systems, technology departments, and employing specialised IT staff – smaller and less resourced interest groups would use the Internet
to develop new media conduits of communication (Margetts et al. 2016; Pickerill 2006; Poell and van Dijck 2015). For example, in the late 1980s, online ‘mailbox systems’ were developed for connecting dispersed activists worldwide (Freire et al. 2017; Haunss 2015). Over the 1990s, online media outlets such as Indymedia or the British SchNews were created and provided audiences with non-corporate, ‘independent’ information; additionally, NGOs and collectives began developing their own websites (Pickerill 2007; Poell and Van Dijk 2015).

However, as Lester (2011: 126) advanced, although digital communication technologies provided activists with ‘new opportunities for protest events to become catalysts for meaningful public debate’, it remained unclear if this led to ‘real political change’, especially if detached from the offline world. A few years later, Anderson (2014) would argue that the media environment within which activists strategised their activities had become more ‘dynamic’. This media environment has evolved to a mix of online and offline strategies and mainstream and alternative media information and communication channels (McCurdy 2012).

As such, new media was not to be considered as working in isolation from the technological and social contexts in which the social movements operated (Anderson 2014; Cottle 2011; McCurdy 2012). Instead, they were ‘an element in a strategic toolbox’ available to activists, which combined diverse strategies aimed at enhancing online networking and mobilisation as well as coordinating dialogue and protest offline (Anderson 2014; Cammerts et al 2013; Cox and Pezzullo 2016; Kahn and Kellner 2004; Pannti and Boklage 2014; Penney and Dadas 2014; Van Alest and Walgrave 2002).

This variety of communicative strategies available to activists was also reflected in the concept of ‘media practices’ developed through the relationship between activists and the media (Couldry 2012; Strömbäck 2008; Trërè and Mattoni 2014). The relationship was twofold: first, it related to the physical devices activists used to produce and consume information. Second, it related to the interconnections of activists with other individuals (Mattoni 2012).

The relationship between social movements and the use of the media was thus complex and influenced the way the public perceived political issues, and society (Rohlinger and Vaccaro 2013; Trërè and Mattoni 2014). In sum, social movements, organisations, and coalitions sought ‘visibility’ through the media through a complex ‘media ecology’ (Cottle 2008). Included were ‘different and overlapping media
formations, horizontal and vertical communications flows and new interactional capabilities’, which offered ‘unprecedented opportunities for the wider dissemination of political protest and dissent’ (Cottle 2008: 859). New media as part of this media ecology was often directed at challenging the mainstream, vertical communication discourse of the (traditional) mass media.

Indeed, as early as 1998, Bimber (1998: 332) argued that a most promising utilisation of the Internet concerned political mobilisation ‘for quickly and cheaply organizing collective action of all kinds, from consumer boycotts to the mobilization of voters in elections’. Eight years later, and also focused on social mobilisation, Dahlgren (2006: 155) opined that the Internet had ‘become not only relevant but central’ in the development and growth of social movements and for activists to create networks globally (see also de Jong et al. 2005; van de Donk et al. 2004). Likewise, Lester and Hutchins (2009: 579) argued that new media posed as ‘tantalising source of hope for activists’.

Castells (2012: 249) summarised that what political participation in social movements and the Internet had in common was a decentralised and flexible structure, which encouraged individuals to be more politically engaged in social movements and social movements to utilise the Internet to good use. As such, the Internet was defined by Castells (2012: 249) as ‘the network of networks … [which] maximised the chances of participation in the movement’, in terms of interaction, coordination, and deliberation between network members. In sum, new media, according to Castells (2012: 253, author’s emphasis), encouraged political participation because it created ‘togetherness for people to ‘overcome fear and discover hope’.

On the use of new media for collective action, van Laer and van Aelst (2010) highlighted the difference between collective actions supported by the Internet and those enabled by it. Actions supported by the Internet carried both low and high risks (van Laer and Van Alest 2010). Low risk digital activities included making donations, influencing consumer behaviour (e.g. through online boycotts), and organising legal demonstrations. High risk activities, in turn, included organising transnational meetings, summits, demonstrations, attending sit-ins, occupations, and taking part in direct protest actions (Costanza-Chock 2003).

Actions enabled by the Internet, in turn, were developed and realised because of the Internet (van Laer and van Aelst 2010). These protests were characterised by a low level of risk and included online petitions, virtual sit-ins, and email ‘bombing’.
Others were seen as higher risk ones, including culture jamming, website protests, hacktivism, and alternative media (Juris 2008; Meikle 2002; Pickerill 2001; Stolle and Micheletti 2008; van Laer and van Aelst 2010).

Several key examples in recent history have demonstrated the power of new media for political purposes, for example, the 2010 Arab Spring, the 2011 Occupy Movement, the 2011 presidential campaign of Barack Obama and more recently of the campaign of Donald Trump through Twitter usage. Both these politicians who became US presidents used new media strategically to connect campaigners with supporters and more broadly with the whole US electorate to their advantage (Castells 2012; Cheney and Olsen 2010; Cogburn and Espinoza-Vasquez 2011; Flew 2014). During the Obama campaign, it became evident that US citizens were making their preferences and values more public by sharing them on social media (Papacharissi 2010). Responses that citizens received from Obama campaigners in the form of text messages, emails, or Facebook comments and pages, was found by Flew (2014: 206) to give these citizens ‘a better sense of personally belonging to the campaign’.

As social media usage increased for political use, Nabatchi and Leighninger (2015: 64) observed that social media platforms had ‘made it much easier to build and maintain interactive networks of people, with far greater levels of electoral power, financial resources, and collective problem-solving capacity’ in comparison to the mass media. As such, new media promoted political participation, as individuals – and groups of individuals – felt more ‘empowered’ using these media (Bennett and Segerberg 2012; Coleman and Blumler 2009; Flew 2014; Kumar and Svensson 2015; Sandoval and Fuchs 2010;).

In addition to communicating with existing supporters already engaged with their activities, activists could use new media to reach previously hard to reach ‘periphery supporters’ located beyond the circle of ‘core followers’ (Brown 2017: 10; also, Barberà et al. 2015). Brown (2017) noted that a strategic use of social media for activists was putting emphasis on the probability of winning through online posts such as images, video, and live reporting (also Barberà et al. 2015). However, the same emphasis could also have a counter-effect of deterring audiences from participating in protest actions (Brown 2017).

Regardless of the immediate effect of these interactions, however, real-time communication with supporters on social media became seen as a strategic ‘form of empowerment’, compared to the limited range of media actions on traditional
mainstream media (Poell and van Dijck 2015: 528). As Cammaerts (2015: 5) observed, although social movements had always used the media for advancing their campaigns and actions, social media were seen ‘to greatly increase the capacity to transmit text and visual discourses’ (also, Galis and Neumayer 2016)

However, despite new media becoming more accessible and empowering for activists than mainstream traditional media, it was also argued that new media might be intrinsically limited in relation to the ability of activists to have effective control on the delivery of their messages to the public (Anderson and Rainie 2017; Cammaerts 2015; Caplan and Boyd 2016; Proferes 2016). In the case of social media, for example, the technological architecture and the algorithms that regulated it prioritised the circulation of some content through sharing mechanisms that included ‘liking’, ‘tweeting’, hashtags, and the use of ‘trending topics’ (Poell and van Dijck 2015).

Social media algorithms also tempered the likeability of some content (often event-related) to trend (or not) on social platforms, even if content considered relevant for sharing purposes by the platform sometimes differed from what activists considered relevant. This phenomenon became evident in the case of content showing on Facebook’s News Feed and in Twitter’s trending topics function (Carlson 2018; DeVito 2017; Gillespie 2014; Kruse et al. 2017; Poell and van Dijck 2015).

Given such developments, the question is begged, to what extent do new media remain perceived as a ‘source of hope’ and/or as a necessary activist utility by environmental activists to better protect the environment? In other words, to what extent does the Internet – in its complex interpretation as a sociotechnological system – encourage democratic participation of environmental activists to foster or pressure for enhanced environmental protection and associated societal change? As such, we might also ask, why and how do new media pose an effective relatively new conduit for environmentalist communication and pressure for change? Such inquiry involves looking at how environmental activists and their use of new media to promote campaigns, protest, pressure industry and governments, and raise public awareness of and enrolment to their causes, and what might be achieved.

**New media and environmental activism: Communication practices and strategies**

Media coverage is essential to the environmental movement (as a social movement) for gaining mediated visibility for its campaigns to better protect the environment, and also promote perspectives for change towards green economies and more sustainable
societies (van Vuuren and Lester and 2008). As discussed in Chapter 2, achieving campaign or issue visibility through the media (otherwise, mediated visibility) is ‘to gain a kind of presence or recognition in the public space which can help to call attention to one’s situation or to advance one’s cause’ (Thompson 2005: 49).

Such mediated visibility, when it occurs, also works directly into the concept of the ‘mediatization of environmental conflict’ found in both traditional mass media and new media (Hutchins and Lester 2015: 341). As Hutchins and Lester (2015: 340-341) noted:

the concept of “mediatized conflict” addresses a defining feature of a “global, media age”—the witnessing of conflict via media images, representations, news formats, and communications technologies … most importantly, [it] stresses the constitutive role performed by media in the enactment and experience of conflicts and their political consequences. Media forms and practices are much more than the means through which news about conflicts are relayed to audiences. They are also resources used by journalists, victims, bystanders, activists, concerned citizens, government agencies, and commercial actors to convey information, interpretations, and opinions to a range of personal and public networks (e.g., Twitter, Facebook, LinkedIn, YouTube, Instagram, Flickr, Tumblr, blogs, websites, etc.). The content that circulates through these networks also enters into the flow of news and political discourses surrounding a conflict. These dynamics embed media practices and technologies as agents that help to structure conflicts and their conduct.

In Australia the beginnings of such dynamics were particularly laid in the 1960s and 1970s in the case of the Australian environmental movement and its turn to evocative imagery (van Vuuren and Lester 2008).

Returning to the concept of mediated visibility, and other visual tactics of the environmental movement, it was highlighted, for example, by Snow et al. (2004: 613) who argued: ‘the development of the [environmental] movement was facilitated … by the development of mass media that ‘transmitted images and information more effectively’. Nevertheless, to be reported on the news media environmental events need to be newsworthy, which means they are more likely to attract audiences (Cox 2013; Gorringe and Rosie 2009; Lester and Hutchins 2009).
Examples of newsworthy environmental events are dramatic ones, ‘such as oils spills, forest fires, hurricanes, and accidents at nuclear power plants’ (Cox 2013: 145). Newsworthiness is also typical of environmental conflict actions such as protests and demonstrations, civic disobedience activities such as blockades and sit-ins, as well as the involvement of celebrities (Anderson 1997; Cox and Schwarze 2015; Lester 2011). These actions are referred to as ‘image events’ (De Luca 2005).

The role of images in environmental conflict was well demonstrated by van Vuuren and Lester (2008) regarding the 2007 ‘Weld Angel’ protest that opposed old-growth forest logging in the Weld Valley, in the south of Tasmania. These authors highlighted how some images carry power and symbolism and, as such, can act as political tools to appeal to audience emotions and potentially affect political action. Consequently, for Lester (2006), the mass media do more than simply report the news on environmental conflict. Instead, it is a ‘key player: negotiating access, shaping meanings, circulating symbols, pushing for actions, contesting decisions’, with the environmental movement strategizing to influence and ‘interrupt media and industry/government power and gain ongoing positive news access’ (Lester 2006: 908).

That said, protest actions, as image actions, provide immediate, short-term visibility to environmental activism on mass news media outlets (Lester 2011). However, this type of visibility is hardly a sustainable long-term one aiming to highlight environmental struggles or lead to political change (Anderson 2014; Cox and Schwarze 2015; Hansen 2010; Lester 2011). A strategy used by environmental activists seeking longer-term visibility comprises strengthening their relationships with news media professionals and providing them with reliable information produced through research (Cox and Schwarze 2015; Hansen 2010). To be able to rely upon reliable sources is valuable to journalists, due to the complexity of some environmental issues to be reported and to reporters often lacking scientific training on environmental problems (Cox 2013). At the same time, the production and dissemination of scientific knowledge to the public also positively impacts on the credibility of environmental groups and their communicative ability (Anderson 2014; Cox and Schwarze 2015).

Increasing the complexity of the relationship between protest, media, and politics was the advent of new media and networked communication (Hutchins and Lester 2015; Pickerill 2001). This was because new media enabled significant protest actions and mobilisation that the mass media would have hardly fostered in any direct
way, and that traditional forms of activism would have found hard to realise (Baek 2010; Guedes 2001; Vliegenthart et al. 2005; Wehr 2011; Wojcieszak 2009). On achieving visibility, Cottle (2008: 860) argued that new media could well ‘add new communicative ingredients into the media ecology mix’, which might then enhance opportunities for mediated visibility and environmental activist engagement (see also Castells 2009; De Donk 2004; Lester 2012; Pickerill 2001, 2003).

Illustrative of this argument was a comparative study by Foxwell-Norton and Lester (2017), who explored communication strategies between environmental activists in their campaigns to protect the Great Barrier Reef in Queensland (Australia) from various threats (including mining) in two distinct periods in time. The first campaign occurred between the 1960s and the 1970s, while the second occurred since 2012. These authors observed that both campaigns extensively relied on the media, but the scale and speed of communication ‘multiplied’ in the 2012 campaign, which relied less on traditional media and extensively on new media (Foxwell-Norton and Lester 2017: 575).

Another difference between traditional and new media is that the latter provide a space to activists for self-representation in a more direct and independent way than traditional media outlets (Lester and Hutchins 2012). Self-representation on new media occurs in various ways. For example, environmental groups (as well as ordinary citizens) can share their views on environmental problems and offer solutions, contact policy makers, organise and participate to social media environmental campaigns, and mobilise supporters (Cox 2013).

On self-representation, it can be achieved through various means by environmental activists to raise public awareness on environmental problem, for example, and perhaps most recently, through drones or unmanned aerial vehicles (UAVs); which were originally developed for military purposes as pilotless aircrafts. Drones are ‘self-propelled airborne devices’ capable of flying autonomously or being controlled remotely (Sandbrook 2015: 636; also, Goldberg et al. 2013). Reflecting on such uses and particularly on the relation between the use of drones for journalism, Gynnild (2014: 335) referred to drones as ‘robot eyewitnessing’ located ‘at the intersection of human subjective accounts and apparently objective accounts carried out by a robot’. Examples of environmental activism in the use of drones are monitoring wildlife conditions, pollution, tree clearing and logging, the conditions of
animals and livestock in farms, coal seam gas mines, and environmental disasters (Goldberg et al. 2013; Hodgson and Koh 2016; Potter 2014; Radjawali and Pye 2017).

Recently, to raise awareness over security flaws of the French nuclear system, Greenpeace flew a drone into a French nuclear power plant in Bugey, France, on 3 July 2018 (ABC News 2018). Another example was provided by Sea Shepherd, which on 24 December 2011 flew a drone in the Antarctic waters to locate the Japanese factory ship Nisshin Maru in the attempt to stop it from killing hundreds of whales (Darby 2012; Franklin 2012). Regarding the latter episode, The Guardian (2011) reported that Paul Watson, founder of the Sea Shepherd, declared in a telephone interview, ‘now that we have this “eye in the sky” it makes it much harder for the whaling fleet to escape’.

Protest actions are another conduit illustrating the new strength of new media for environmental actions and public impact, as horizontal communication can ‘place more effective and massive pressure’ on corporations and, in turn, government (Baek 2010: 1067; also, Wehr 2011). However, protest actions are often initially organised through vertical communication by environmental NGOs, and more horizontally at the grassroots and community level. Examples of vertically organised digital environmental protests include Greenpeace’s Australian campaign ‘Save the Reef’; and the campaign of 350.org’s ‘Fossil Free’ pressuring government and companies to divest from fossil fuels. In turn, horizontally and grassroots organised digital environmental protests include, for example, the online boycott-BP protest initiatives in response to the Gulf of Mexico Oil Spill in 2011 (Hindmarsh and Calibeo 2017; Muralidharan et al. 2011); the 2013 Gezi Park protests in Turkey (Hutchinson 2013); the anti-nuclear movements in Japan and other countries following the 2011 Fukushima Daiichi disaster (Hindmarsh 2013; Liscutin 2011); and, the ongoing case of activism against coal and coal seam gas mining in Australia.¹

However, Cox (2013) highlighted that the use of new media for environmental activism and advocacy may also present environmental activists with many challenges (see also Pickerill 2001). A big challenge lies in finding the best strategy to reach and mobilise audiences, and disseminate ‘messages, alerts, information on issues, and appeals to wider audiences’ (Cox 2013: 194). One common strategy widely employed by environmental activists is ‘storytelling’ (Canella 2017; De Fina 2016; Gambarato and Medvedev 2017; Lundby 2008; Pezzullo 2001).
Storytelling is a bottom-up, user generated practice that allows individuals to produce and share their own experiences, with the potential to more engage broad audiences (Canella 2017; De Fina 2016; Gambarato and Medvedev 2017; Lundby 2008). Storytelling on new media is a widespread practice to gather attention and engage supporters. As Papacharissi and Blasiola (2016: 211) argued, social media ‘permit movements to frame their story in their own terms … they permit each individual involved, affiliated, or interested in a movement to become a storyteller’.

Storytelling is an alternative communication method that ‘encompasses all kinds of computer-mediated activity’ through which ‘oral traditions of storytelling are being recovered and fused with emergent narrative practices … of contemporary digital media cultures’ (Spurgeon and Burgess 2015: 403). Through enabling the deployment of this engagement device, Papacharissi and Blasiola (2016: 219) argued, social media platforms provide spaces for storytelling that are ‘meaningful habitats for imagining and, potentially, enacting change’.

As such, this communication method is used in the context of environmental activism as a communicative and participatory tool to reach out to audiences and potentially enhance their engagement with environmental issues and struggles. By telling stories, environmental activists offer their audiences alternative narratives and perspectives that do not occur so often on mainstream mass media. Such narratives resonate with the audiences’ feelings and emotions, thus eliciting emotional and affective responses potentially, in a more effective way than ‘logical-scientific communication does’ (Dahlstrom 2014: 136).

Storytelling by way of new media is also referred to as ‘digital storytelling’ (Gubrium and Harper 2013; Robin 2016). Couldry (2008: 3) defined storytelling as ‘the whole range of personal stories now being told in potentially public form using digital media resources’ (also, Canella 2017; Papacharissi 2016). On new media, audiences can thus virtually experience real life settings, and in a more comprehensive way than traditional mass media (Hendricks et al. 2016). Such experience is due to the ‘multisensory items’ characterising social media, namely textual, graphic, audio, and visual forms of communication, as, for example, enabled through the use of drones, as discussed above, and web-casts (Hendricks et al. 2016: 17; Loader and Mercea 2012).

A powerful example of digital storytelling was provided by the Tasmanian environmental group ‘Still Wild Still Threatened’ who, in 2011, protested the logging of old growth areas of the Styx and Tyenna valleys (south Tasmania). Among the many
videos uploaded online about the logging activities in the area, the group documented the threat to the forest in a video called ‘The clock is still ticking! Ancient Styx forests burning 20 March 2011’. In the short (less than three minutes) video, a call for action to stop the logging was provocative imaged and framed through evocative imagery of clear felled trees and burning operation in course, against stunning views of the remaining forest yet to be protected.

In turn, in the protest arena of fracking, an example of digital storytelling was provided by a group of concerned farmers, landowners, and residents contesting development of the fracking industry in Kerry, the Scenic Rim, South East Queensland, where they set up a blockade in 2012. After the failed attempts to stop the advance of driller rigs, protesters dropped their hats on the ground. The drilling rigs drove on the hats and crushed them; for the protesters (and the viewers) that act, as indicated in the description of the video, ‘is exactly what these gas mining companies are doing all over Australia - crushing the dreams and food security of Australian people’ (Coal Seam Gas News 2012). The video also featured a farmer sharing his personal story while holding other farmers’ hats: ‘I own a little place up the top there, it’s only small, it may be insignificant to some but it’s my house and it’s my home’.

The farmer’s words recalled the idea of a ‘sense of place’ at stake if the fracking occurred (e.g. Hindmarsh 2012) and signified his involvement in the protest as even more meaningful.

Another example of digital storytelling used by environmental activists was found in relation to the controversial project on coal seam gas in the Narrabri area, New South Wales, Australia. Hendricks et al. (2016) analysed how activists used social media to show their opposition (or support) to the project. These authors found that, as with other protesting strategies on anti-CSG social networks, digital storytelling was widely used by stakeholders as a social media strategy to disseminate their message across. Using a terminology derived from dramaturgy, which ‘views everyday behaviours and interactions as theatrical performances’, Hendricks et al. (2016: 104-105) found that digital storytelling was often ‘staged’ and ‘tightly scripted’ to appear as personal as possible and thus resonate with a target audience comprised of local residents, farmers, and families, also affected or potentially by coal seam development.

Another activist practice involving involves environmental issues directly and indirectly is ‘political consumerism’. The latter is a social movement comprised of
groups of citizens engaging online to contest and change industrial production and business consumer interests of corporations regarding manufacturing production and consumer issues through alternative media. Strategies include online boycotts or ‘buycotts’, by which activists aim to ‘use the market to vent their political concerns’, as well as Internet advertisements, advocacy work, and public disclosure (Stolle et al. 2005: 246; also, Clair 2012; Cravey 2004; Della Porta and Diani 2015). The ‘anti-sweatshop’ movement, whose actions challenge and expose the uneven conditions imposed on factory workers in so-called ‘sweatshops’, especially in developing countries (Stolle et al. 2005), has led the way in this area of activism.

Environmental pressure is also exerted online on companies with questionable environmental and social practices. For example, in 2014, Greenpeace elaborated on its success involving online pressure on corporations and governments:

Lidl, the world’s second largest discount supermarket, made a commitment to eliminate all hazardous chemicals from its textile production by 1 January, 2020 … The world’s largest electronics retailer, Best Buy, announced major improvements to its paper supply chain to better protect Canada’s Boreal Forest … German retailer Tchibo … promised to make sure its products are toxic-free … After more than one million people respond[ed] to Greenpeace’s Save the Arctic campaign LEGO end[ed] its 50-year link with Shell. On its website, LEGO published a statement committing to “not renew the co-promotion contract with Shell” … [and] British luxury brand Burberry made a commitment to eliminate the use of hazardous chemicals from its supply chain by 1 January 2020.4

In turn, ‘culture jamming’ is a form of political consumerism through which activist’s target brands with the aim of raising public awareness in relation to ethical conduct, sustainability, and environmental responsibility (Micheletti and Stolle 2008). In Australia, for example, the activist group ‘GetUp!’ disseminated social media spoof videos to parody the advertisements of polluting companies opposing the carbon tax in 2011.5 Similarly, the Australian NGO ‘Markets for Change’ used cultural jamming techniques when it produced a short video clip available on YouTube critical of the Tasmanian logging industry, and the well-known furniture retailer Harvey Norman (who bought the old growth timber).6
Another tool that expresses dissent online is ‘tactical media’, described by Garcia and Lovink (1997: 1) as a media of ‘crisis, criticism and opposition’. Tactical media enables actions of disturbance and provocation that gives individuals an alternative way to see, understand, and interact with society and politics (Raley 2011). On the definition of ‘tactical media’ the Critical Art Ensemble (CAE) – a collective formed in the late 1980s to explore the connections between ‘art, critical theory, technology and political activism’ – stated on its webpage:

[Tactical media] refers to a critical usage and theorization of media practices that draw on all forms of old and new, both lucid and sophisticated media, for achieving a variety of specific non-commercial goals and pushing all kinds of potentially subversive political issues (CAE 2001: 7-8).

Tactical media can thus be seen as a tool to critically express dissent through interactions of artistic practices, new technologies, and communication. Another way to understand tactical media is to focus on the meaning of ‘tactics’ about a peculiar kind of political activism (Boler (2008). In other words, tactical media, according to Raley (2011: 16), ‘are what happens when cheap do it yourself media … are exploited by those who are outside of the normal hierarchies of power and knowledge’.

Examples of tactical media can be found in the digital environmental activism arena. For example, in Australia, to save old growth forest in Tasmania’s Styx Valley, a ‘community of opposition’ used tactical media to pressure the logging industry and the government (Lester and Hutchins 2006: 588). Between 2003 and 2004, Greenpeace and the Wilderness Society set up a ‘Global Rescue Station’ in a giant Eucalyptus regnans. The giant tree served as both a base camp and platform for activists to protect the old growth forest and wilderness from logging, through the tactic of ‘going online up a tree in a forest’ (Lester and Hutchins 2009: 588). This action, disseminated on the Internet, gained attention from both the mainstream national and international news media, and thus fits the description of a do-it-yourself tactical media approach regarding activism (Garcia and Lovink 1997; Raley 2011).

The use of new media– particularly Twitter – for environmental protest has often been associated with the expression ‘ecologies of dissent’, which refers to the ‘context’ in which protests take place (Segerberg and Bennett 2011). In this context, individuals, groups, platforms, and places connect through ‘a multi-media landscape
that encompasses and switches between social and traditional media, organization sites, and face-to-face and mediated actions’, as Bennett et al. (2014) describe. In this discursive terrain, social media are used as ‘organizing mechanisms in complex collective action ecologies and as reflections of larger organizational schemes’ (Segerberg and Bennett 2011: 198; also, Bennett et al. 2014).

However, it was in 2009, in the case of the UN Climate Summit, that Segerberg and Bennett (2011: 197-198) claimed ‘social media [had] moved to the front line in a variety of national and transnational protests’. In their analysis of the protest, Segerberg and Bennett (2011: 212) focused on the strategic use of Twitter hashtags, which they described as ‘one of many digital media mechanisms operating to bring publics together to act in concerted or less organized ways’. These authors summarised:

#Cop15 is an interesting example of an emergent self-organizing stream that was not centered on one organization or coalition … a multilanguage hashtag of unclear origin, [which] became one of the most used and tracked streams relating to the COP15 conference as well as the associated protesting. (Segerberg and Bennett 2011: 204)

As such, hashtag #cop15 demonstrated the civic potential of Twitter in contentious politics, as an instrument that goes far beyond traditional offline strategies of organisations and/or political coalitions (Boynton, 2010; Penney and Dadas 2014; Segerberg and Bennett 2011).

Although Twitter poses some technical limitations for its users – such as the maximum of 140 limit characters per tweet – activists, like many others, have overcome such limitations and created networks of interaction between people and information using hashtags and ‘mentions’ (Arceneaux and Weiss 2010; Tremayne 2014). As noted by Penney and Dadas (2014: 77), the 140-character limit for tweets ‘almost seems to be purposefully designed for quick circulation’ of information, and for catching audience attention (also, Sheridan et al. 2012).

Activist networks of interaction or ‘exchange’ are also referred to as ‘counterpublics’: groups of likeminded individuals who communicate outside the supervision of dominant groups or outside traditional media (Penney and Dadas 2014: 77; also, Fraser 1990). Counterpublics are found in both local and global social
movements, coalitions, and marginalised communities. The use of new media, and particularly Twitter enables networked ‘counterpublics’ of individuals to engage with multiple audiences by the ‘tweet and retweet’ of information (Penney and Dadas 2014).

New media were also turned to actively by citizens in the aftermath of the 2011 Fukushima Daiichi nuclear disaster (Kera et al. 2013; Tateno and Yokoyama 2013). Facing the urgent need to know where radioactive pollution was located and the radiation levels in air, soil, and water – due to the failure of official systems to provide such information for 12 days after the disaster – civic digital technologies were used to detect radioactive pollution (Hindmarsh 2013). With the help of Safecast, an international volunteer organisation in collaboration with Hackerspace Tokyo, Japanese citizens assembled DIY (do-it-yourself) Geiger devices, through which they measured local radiative hotspots, localised them on Google Maps, and shared them on social media (Kera et al. 2013).

Yet another example of ‘other’ uses of new media in the environmental arena was the 2015 release of the Environmental Justice Atlas, which illustrated the potential of the Internet in raising public awareness on environmental issues (available at https://ejatlas.org/). The Atlas online platform shows where the production of waste and the exploitation of natural resources worldwide affects populations, degrades the environment, and generates social and environmental conflicts. As the Atlas’ authors explained on the website’s homepage, the Atlas features ‘voices fighting for environmental justice and bringing attention to threatened communities that are often rendered powerless by institutions and ignored by the media’. Through the Atlas, the authors ‘hope to dispel consumer blindness and suggest policy recommendations and consumption changes’ (Ejolt Maps, https://ejatlas.org/).

The examples discussed above show that new media offer substantial potential for environmental activists in endeavours of communication and protest. However, concentration of media ownership and surveillance of digital activists are key challenges to this potential.

**Challenges to new media for environmental activism**

The next two subthemes explore the key challenges that have emerged in the literature as significant constraints to the potential of new media and social media to better protect the environment. It is important to discuss these challenges to better understand
how and to what extent they impact on the effectiveness of new media as enabling more democratic spaces for communication and activism. They are ‘concentration of media ownership’, and ‘surveillance of digital environmental activists’.

**Concentration of media ownership**

‘Concentration of media ownership’ refers to the situation where control over media businesses of any kind – from radio stations to Internet platforms, and generally the information industry – is owned mainly by a few large corporations who consolidate the market in buying up smaller companies, and sometimes merging with each other. Traditionally, the provision of media services was managed by national telecommunication monopolies under direct control of the state (McChesney and Schiller 2003). Yet, from the 1980s, the media landscape has undergone significant structural transformations, due to media convergence of computing, print media, television, radio, and online services.

Such concentration changed the traditional structure of the mass media, the borders that separated them, and their market structures (Doyle 2012; Kung et al. 2008; Noam 2009). Concentration has been further encouraged by contemporary neoliberal shifts towards economic globalisation and privatisation involving deregulation of state monopolies such as the electricity, water supply, and telecommunication sectors. Consequently, many companies expanded their businesses internationally, to maximise market expansion and profits, and increase market power and efficiency (Croteau and Hoynes 2006; Doyle 2012; Graham et al. 2015). Over the past three decades, at least, a global corporate media environment has subsequently resulted, for example, NewsCorp. So, what does the corporate media environment look like?

Media companies, or more accurately, ‘conglomerates’ now expand and diversify their business by ‘integrating’ their activities and services with those of other companies, for example, through mergers and acquisitions. The most common forms of integration are horizontal, vertical, and cross-media (or diagonal). Regarding ‘horizontal integration’, one conglomerate concentrates its ownership across different segments of the media industry by acquiring other companies that provide a similar service (Croteau and Hoynes 2007). For example, through assembling large portfolios of magazines, television stations, book publishers, and record labels (Croteau et al. 2012).
Regarding ‘vertical integration’, one company (or more), or a conglomerate, combines with other companies that provide different services in the same industry. For example, in the music or movie industry, all processes related to publishing, production, and distribution within the same conglomerate are integrated (Croteau and Hoynes 2006; Doyle 2012; Graham et al. 2015).

In addition, cross-media ownership involves the intersection of diverse media industries within the same conglomerate, as facilitated by processes of media convergence that started in the mid-1980s (Croteau and Hoynes 2006; Doyle 2012; Jenkins 2006). For example, ‘feature films, their accompanying soundtracks and DVD/Blu-Ray disc releases, spin-off television programs … can all be produced and distributed by different divisions of the same conglomerate’ (Croteau et al. 2012: 43; also, Doyle 2012).

Furthermore, because of technological advancements in digital technology and use of Internet, different media forms that were traditionally separated and distinct have converged (Croteau and Hoynes 2006; Gorman and McLean 2009; Jenkins 2006; Varnelis 2012). Internet companies have merged with existing (traditional) media corporations through cross-media integration (such as Comcast and NewsCorp), while other companies (such as Google and Facebook) focus entirely on the Internet (see also Doyle 2012; McChesney and Schiller 2003; Noam 2009).

In the case of digital media, some scholars argue that media convergence does not only relate to the proliferation of digital devices among the public, but also to the broader cultural context in which ‘media convergence’ is developed, which Jenkins (2004: 282) commented about thus:

The technological, industrial, cultural, and social changes in the ways media circulates within our culture. Some common ideas referenced by the term include the flow of content across multiple media platforms, the cooperation between multiple media industries, the search for new structures of media financing that fall at the interstices between old and new media, and the migratory behavior of media audiences who would go almost anywhere in search of the kind of entertainment experiences they want.

However, tendencies towards market domination, concentration of ownership, and monopolies have historically represented ‘a fundamental problem for anyone
seeking a more progressive outcome from the media’ (Hirst 2013: 1). Such argument began being projected onto new media during the 2000s (Bagdikian 2004; McChesney 1998, 2008). This is because old media corporations dominating the traditional telecommunication sector – namely Comcast, Disney, NewsCorp, DirecTV, Time Warner, Viacom, and AOL – were joined by the Internet giants of Facebook, Google, Twitter, Amazon, Microsoft, and Apple in the hardware, web browsing, and social networking arenas (Bagdikian 2004; Taylor 2014). Consequently, some business structures typical of mass media ownership, and their implications for media openness, are of potential issue in the arena of new media. So, what are the implications of such replication for new media?

From a socio-economic perspective, concentration of ownership can reduce diversity (variety) and choices available to consumers. For example, small competitors can be marginalised by larger companies who apply predatory pricing strategies, while consumers are left with fewer alternatives. The 2001 Microsoft case illustrates how a predatory pricing strategy was applied in the new media arena in relation to its web browser Internet Explorer. In this case, the Microsoft monopolist of PC operating systems excluded rival browsers and Netscape from competing in this market. By tying Internet Explorer to Windows 95 and Windows 98, Microsoft set a zero price for its browser to deprive Netscape of revenue and protect its operating system monopoly (US Department of Justice 2001: case 253 F.3d 34; see also Economides 2001; Pardolesi and Renda 2004; Weinstein 2002).

In turn, from a communication and political perspective, and from the experience of the mass media, concentration of new media ownership may influence the formation and/or modification of public opinion (Di Maggio 2009; Herman 2002). Such modification can be achieved, for example, by narrowing public awareness through political censorship demonstrating bias of topic selection and reportage, by way of, for example, framing editing in selecting and reporting the news (Herman and Chomsky 2008; Gilens and Hertzman 2000; Jenkins 2006; Noam 2009).

A well-known example of biased news reporting is the case of the 2003 Iraq War. While some mass media outlets provided ‘pro-war news coverage’, they failed to cover anti-war perspectives, as in the case of News Corporation reportage (Hobbs 2010: 29; also, Baum and Zhukov 2013; Di Maggio 2009). Another example that demonstrates the political implications of media ownership concentration occurred in Italy in 1994 and 2001 when ex-Prime Minister, and media magnate, Silvio Berlusconi
used his media business interests to promote and support his political campaigns (Doyle 2012; Durante and Knight 2012; Graham and Davies 1997).

Even if the Internet provides citizens with more open space for debate, mobilisation, and engagement in pressure politics than the mass media, Dahlberg (2004: 86) considers it alarming in terms of transparency and free speech. This because ‘a few corporations are increasingly gaining ownership of the Internet’s content, code and bandwidth, and thus the power to determine what can be accessed and communicated online’ (Dahlberg 2004: 86). Similarly, even if the Internet provides businesses and individuals with an open environment for competition, monopolies and oligopolies that control some digital components products can prosper online to the detriment of competition. As such, ‘instead of levelling the field between small and large (companies), the open Internet has dramatically tilted it in favour of the most massive players’ (Taylor 2014: 32).

Such developments increasingly invite questions about the effectiveness of new media as ‘a new space for democratic freedom’ for civic interests to move into more open deliberative spaces for communication, debate, and actions (van Dijk 2012: 164; also Dahlgren 2006; Hacker and van Dijk 2000). Increasing concentration of media ownership thus raises issues about the accuracy and diversity of information available online, alongside issues of economic and state surveillance (Artz and Kamalipour 2003; Fuchs 2012; Noam 2009; Taylor 2014).

The issue of the accuracy of information on the Internet is related to the experience of Internet users faced with over-abundant flows of information on the web. Information-savvy users tend to rely on ‘trusted’ sources of information, channels, or platforms – also known as information gatekeepers - which are believed to be providers of the most accurate and reliable links in their prioritising of information on behalf of the user (Barzilai-Nahon 2008; Ristow 2013).

The most popular information gatekeeper worldwide is the Google web search engine, with, for example, some 68% of the 2014 desktop search engine market share (Netmarketshare.com 2015). In addition, regarding access to Google services from mobile devices, Google claimed more than 92% of market share in 2014 (Statcounter.com 2015). Such statistics beg critical questions, such as: Is Google’s dominant position in the search engine market a guarantee for users to be provided with accurate, diverse, and/or unbiased information?
According to Vaidhyanathan (2011: 3), we have ‘come to believe that Google’s search rankings are a proxy for quality of information … but this belief is unhealthy and wrong’, as the results may suffer from certain ‘biases’. Such allegation was also made in the ‘Google Search Case’. The case started in 2010 with a complaint filed to the European Commission (EC) by a small British company called Foundem, which was also joined by Microsoft and smaller web search engines (European Commission, case 39740; also, Barr 2015; Winkler et al. 2015).

In response, in 2010, the EC opened an investigation on Google regarding potential abuse of its dominant market position in online search engines. Consequently, on 27 June 2017, the EC filed a prohibition decision (or a guilty verdict) that imposed a €2.4 billion fine on Google (European Commission, case 39740; Raff and Raff 2017; Renda 2015; Titcomb 2017). Despite longstanding public claims by Google that it had provided users with neutral results based on ‘algorithmic rankings’, the EC thus found that Google had abused its position. An example of Google’s biases was reported by Barr (2015: 1) in the Wall Street Journal:

Staffers at the U.S. Federal Trade Commission in 2012 found that Google favoured its own shopping, travel and local services in general search results, even when some of those products weren’t most relevant to users … “Users do not necessarily see the most relevant results in response to queries – this is to the detriment of consumers, and stifles innovation,” the commission said in a statement.

Google favoured its own or its associate website over competitors’ ones because it is a profit-driven firm providing users with ‘free’ tools, services, and information. In ‘exchange’, in a process referred to as ‘economic surveillance’ of media audiences, Google stores and exploits data regarding its users’ activities, such as personal information, political preferences, and web search histories, and sells this data to advertisers (Vaidhyanathan 2011). The advertisers can then target the users with streamlined, personalised ads and marketing campaigns.

Similar approaches are applied by other giant social media corporations, including Facebook and Twitter (Andrejevic 2009; Cohen 2014; Fuchs 2017; Mosco 2009; Roberts 2010; Van Dijck 2012). Yet, this approach is not new. Economic surveillance is also widely used in the old media, as Kang et al. (2011: 143) observed:
Media companies produce content that attract audiences and encourage, trick, or seduce viewers to watch the accompanying advertisements. Consequently, the cost that companies pay for advertising spots is ultimately used for buying the audiences that watch the spots.

In relation to the process of users creating content on new media, and media owners utilising that content for advertising purposes, some scholars refer to the expression ‘audience commodification’, by which media companies treat audiences as ‘goods’ exchangeable on the advertising revenue market (Caraway 2011; Dunn 1998; Fuchs 2017; Mosco 2009; Smythe 1981). As such, because both old and new media are financially supported by advertising, audiences become an important ‘commodity’ for media companies (Fuchs 2017; Mosco 2009); which thus complements and shapes their role as producers of content.

Accordingly, users voluntarily, but it appears quite often unknowingly or unwittingly, produce, and disseminate information that can be used by advertising companies to enable marketing campaigns; even though compared to the early days of the Internet, users were hardly aware of it (Boyd and Crawford 2012; Leaver 2013). Even if some users set their preferences on what information should be accessible to a platform owner, online browsing services – such as Internet Explorer, Mozilla, Google Chrome, as well as social networking platforms such as Twitter or Facebook – do not entirely make it clear to their users how to set these preferences, or the extent to which these procedures will be effective in working to the wishes of the users (Esteve 2017; Hull 2015; King et al. 2011).

Indeed, the opaqueness of setting preferences has influenced some Internet users to disregard privacy settings (Brake 2014; Debatin et al. 2009; Fuchs et al. 2012; Trottier 2014). As Taylor (2014: 27) observed about the Internet, ‘everything we do gets swept back into a massive, interactive mashup in the cloud, each bit parsed in the data mine, invisible value extracted by who own the backend’. Such so-called ‘invisible value’, however, can be important not only for firms engaging in economic surveillance, but also for governments engaging in state cyber surveillance of citizens – for example, of digital environmental activists (Guldemann 2013; Hindmarsh and Calibeo 2017).
According to Moore (2004: 1439), ‘surveillance’ is the close observation especially of a ‘suspected person’. When carried out by government, as Starr et al. (2008: 253) elaborated, state surveillance ‘inhabits a shadowy realm of public affairs, often secret and barely legal ... its operations are a constant negotiation between popular political moods and elite government interests’. Button et al. (2002: 29), for example, argued that the key role of surveillance lay in creating a ‘security culture’. As these authors stated, ‘generally … this [security culture] has involved surveillance of key activists, monitoring the communication strategies of activists, planting under-cover officers amongst activists and developing a network of informants’ (Button et al. 2002: 29). This type of surveillance is known as ‘traditional’ or ‘targeted’ surveillance (Henman 2004; also, Haggerty and Gazso 2005).

Following 9/11 (in 2001), state surveillance security operations intensified, but perhaps opportunistically, were extended to include a range of so-called civic ‘influencers’ and categories across several socio-political areas, including environmentalism. The latter appeared to add to the development of the ‘ecoterrorism frame’ in the late 1970s, even though by 9/11 environmentalism per se had become mainstreamed in society, including government as well. Just by its name of ecoterrorism, this frame appeared to fit neatly to the US ‘war on terror’ following 9/11 (CNN 2001; Kellner 2003; Welch 2006).

The frame was conceived in the 1970s to justify and describe surveillance on certain types of environmental activism (Loadenthal 2013; Potter 2008, 2011). It was prompted by a nexus of actions by ‘hard core’ direct action environmental activists, who were often located on the periphery of environmental movements, but also highly popular in being at the forefront of protecting the environment when a dire lack of state services in this area existed.

Some 30 years later, following 9/11, the Federal Bureau of Investigation (FBI) (2002: 1) stated on its website and at the US Congress that ‘ecoterrorism’ was the ‘use or threatened use of violence of a criminal nature against innocent victims or property by an environmentally-oriented, subnational group for environmental-political reasons, or aimed at an audience beyond the target’. By then, the term of ecoterrorism, according to Smith (2008), had seemingly become normalised, at least to surveillance forces, and some political and industrial interests. As Smith (2008: 564) commented:
Because of repeated official pronouncements from the government, the complicity of the mass media, and the campaigning of industry groups … the term ecoterrorism has been widely accepted. The acceptance of the term has also created acceptance more generally of the idea that radical environmentalists are terrorists. The impacts of this acceptance include more investigation, infiltration, and disruption of radical environmental groups.

Among the early actions labelled as acts of ecoterrorism were those of Greenpeace to protect whales and other wildlife on the high seas, complemented later by the more confrontational Sea Shepherd Conservation Society. In addition, there were animal rights actions; and fights to preserve old growth forest from logging, with the actions of (US) Earth First particularly notable regarding ‘tree spiking’ and other forms of so-called ‘eco-sabotage’ (Button et al. 2002). Other notable direct actions occurred worldwide on nuclear facilities and nuclear waste transportation, biological warfare research, animal testing facilities (for example, Walby and Monaghan 2011; Potter 2011), and even desert motorcycle races (Eagan 1996).

These and other actions were carried out by so-called ‘radical’ environmental groups, including Animal Liberation Front and Earth First!. The FBI described them as ‘terrorist threats’ to security (Smith 2008). Consequently, the rhetoric of ‘ecoterrorism’ became associated with ‘aggressive prosecutions that politicised misdemeanour acts of criminality’, including vandalism, theft, trespassing and arson; techniques particularly highlighted as informing the actions of Earth First! and the Earth Liberation Front; which were then reconstituted ‘as federally prosecutable acts of terrorism’ (Loadenthal 2013: 94; also, Button 2002).

Critical of US anti-terrorism security measures adopted after 9/11, Loadenthal (2013: 94) argued they were ‘the product of the [US] State’s understanding of its own threatened position, its own ‘apprehension of threat’. Nevertheless, a ‘war on terror’ was articulated and further legitimised through primary legislation, for example, the US Patriot Act (2001), and successive Crime and Criminal Justice Acts in the UK (Welsh 2007).

The Patriot Act (2001) enabled more intensive state surveillance particularly through Section 251 measures. These measures enabled court orders to be issued for the collection and retention of ‘tangible things’ considered ‘relevant’ for FBI investigation, including the activities of social and environmental movements. As
reported in 2002 by the Wall Street Journal, the FBI watch list of potential terrorists was extended to include ‘animal rights extremists’, ‘anarchists’ and ‘environmental extremists’ (Davis 2003; also, Welsh 2007).

Welsh (2007: 356) also argued that ‘such measures applied to both internal and external affairs of state and included those sections of environmental movements explicitly linking environmental degradation with critiques of contemporary neoliberalism’. Examples of such critiques presumably included those expressing dissent to the policies of the International Monetary Fund (IMF), the World Bank, and the World Trade Organization (WTO), and to controversial science and technology, free trade and excessive economic growth, otherwise globalization. According to Loadenthal (2013: 95), addressing such dissent through the construction of a ‘good protestor/bad protestor, activist/terrorist dichotomy’ provided ‘an impetus and justification for State manoeuvres which required a constructed enemy’, like wartime conditions (see also Salter 2011; Thompson 2008; Welsh 2007).

Will Potter, author of the book *Green is the New Red* (2011), noted that such manoeuvres coincided with ‘sweeping legislation, grand-jury witch hunts, blacklists, and FBI harassment’ (Potter 2009: 672). Accordingly, as suggested by Potter (2009), these measures were reminiscent of the US ‘Red Scares’ against suspected communists and anti-war activists of the first half of the 20th Century. Likewise, environmental activists referred to the frame of ecoterrorism as the ‘Green Scare’, where the rhetoric of ‘terrorism’ was utilised ‘to push a political agenda, instil fear, and chill dissent’ (Potter 2009: 673; also, Ellefsen et al. 2012; Kuipers 2009; Monaghan and Walby 2008; Smith 2008).

Turning to the contemporary use of the frame of ecoterrorism to justify online state surveillance, three recent cases have occurred involving the surveillance of groups seemingly representing environmental activists (Calibeo and Hindmarsh 2017; Uldam 2016). First, in 2010, the Marcellus shale gas drilling opponents in Pennsylvania came under state surveillance by the US Office of Homeland Security (OHS). Environmental concerns were held about dumping polluted wastewater from shale gas mining into rivers, some also being used as catchments for human water consumption (Howarth et al. 2011; Matz and Renfrew 2015).

The protestors only became aware of this surveillance through a local OHS intelligence bulletin being mistakenly placed on a civic online forum. It revealed that state police intelligence was monitoring them through a contractor hired to obtain
information on planned anti-shale drilling actions (Harwood 2010). It was later posited that the OHS had spent more than US$100,000 to contract a private firm (The Institute of Terrorism Research and Response (ITRR)) to collect information about potential terrorist activities (Wilber 2012).

Second, activists contesting the Keystone XL tar sand project in Canada were placed under police surveillance in 2011, as they were considered ‘threats to national security’ (Leahy 2013). TransCanada, the company constructing the pipeline, had warned local authorities about a threat to state security brought by activists and local landowners (Arnsdorf 2015; Leahy 2013). It thus seemed an economic and/or energy security threat was conceived by the construction company (Ahmed 2014; McCarthy 2017).

Third, Chisholm and Uechi (2014: 1), in their study of emergent interest group surveillance in Canada, reported that ‘members of a Quebec-based group of shale gas opponents ... [had] learned through a story in La Presse news that the RCMP [Royal Canadian Mounted Police] was watching them, believing that anti-fracking activists might one day be “radicalized” by North American “extremist” groups’. Concomitantly, Nelson (2014) contended that Communications Security Establishment Canada – the Canadian surveillance agency with responsibility for collecting and analysing metadata information and which operates jointly with Canadian Security Intelligence Service – had collected data on the activists and reported it to the RCMP and petroleum companies.

It was also notable that in late 2013, the Canadian government issued an advertisement for analyst/s to conduct ‘24 hours a day, seven days a week, 365 days a year’ monitoring and analysis of social media content for ‘influencers’ (Rennie, 2013). Interestingly, such activities, which include monitoring of what is being said on Facebook, Twitter, or YouTube, have been justified as a ‘standard procedure for any government that wants to understand how its policies and practices are being received by the public’ (Rennie 2013:1).

These activities and the more publicly known development of data retention regimes, such as ‘data mining’ and ‘metadata’ schemes, have generated many public concerns about privacy. The latter have been adopted by several states, including the US, the UK, France, Germany, Taiwan, and Australia (Cate 2008; Lachmayer and Witzleb 2014; Posner 2008). The regime of ‘data mining’, particularly relevant to new media, refers to the use of software aiming to detect communication patterns and
connections of individuals through ‘collection, extraction and analysis of large sets of data’; about which Harvey (2014: 26) contended if analysed manually ‘would be too much of a nuisance to be useful’.

In Australia, metadata regimes require all telephone companies ‘to retain the time, identity, billing information, general locations and IP addresses of the senders and recipients – but not the content of communication’ for a minimum of two years (Bingemann 2015: 28; also, Griffiths 2015; Thomas 2015). In 2014, the Australian Media, Entertainment and Arts Alliance (MEAA) warned politicians and the public that the metadata regime, introduced by Tony Abbott’s Liberal-National Coalition government that same year, represented a threat to press freedom, and made ‘every citizen a suspect’ (MEAA 2015: 1). The MEAA contended that the metadata regime circumvented ‘ethical obligations’ of journalists to protect, for example, ‘the identity of confidential sources’, by allowing ‘government agencies to identify and pursue journalists’ sources, including whistleblowers’ (MEAA 2015).

On the effects of cyber surveillance, it is not clear whether the aim of data retention schemes to identify and effectively contain terrorism is working that well. Bingemann (2015: 28), for example, argued that these regimes ‘have been shown to be ineffective in combating terrorism’ in the US and France. At the same time, some scholars have argued that these regimes – more broadly, the anti-terror legitimation of cyber surveillance, public knowledge about surveillance controversies including the NSA spying scandal disclosed by Edward Snowden, and the WikiLeaks case – have ‘heightened sensitivities to surveillance, intensified activist anxieties and produced a climate of fear as well as public insecurity’ (Welsh 2007: 365; also, Jeffries 2011; Monaghan 2014).

However, as Doyle and Fraser (2010: 222) noted, the ’empowering bottom-up visibility’ of new media along with ‘its capacity to empower collective action’ demonstrated in several environmental protest arenas has acted to deter the threat of digital surveillance. As such, Doyle and Fraser (2010: 226) contended that online state surveillance can be ‘surprisingly ineffective when confronted with the horizontal, self-organized power of online social networks’.

In relation to digital environmental activism, many protests increasingly appear more horizontally organized than vertically (or centrally) to also help deter the threat of surveillance (Calibeo and Hindmarsh 2017; Penney and Dadas 2014; Van Laer and Van Aeist 2010). Again, horizontal communication fits in some ways to the
organisational architecture of the environmental movement as a highly flexible and ever-changing action network of activists, groups, and communities (Doyle and McEachern 2008), albeit of many other social movements undoubtedly.

The horizontal communication structure of new media has also enabled so-called ‘reverse watching’, where citizens attempt to turn ‘the watched’ into ‘watchers’ (Krueger 2005; also, Fuchs 2012). Mann and Wellman (2003: 333) defined reverse watching as ‘sousveillance’, as an ‘inverse panopticon’ that ‘focuses on enhancing the ability of people to access and collect data about their surveillance and to neutralize surveillance’ (also Fuchs 2012; Doyle and Fraser 2010).

Krueger (2005) observed that some users, who are aware of being watched, tended to increase their activities as a way of challenging surveillance, for example, in participating more actively in online debates as well as in social actions. Similarly, Albrechtslund (2012: 192) referred to citizens challenging surveillance through ‘participatory surveillance’. According to Albrechtslund (2012: 192):

Instead of being intimidating and potentially damaging, certain surveillance practices demonstrate that it can be empowering to be on the receiving end of the gaze … some surveillance practices empower the watched and, thus, sometimes reverse the panoptic and Orwellian understanding of gaze and power.

In attempts to further negate state cybersurveillance, users have begun using encrypted channels for communication, which have become available to apps like Wickr and WhatsApp (Dencik and Cable 2017; Kotfila 2014; Leistert 2012). For example, when 2011 Occupy Wall Street activists came to learn that local protests in Massachusetts were being ‘heavily monitored by law enforcement’, they stated, ‘we’re moving to other channels where it will be encrypted, and it will be less able to be spied on’ (Penney and Dadas 2014: 88; see also, Pickerill 2003; Van Laer and Van Aeist 2010).

Conclusions

The aim of this chapter was twofold. The first aim was to undertake a literature review on new media in relation to understanding its nature, emergence, operation and impact,
and structure for communication. As such, the investigation focused on the relationship of new media to social movements and environmental activism for (i) potential enhanced protection of the environment, and (ii) potential barriers to that through media ownership concentration, and digital surveillance (also referred to as cybersurveillance) of environmental activists.

From the review of the literature, it emerged that it is easier, cheaper, and faster to produce and distribute information digitally than via traditional media. This facilitated communication between individuals and groups of individuals interconnected digitally through ‘horizontal’ (or many-to-many) structures of communication. Horizontal communication enabled ‘interactivity’ between individuals that on new media were simultaneously interconnected with other users and networks and could communicate to distant and diversified audiences.

The second aim of the chapter was to present the four key themes discerned from media studies and science, technology, and society (STS) studies in this chapter, to add to those of Chapter 2 to form my conceptual framework for the study, as explained below. The first theme, ‘new media as a sociotechnological system’, investigated the relation between technology and society as and embedded ‘sociotechnological system’, where the Internet is comprised of a technical infrastructure and a social infrastructure, the latter consisting of human arrangements and values, including those of environmental activism.

The second theme, ‘new media and activism’, investigated the impact of new media on civic participation and activism. New media were found central to the development of social movements, as they provide activists with new conduits to communicate in the media space, in ways that traditional mass media did not allow. As strategic conduits for communication, new media enhance networking and mobilisation online, but also serve the purpose to coordinate dialogue and protest offline.

Such enhancements are also found in relation to the environmental movement, as investigated through the third theme, ‘new media and environmental activism’. This theme investigated the relationship between new media to enable forms of environmental activism digitally. New media were found essential for environmental activists to achieve mediated visibility for their struggles in relation to several digital strategies, including storytelling, political consumerism, culture jamming, and ‘tactical
media. In addition to mediated visibility, new media also enhanced mobilisation for environmental protest actions.

The fourth and last theme, ‘challenges to new media for environmental activism’, was informed by two subthemes. The first subtheme ‘concentration of media ownership’ found such concentration potentially affects the diversity of the information available online to users. Issues of censorship, transparency, and freedom of information also emerged in relation to this subtheme. The second subtheme, exploring ‘digital (political) surveillance of environmental activists’ found such surveillance could potentially deter civic participation in environmental activism. At the same time, digital surveillance strategies seem unlikely to threaten environmental activism because environmental activists have developed alternative ways to subvert traditional top-down patterns of surveillance, through ‘participatory surveillance’, or communicating through encrypted channels, for example.

I turn now to Chapter 4, the last one presenting my literature review. In Chapter 4, the focus on environmental activism and the adoption of new media by activists is narrowed to the Australian context, with attention to two case studies of relevance in the Australian environmental activism arena: logging of old-growth forest and development of hydraulic fracturing to extract gas (specifically, coal seam gas). At the end of the next chapter I also present my conceptual framework, which illustrates the meta-themes and themes that are of assistance for this study.

Notes

1 For example, see: http://www.lockthegate.org.au/about_us
4 See: http://bit.ly/2yovoNzG.
5 For the Anti-Carbon Tax Ad Brainstorm video by GetUp! see: https://goo.gl/H68Anz
6 The No Harvey No MFC & GetUp! Video is available at: https://goo.gl/7SI932
7 Predatory pricing is a temporary business strategy in which one or more companies hold a dominant position in a market. This positioning enables these companies to lower their prices to eliminate rival competitors out of the market, or discourage new rival companies from entering the market (Doyle 2012).
8 More detailed information about the 2001 US versus Microsoft antitrust case can be found at: https://www.justice.gov/atr/file/704931(download).
Media ‘framing’ refers to the process through which news is structured and disseminated to emphasise certain aspects of reality ‘in a bid to promote desired interpretation’ (Wasike 2013: 9; see also de Vreese 2005; Entman 1993; Gamson and Modigliani 1989; Scheufele 1999).


As stated by Schmidt (2004: 24), the Red Scare was ‘a short-lived but intense period of political intolerance and repression of Communists, radicals and other non-conformists’ that characterised the American history of the 19th century. During the first 30 years, ‘unions were regarded as criminal conspiracies by the courts and ruthlessly fought by the employers’, while in the 1950s ‘suspected Communists were the targets of the McCarthy era and anti-war protesters harassed during the sixties and seventies’ (Schmidt 2004: 24; also Storrs 2013).

In more detail, the Marcellus Shale is ‘a geologic formation of shale rock buried deep under parts of Pennsylvania, New York, and West Virginia. Part of the process of preparing a Marcellus gas well for production involves pumping millions of gallons of water, sand, and chemicals into the well under very high pressures to crack the shale apart and prop open the cracks – a process called hydraulic fracturing or “fracking”’ (ExploreShale.org 2014).
4. The evolution of the environmental movement in Australia: From Lake Pedder to digital environmental activism

Introduction

The focus of this chapter is twofold. First, it is focused on providing an overview of the evolution of environmental activism in Australia, from the ‘first wave’ of the environmental movement to contemporary digital environmental activism. In this history, many environmental issues emerged from the conservation of Australian wilderness to climate change, pollution, and mining, to name but a few. Concomitantly, organisational issues also emerged within the environmental movement, as tensions and divisions between different streams of thought and activism on how to address environmental issues more effectively; given the many difficulties in attaining effective environmental protection in most areas of activism.

Second, this chapter also is focused on providing a background to investigate how environmental activists deployed new media are for environmental activism in Australia. In tackling such investigative endeavour, given the hundreds of environmental campaigns across Australia, from national to local levels, I refer to two demonstrative campaigns as case studies to focus on: old-growth forest logging and coal seam gas development.

The selection of these two campaigns was due to four reasons. First, the campaigning effort in these two areas in Australia is fierce and endures, with campaigners ‘locked’ into these campaigns. Second, and by association, the many environmental issues raised by campaigners in these two areas remain unresolved; which also questions the effectiveness of traditional campaigning strategies, without digital media support, to obtain satisfactory policy responses in relation to protecting the environment (The World Watch Institute 2017; United Nations 2016).

Third, these campaigns are widespread across Australia from the national to local levels, thus providing a diverse representation of campaigns to more in-depth examination of the contemporary use and extent of new media in the context of investigating the potentialities of new media for environmental activism. Fourth, and
downstream (see Chapter 5), to enable, in turn, a representative selection of 34 interview respondents across Australia to investigate the informed perspectives of environmental campaigners and activists largely in these two areas, but also in other campaign areas (as detailed in Chapter 5).

A caveat as to the thoroughness of the representation of these campaigns is that time and space constraints did not allow me to cover all the many details in relation to the history of campaigning about deforestation and the CSG development in Australia. However, I believe this summary background information demonstrates sufficiently new media campaigning contexts now in usage in Australia, as also explored empirically through web content analysis of how groups and organisations used new media in relation to these campaigns. The results and analysis in relation to the web analysis are presented in Chapter 6.

The chapter is organised into three parts: (i) environmental issues in Australia: the evolution of the environmental movement; (ii) The advent of new media for environmental activism; and (iii) Environmental activism and new media: background to two big Australian case studies. Once these three parts are presented, I draw the chapter’s conclusions and present the conceptual framework of my study.

Environmental issues in Australia: The evolution of the environmental movement

The history of the Australian environmental movement has experienced two major phases – or ‘waves’ (Doyle 2005; Dowie 1995; Hutton and Connors 1999; Mulligan and Hill 2001), that now include the latest techniques involving the use of new media. Following the first wave (1870s-1960s), the so-called ‘early’ environmental movement or ‘early’ environmentalism, was the second period of the 1960s to date, called the second wave or ‘modern’ environmentalism.

The first wave pressured government through ‘gentle’ advocacy to help produce policies to begin regulating the exploitation of Australia’s natural resources from the 1880s (Hutton and Connors 1999; Mulligan and Hill 2001). Exploitation was characterised by contradictory elements related to the relationship between the European colonisers and native Aboriginal communities (Hutton and Connors 1999). For example, Aborigines were sometimes seen as useful guides to European
discoverers and early Australian naturalists, due to their vast knowledge of the Australian landscape. However, disclosing such knowledge to the colonisers also ‘unwittingly lead to further economic expansion and degradation of the very landscapes that both Aborigines and nature-lovers cherished’ (Hutton and Connors 1999: 27).

More strongly expressed concerns about the degradation of the Australian environment then came from the scientific community in the later years of the 19th Century (Hutton and Connors 1999). Concerns arose about the disappearance and extinction of biodiversity – plants, animals, and ecosystems – due to vast habitat clearance for development, especially forest clearing for pastoralism: the raising of livestock; and, later, industrial agriculture. As such, the early environmental movement was comprised heavily of scientific and naturalistic societies focused on observing and cataloguing the existing species of plants and animals for research and preservation purposes (Mulligan and Hill 2001).

However, given a state of rapid development and associated land clearing, everyday citizens also began to express increasing interest in the preservation of both flora and fauna in the protection of the Australian wilderness (AEGN 2014). Accordingly, environmentally focused groups began forming. For example, the Australian Wildlife Society, founded in 1909, raised many issues for the public agenda including the vast clearance of rainforest; and the trade of native animal pelts, including those of possums and koalas for leather and other goods, and bird feathers (as well as furs) for the fashion industry (Doyle 2000; Hutton and Connors 1999; Strom 1979).

Stimulating growing interest in environmental protection was the rising popularity of recreational activities, including skiing and bushwalking, which created a stronger connection between individuals and their natural surroundings (Australian Government 2015; Doyle 2000; Robin 2013). The emergent influence of the achievements of environmentalists overseas, particularly in the USA, motivated environmentally concerned Australians to better protect the environment. A symbolic icon for this trend in 1879 was the establishment of the Royal National Park, south of Sydney in Sutherland Shire. Proclaimed in the wake of the designation of the Yellowstone area in the USA as a national park (Robin 2013), it was the first national park in Australia and the second in the world.
However, during the 1960s and 1970s, alongside the advent of many social movements at that time, the Australian environmental movement evolved into a more structured, wider, and nationally identifiable political force. This moment marked the second wave of the Australian environmental movement (Doyle 2000; Hutton and Connors 1999). According to Doyle (2000), this evolution was significantly influenced by industrialisation policies heavily favouring economic and urban development that was ‘destroying whole areas of rural Australia in the 1960s … [and] tearing the heart out of Australian cities’, made worse by little or no community consultation (Hutton and Connors 1999: 128).¹

One notable response was the Sydney ‘green ban’ movement during the 1970s, which was the first of its type worldwide. It comprised a series of builders’ labourers’ union strike actions to protect heritage sites from environmentally and/or socially undesirable development (Burgmann and Burgmann 1998; Cook 2011; Roddewig 1978; Hutton and Connors 1999; Iveson 2014; Ruming et al. 2010). The green bans brought together trade unions, resident action groups, and environmentally concerned citizens and groups, who lobbied politicians and businesses, collected citizens’ signatures, and contacted newspapers.

However, a key factor influencing the evolution of the environmental movement in Australia was the international diffusion of high profile books on environmental degradation. For example, Rachel Carson’s Silent Spring (1962) raised concerns over the toxicity of pesticides used in industrial agriculture on wildlife. In turn, Paul and Anne Ehrlichs’ The Population Bomb (1972) raised overpopulation issues. Perhaps most significantly, The Limits to Growth (Meadows et al. 1972), and Vance Packard’s The Waste Makers (1961) highlighted waste and pollution consequences of consumerism, among other things, and advanced new sustainability ways forward.

Particularly catalysing the Australian evolution of the environmental movement was the ‘battle’ or campaign to save Lake Pedder in South West Tasmania in the late 1960s and early 1970s, for several reasons (Davis 1989). First, ‘considerable elements of the Australian population [became] conscious of the need for wilderness conservation and some areas became identified as national symbols that ought to be preserved’ (Davis 1989: 109). Accordingly, several major environmental groups and NGOs emerged at both the local and national levels, including the Australian Conservation Foundation (ACF); the Wildlife Preservation Society of Queensland;
and the Tasmanian Wilderness Society (TWS). Often informed by direct action tactics, these groups began to pressure government and industry to protect the environment, for example, on land-use decision-making (Davis 1989; Paehlke 1995), among other things.

Second, although the campaign to save Lake Pedder failed with the lake eventually flooded by Hydro Tasmania, it led to the establishment of the world’s first green party – the United Tasmania Group (UTG) in 1972. The UTG founders agreed that to implement ‘a national, well-researched conservation plan for the State of Tasmania a single independent coalition of conservation-oriented candidates and supporters was needed (Bennett 2008: 2). Third, the Lake Pedder campaign was crucial to the later success of the ‘save the Franklin wild river campaign’. The Franklin campaign recruited much larger and wider support and brought a new robustness and determination to contest this environmental challenge (and later ones) in Tasmania. Given its precedent, many green parties also began emerging worldwide.

When the Tasmanian government made the announcement to dam the Franklin River for more hydroelectric projects, the Australian environmental movement was ready to strongly oppose it through national and local protest actions that linked to international support worldwide. At the forefront of this campaign – and under the leadership of Bob Brown (who later became the first leader of the Australian Greens Party, and subsequently, the first Greens Senator in the Australian parliament), the Tasmanian Wilderness Society (TWS) conducted a strong ‘No Dams’ campaign (Kellow 1989; Mulligan and Hill 2001; Rogers and Mackey 2015). Public awareness about what was going on was a key factor to win the challenge. Actions that informed mobilisation included informing the public through documentaries, brochures, and photographic exhibitions of the beautiful Franklin River. The iconic photo of Peter Dombrovskis ‘Rock Island Bend’ led the campaign.

Turning to direct action, the most visible TWS protest action was the 2000 protestor blockade against the actual construction of the dam, which begun on 14 December 1982 (Phillips 2012). In its aftermath, the blockade was described by the mainstream media as a strong and powerful act of civil disobedience, which was ‘hugely instrumental in influencing public opinion in a critical period prior to the 1983 federal election’ (Rogers and Mackey 2015: 148; also, Martin 1984). Consequently, the protection of the Franklin River was a key issue debated in the 1983 federal
election campaign. ‘Green’ electoral value for the Labour Party’s position of ‘no dam’ significantly influenced the Labor Party’s win (Wattchow and Brown 2011).

Indeed, the Franklin river campaign is considered historically as ‘the genesis of the political movement that grew into the Australian Greens’ in 1992 (Phillips 2012: 1; also, Frankland et al. 2008; Rootes 2015). It affirmed the political power of environmental activism and political pressure. According to Hutton and Connors (1999: 163), the Franklin campaign represented ‘the coming of age of the environmental movement’ (also Doyle 2000; Hay 1991; Green 1984; Lester and Hutchins 2006; Phillips 2012). By way of the Franklin campaign, the environmental movement had achieved several goals: it mobilised thousands of activists, and broad Australian and international support, to influence the outcome of the federal elections. In doing so, it won the support of the Labor Party in generating strong electoral value for wilderness protection, and, by association, it elevated environmental concerns higher on the media and policy agendas of that time (Kelly 2008).

Along with this success, the movement saw the emergence of diverse streams of environmental activists and groups with an array of views and strategies. As such, the breadth of environmental issues grew alarmingly, alongside public interest in them. Such endeavour then saw some of the bigger groups, including the Tasmanian Wilderness Society and the Australian Conservation Foundation, begin to structure their activities in a more centralised and hierarchical organised way. They also began to shift from protest actions to lobbying and negotiating with government, along with public awareness activities (Beder 1991; Doyle 2000).

Concomitantly, the development of these diverse streams and strategies also generated tensions and divisions within the movement, as elsewhere, and ‘alienated large sections of the organisational membership and the movement participants who chose to operate outside the structures of formal organisation’ (Doyle 2000: 172). Many saw the agenda of the environmental movement increasingly influenced or weakened by the alignment of environmental groups to the positions of the Labor party. For example, when the TWS and the ACF declared their support for the Labor party in the 1987 election campaign, the decision was criticised by other members of the movement because, as Doyle (1990: 41) argued, it was ‘in no way representative of the broader movement’ (see also Beder 1991).

In addition to these internal challenges, other factors were influencing the evolution of the environmental movement that also affected its evolution. The late
1980s and the early 1990s were characterised by a ‘global rise of public anxiety about a new generation of environmental issues’, including global warming, acid rain, and ozone layer depletion (Christoff 1998: 117). Subsequently, public interest in environmental issues grew. In the 1990 federal election, Staples (2012: 1) reported that ‘the public rated the environment as the second most important issue after the economy’. Accordingly, environmental issues also rose further up the policy agenda (Lohrey 2002; Staples 2012).

As such, in following international environmental policy debates that led to the 1992 United Nations Conference on Environment and Development, in December 1992, the Council of the Australian Governments proposed an ‘Ecologically Sustainable Development’ (ESD) strategy (Australian Government 2017). The aim of the ESD strategy was to find a balance between economic and environmental concerns. In other words, to make sure environmental issues were included in decision-making processes, to protect Australian ecosystems for the benefit of future generations (Rosewarne et al. 2014; also, Hutton and Connors 1999).

To develop the strategy, the Hawke Labor Government established nine sectoral ESD working groups to identify directions and proposals to formulate policies for key industry areas, which included water management, fishery, forestry, and energy (Dovers 2003). Representation from industry, trade unions, the government, consumer groups, communities, and environmental NGOs was invited. However, the process did not include Aboriginal and local government representation, and community input that ‘too limited and too late to be properly effective’ (Maclean 2015: 31).

The environmental movement initially perceived the ESD strategy to elevate environmental issues much higher on the policy agenda. However, over time, it became clear that the policy agenda biased economic considerations than initially envisaged. Consequently, with no shift in this bias, the environmental organisations withdrew from the ‘corporatist’ process (Rosewarne et al. 2014: 32).

Such outcomes demonstrated that the shift to lobbying and negotiation with government and industry was fraught with difficulties for the environmental movement that sometimes led to enhancing environmental protection in a somewhat piecemeal way, and sometimes led to reverses in a continuous negotiation battle in a highly discursive terrain. The forestry management battles that occurred, as initially connected to the ESD strategy is a case in point and provides a context or background
for one of my case studies in looking at the more contemporary potential adoption of new media for environmental campaigning and protection, as discussed in Chapters 5–7.

**Forestry battles**

In 1999, an ESD working group called ‘Forest Use’ was established in response to the intense and enduring public debates over deforestation, timber harvesting, tree plantations, biofuels, and pulp mill construction. An increasingly polarised conflict featured those who advocated the need to preserve Australian wilderness and biodiversity, and those who advocated the need to support economic development, with a weaker resource conservation agenda (Ajani 2007; Hutton and Connors 1999; Kirkpatrick 1998; McDonald 1999).

One example of the escalating 1990s debate involved the Tully Millstream dam proposed for the Daintree rainforest area, North Queensland, an area listed as world heritage since 1988. The proposal was strongly opposed by local community and conservation groups and supported by many national groups including WWF and Friends of the Earth (FoE), Greenpeace, and the Wilderness Society (Hillstrom and Hillstrom 2003). The ‘Save the Daintree rainforest’ action was at the tip of many environmental issues being contested across Australia; many involving local direct action. To address such conflict, and informed by the ESD strategy, and as envisaged in the National Forest Policy Statement in 1995, the federal government began to establish guidelines for the sustainable management of Australian forests. This led to the policy of Regional Forest Agreements (RFAs), with 12 eventually signed between 1997 and 2001 across Australia by State and Commonwealth governments (Dargavel 1995; Hutton and Connors 1999; McDonald 1999; Treby et al. 2014). The RFAs remain in practice to date, with renewals due between 2017 and 2021 (Burns et al. 2015; Kanowski 2015; Kirkpatrick 1998).

The key outcomes of the RFAs were a larger allocation of parts of state owned native forests (especially old growth) incorporated into an expanded reserve system not for logging but the functionality of the forest ecosystem. In addition, the development of stronger codes of practices to ensure that logging of remaining publicly owned forest was managed sustainably; and, to increase certainty of access for the timber industry to sustainable forest resources (Kanowski 2015; Mc Alpine et al. 2007).
However, practices that appeared to depart from these conditions saw critics raise criticisms that RFAs did not adequately protect forests from undue destruction while enhancing industrial productivity (Ford 2013; Kirkpatrick 1998; Lane 2003; Lindenmayer et al. 2015; Loxton et al. 2014). Such was the visibility of these practices, that several environmental scholars and activists demanded a full review of the RFAs before their next and still upcoming renewal (Burns et al. 2015; Kanowski 2015; Kirkpatrick 1998; Lindenmayer et al. 2015; Treby et al. 2014; Sweeney 2016).

Lindenmayer et al. (2015), for example, raised the unsustainability of some harvesting techniques; the endangerment of forest ecosystems; and the risks associated with overcutting in relation to the recurrence of wildfires and climate change and its impact on ecosystems (Burgman et al. 1993; Kirkpatrick 1998; Smith et al. 2014). Another criticism was over the failure to incorporate world heritage values into forestry harvesting processes (Kirkpatrick 1998; Lindenmayer et al. 2015), to protect existing areas already awarded world heritage status; and better enable assessment on other areas that might have qualified for protection (Kirkpatrick 1998; Sweeney 2016).  

Notably, a key factor driving environmental activism was the effort to achieve formal recognition for forests as world heritage, which existed long before the RFAs (Boyd and Henry 2015). This included the case of the Franklin River area, which led to the recognition of the NW Tasmanian wilderness as world heritage in 1982. Accordingly, environmentalist pressure continues to have other forested areas in Tasmania included as world heritage (Wardell-Johnson et al. 2015; Le Saout et al. 2013), which, again, is discussed in Chapters 6 and 7.

We now turn to the evolution of the Australian environmental movement in relation to new influences on campaigning by new media, which begins our investigation into their potential for more enhanced environmental protection.
The advent of new media for environmental activism

A notable influence on contemporary environmental activism internationally and in Australia was the popularity of digital technologies among activists over the last two decades (Lester and Hutchins 2006; Pickerill 2003; Seguin et al. 1998). In Australia, vividly illustrating the early potential for new media campaigning techniques for enhanced environmental protection in 2003 was the successful campaign to stop the construction of large Ningaloo Reef resort, Western Australia. The campaign saw local communities and environmental groups robustly using the Internet through online forums and emails to communicate about, and mobilise, the campaign. This action culminated in the Rally for the Reef on December 1, 2002, which gathered about 15,000 people in Fremantle (Mackenzie 2003).

Overall, digital technology advancements provided environmental activists with new tools to organise campaign actions in different ways and with different scopes. Twitter, for example, enables campaigners to create conversation and information ‘streams’ using hashtags and retweeting (Sandoval-Almazan and Garcia 2014), as also outlined in detail in Chapter 3. Facebook, in turn, enables campaigners to create pages and groups aimed at gathering support and encouraging interactivity between members.

In short, social media platforms enable ‘micro-activism’ spaces (Marichal 2013; Vromen 2015). Micro-activism refers to politically oriented activities that users engage in through social media, which include creating pages for political groups, retweeting of news articles, and/or creating and/or disseminating videos of political interest (Vromen 2015). These platforms are available to everyone on the Internet; and as observed by Marichal (2013: 3), although digital spaces ‘might not be intentionally designed to produce social change’ they ‘can have a mobilizing impact’, from the national to local levels (Marichal 2013: 3; also, Svensson 2009).

At the local level, the use of social media to organise campaigns can strengthen ‘sense of community’, in making communication and mobilisation easier (Denton 2015: 1721; also, Eltantawy and Wiest 2011; Hestres 2014). For example, regarding the Narrabri Gas project on coal seam gas (CSG) in eastern Australia, Hendriks et al. (2016) found that environmental activists used social media to raise concerns over the impact of coal seam gas on groundwater, biodiversity, and local industries. In addition,
to inform other civic stakeholders outside the Narrabri region that CSG represented a threat for them as well on site and by way of linked bioregional water systems (Lloyd et al. 2013; Hendricks et al. 2016).

More broadly, CSG environmental concerns in Australia mirror concerns raised worldwide in informing global debates on climate change, energy security, and transitions to sustainable societies (Hendriks et al. 2016; also, Gavin 2010). In such multiple terrains of activism, Hendriks et al. (2016) argued that the use of social media can redefine the geographies of environmental controversies in raising awareness beyond the local level where a campaign started, for example.

In addition to social media initiatives and the mobilisation of local communities on environmental controversies, Chen and Vromen (2012) advanced that new media enable ‘hybrid mobilisation’ through campaigning groups such as GetUp!, and 350.org (Chadwick 2007; Dahlberg 2011; Marichal 2012; Chen and Vromen 2012). Here, the term ‘hybrid’ refers to the use of horizontal (many-to-many) communication typical of new media by which large audiences can be reached through diverse online platforms, where the organisational infrastructures of user organisations is predominantly hierarchical and centralised (Bimber et al. 2005; Chadwick 2007; Bennett and Segerberg 2012; Vromen 2015, 2017).

An example of a hybrid group is GetUp! (Vromen (2015): a popular campaigning organisation that focuses on issues often located both inside and outside the boundaries of traditional politics, including lesbian, gay, bisexual, and transgender (LGBT) rights; freedom of speech; and environmental issues. Similar to other online organisations like MoveOn, Avaaz, and 350.org, the activities of GetUp! can be defined as ‘hybrid mobilisation’, again, in combining traditional organisational structures with digitally enabled collective ones, both online and offline (Chadwick 2007: 284; also Vromen 2015).

With its hierarchical organisational infrastructure, GetUp! resembles traditional top-down oriented NGOs such as the WWF and Greenpeace (Vromen 2015; Chadwick 2007; Häyhtiö and Rinne 2008; Vromen 2015). It has staff that shape online campaigns, harvests support, and places advertisements in mainstream media; and, while creating action on campaigns, does not provide digital spaces for debate (for example, forums). Online, it works though ‘short-term focused campaigns’ aimed at creating immediate change in policy or to raise awareness on certain topics, taking advantage of social media momentum also informing traditional media (Chadwick
One GetUp! campaign, for example, in 2011, was to call for the banning of live animal exports following an exposé by an ABC Four Corners episode. In response, ‘a quarter of a million signatures calling for the ban’ were presented to parliament. As GetUp! declared on its website, the then Australian Prime Minister Julia Gillard ‘immediately suspended live exports to Indonesia’ (GetUp! 2016: 1).

A similar approach both in terms of campaigning and organisational structure is adopted by 350.org, an international ENGO founded in 2008 by US environmentalist and scholar Bill McKibben. It is active in 13 countries, including Australia, with campaigns on fossil fuels, renewables, and climate change. On its website, 350.org Australia describes itself as a grassroots movement, rather than an organisation, that runs ‘adaptive, locally driven campaigns’ (350.org.au 2017). It has a ‘small team of paid staff’ that coordinates its activities using the Internet based on a collaborative model of campaigning linking together activists, communities, organisations, and ‘regular people fighting for the future’ (350.org: 1). Its founder stated that the organisation was ‘a great planetary hive, less an organization than a loose campaign designed to mesh with the Internet ethos of distributed action’ (McKibben 2013: para. 1).

One of the most popular campaigns organised by 350.org opposed the implementation of the US Keystone XL, an infrastructure project by energy company TransCanada that would connect Hardisty (Alberta) with Steele City (Nebraska) through the construction of a pipeline to transport crude oil (TransCanada 2017). In collaboration with other organisations including the (US) Sierra Club and Greenpeace USA, 350.org opposed Keystone XL, by complementing offline activism strategies of civil disobedience with online actions (Hestres 2015; Nisbet 2015). The latter made good use of Twitter to interact with other groups opposing the project; inviting supporters to make donations and attend demonstrations; and encouraging them to also participate in online actions to pressure the Obama administration to reject the project, which occurred on 6 November 2015 (Hodges and Stocking 2015; Meisel 2015).
Environmental activism and new media: background to two big Australian case studies

Against this broad background, this section introduces two case studies that focus on logging of old-growth forest and on development of hydraulic fracking, especially to extract coal seam gas (CSG). The aim of providing the two case studies was to contextualise the environmental campaigning practices and experiences and how they translated into digital environmental activism. The exploration of these digital campaigning practices and experiences is thus conducted through web analysis, which focused on how environmental groups and organisations used new media to advance their campaigns and communicate their concerns. The results of the web analysis are presented in Chapter 6.

The first one (Case Study 1) is ‘Environmental campaigns on forest logging in Tasmania, Victoria, and New South Wales’, and focuses on environmental activism to stop the logging industry from unsustainably destroying native forests, and especially, old growth rainforest. In the first case study on logging of old-growth forests, national, state, and local environmental groups pressured forestry companies and governments to prevent the logging of old growth forests. This has occurred since the early 1970s, particularly in terms of biodiversity and the functionally and integrity of forest ecosystems; in addition to the many social values such as aesthetic, recreational, and intrinsic value (for example Frankland et al. 2008; Rootes 2015).

In turn, the second case study (Case Study 2) is ‘Environmental campaigns on the coal seam gas (CSG) industry in Queensland, New South Wales, and Victoria’, and focuses on environmental activism to stop gas companies extracting unconventional gas in Australia with unsustainable environmental and special consequences (in particular, coal seam gas). In this case, interrelated environmental issues range from water contamination and land degradation to human health and occupational risk (Bec et al. 2016; Phelan et al. 2017).

Case study 1: Forest logging in Tasmania, Victoria, and New South Wales
In this section, I first explore the history of the conflict over forestry management in Australia, and its main protagonists, with most focus on Tasmania’s dispute on the clearing of native old growth forest as a historically key site for environmental...
campaigning. I focus especially on campaigning actions to protect the Lapoinya Forest and the Tarkine Forest, as some of the most controversial and heavily disputed areas. Outside Tasmania, I explore the case of East Gippsland, Victoria, where logging started at the end of the 19th century, with the intense fight for forest conservation ongoing. Secondly, I look at the case of NSW, particularly in relation to the south-east region, as also a heavily disputed forest area. However, before investigating these campaigns, I provide a potted background to forest logging in Australia.

**Forestry battles**

Land clearing, deforestation, or ‘logging’ of Australian public forests produces native timber, wood-based products (ABARES 2017), as an established industry sector since the early days of Australia’s colonisation.⁷ ‘Land clearing’ refers to the removal of both old growth and regrowth forest for pasture or crop production (ABARES 2017). Concomitantly, many adverse environmental impacts occur in these practices. For example, land clearing destroys trees and ecosystems. It also removes the ‘food and habitats on which native species rely … [it] helps weeds and invasive species to spread, affects greenhouse gas emission and can lead to soil degradation, including erosion or salinity’; in so doing, destabilising ecological processes (Australian Bureau of Statistics 2010: 1; see also Bennett 2003; Cogger et al. 2003; Gibbons and Lindenmayer 2007).

The clearing of native forests began with European settlement in the late 18th Century, mainly for agricultural and pastoral reasons (Bradshaw 2012; Kirkpatrick 1991). At the time of European settlement, 30% of the Australian continent was forest (Bradshaw 2012: 110; also, Barson et al. 2000; Wells et al. 1984).⁸ By the late 1980s some 38% of the forests had been modified by clearing; today, more than one third of Australia’s native vegetation has been cleared or modified severely (ABARES 2017; Bradshaw 2012; Evans 2016; Wells et al. 1984), with much criticism from a host of researchers on the environmental consequences (for example, Bulinski et al. 2016; Dargavel 1995).

New South Wales was one of the first areas of Australia colonised. Its forests suffered most from the late 18th Century not only for land clearing for settlements, agriculture, and mining, but also for logging valuable native timber like cedar to be shipped to the European markets. The case of the clearing of cedar – referred to as ‘red gold’ – from the Dorrigo Plateau near Coffs Harbour is a seminal example (Curby
Continuing over time, NSW has had ‘the second highest average proportional land-clearance rates among Australia’s states and territories’ (Bradshaw 2012: 112). In turn, in South Australia much land clearing for agriculture (for example, of the Mount Lofty Ranges) occurred between the 19th and the 20th Centuries (Armstrong et al. 2003; Szabo et al. 2011). By 2017, less than 5% of native forests covered South Australian state-owned lands, as the lowest percentage of forested state land in Australia, followed by Western Australia, where forests cover 7.6% of the state land area (ABARES 2017: 1).

In Queensland, the cattle industry has been the main reason for deforestation, which has occurred mostly over the last 50 years, starting in the early 1970s (Bradshaw 2012; Field et al. 2012; McAlpine et al. 2009). Although Queensland is the second state (after Tasmania) with the highest rate of native forests compared to other states, only 29.5% of state land is covered by native forest (ABARES 2017: 1). In turn, the Northern Territory has 11% of its land covered by forest, and the least percentage of forest clearing in Australia due to its remoteness and climate conditions not favouring agriculture (Woinarski et al. 2007).

In Victoria, land clearing began in the mid-1850s (State of Victoria 2017; Bradshaw 2012; Lindenmayer 2007). To date, 36% of state land is forest (ABARES 2017: 1). Finally, excluding the Australian Capital Territory, where forests cover 56.6% of state land, the most forested state in Australia is Tasmania where forests cover 54% of state land. (ABARES 2017; Bradshaw 2012; Evans 2016; Kirkpatrick 1991).

Deforestation occurs in diverse ways. Regarding timber harvesting, ‘the goal is to harvest and regrow the forest rather than clear it’ (Schrimer 2014: 2016). However, even if timber harvesting includes forest regrowth, this practice is often opposed by environmental activists, who are concerned about diminishing forest biodiversity, slow regrowth rates, and overall impacts on climate change emissions with carbon sinks cleared (Ajani 2007; Hansen et al. 2014).

In addition, monoculture plantations can replace native forest harvesting, which also raises biodiversity issues. This is because plantation practice aims to meet a high demand for diverse types of wood through single-species, large-scale plantations on cleared agricultural land. These plantations are opposed by environmental interests as they can easily generate interbreeding with local tree species (thereby diminishing biodiversity and the natural functionality of ecosystems),
and degrading soil and water quality through the use of applied chemicals and pesticides needed for monoculture plantations to grow well (Cossalter and Pye-Smith 2003; Kröger 2014; Schrimer 2014).

Deforestation also produces biofuel energy, as an alternative to fossil fuels and a considered source of renewable energy (Atabani et al. 2012; Bozbas 2008; Naik et al. 2010). Biofuel derives from organic materials (biomass) – mainly food crops such as sugarcane, rapeseed, maize, and other starchy cereals – to produce energy. It is either in a ‘solid’ form such as fuelwood or wood pellets, or in a ‘liquid’ form such as ethanol or biodiesel (Atabani et al. 2012; Cherubini 2010; Scharlemann and Laurance 2008). However, the productive potential of biofuels is constrained by availability of land for cropping. Thus, land clearing of native forests for biofuels is often criticised by environmentalists on biodiversity grounds, as well as forests providing carbon sinks to help reduce carbon emissions (Fargione et al. 2008; Scharlemann and Laurance 2008; Schrimer 2014).

Environmental concerns also relate to the construction of pulp mills and other wood processing facilities (Schrimer 2014). These concerns relate to the amount of wood required to meet the fibre demand of these facilities, and the industrial procedures that can cause air, land, and water pollution, waste production, and unsustainable water consumption (Schrimer 2014). In this context, in the late 1980s, Tasmanian citizens and ENGOs strongly opposed a pulp mill installation at Wesley Vale, Tasmania. Opponents, however, were not only concerned about a range of production pollutants, but also about forest logging to unsustainably provide wood supplies to the pulp mill. Eventually, due to strong public pressure, the project was cancelled (Buckman 2008; Curran and Hollander 2008; Sonnenfeld 1996).

In the mid-2000s, the same sort of public and environmental concerns arose in Tasmania about the Tamar Valley Pulp Mill proposal (close to Launceston) (Gale 2008). Although the project was eventually approved in 2007 by the federal and Tasmanian governments, it remained criticised by citizens and ENGOs (Buckman 2008; Curran and Hollander 2008; Gale 2013) and was later cancelled due to water and energy shortages to run it.
Case study 2: Coal seam gas (CSG) in Queensland, NSW, and Victoria

Natural gas is a widespread energy resource in Australia, alongside the dominant one of coal, popular but still marginal renewable resources like wind and solar, and uranium only for export. Underground drilling wells extract the natural gas and release it to the surface. On 16 October 1900, natural gas was found during a water-drilling incident in a reservoir located in Hospital Hill, Roma, in the Surat and Bowen basins, Queensland. The incident led to more drilling to explore for more gas reservoirs, and although over the years many gas deposits were found, especially in Queensland, it was only in the 1960s that natural gas begun to be commercialised from so-called ‘conventional’ accumulations (Spencer 1948; Towler et al. 2016; Wolfensohn and Marshall 1964).

Conventional accumulations are deposits of natural gas within porous formations, such as sandstone or limestone. Covered in impermeable rock, they are extracted using traditional technologies like drilling, usually with a few wells for each basin (CSIRO 2014; Leather et al. 2013; Rutovitz et al. 2011). In contrast, ‘unconventional’ accumulations are deposits of natural gas within more complex geological formations, described as ‘tight sandstones, shales, and other low-permeability geological formations’ (Jackson et al. 2014: 329). Because of their low porosity, unconventional accumulations were initially considered hard to access, or even ‘unrecoverable’ (Jackson et al. 2014: 329). However, due to technological advancements hydraulic fracturing developed over the last 30 years and the accessibility and productivity of unconventional wells dramatically increased (Jackson et al. 2014; Ross and Darby 2013).

This case study focuses on unconventional gas sources, specifically on coal seam gas (CSG) development, which by far leads unconventional gas (UG) development in Australia. In more detail, CSG as a naturally occurring methane gas found in most coal seams is extracted through hydraulic fracturing, popularly known as ‘fracking’. This process first involves drilling, which can occur ‘kilometres underground and to horizontal distances of 2 kilometres or more’ (Jackson et al. 2014: 2). Once horizontal drilling has occurred, the well is hydraulically fractured through the injection of ‘fracturing fluid’ made of sand, water, and some chemical additives (Batley and Kookana 2012; Jackson et al. 2014; Leather et al. 2013; Ross and Darby 2013; Rutovitz et al. 2011). The fractures then provide ‘the conductivity necessary to
allow natural gas and oil to flow from the formation to the well and then up through the well to the surface’ (Jackson et al. 2014: 2).

Although CSG exploration for commercial use started in Australia in the late 1930s, the first successful drilling to extract CSG occurred in 1996 in the Bowen Basin, Queensland (Baker and Slater 2008; Day 2009; Leather 2013; Senior and Skirrow 2013). Initially extracted in small volumes, the production of CSG enhanced over time, increasing by 32% per year until 2008 along with governmental plans to further raise the production rate due to the large availability of the resource (Fleming and Measham 2015; Leather et al. 2014; Carey 2012; Towler et al. 2016).

Leather et al. (2013) reported that Queensland has around 95% of the total CSG reservoir in Australia, clustered in the Bowen and Surat basins (Fleming and Measham 2014; Rolfe et al. 2007; Towler et al. 2016). However, CSG development has expanded to other areas of Queensland including the Darling Downs, the Lockyer Valley, the Scenic Rim, and the Somerset region. It has also spread to New South Wales, when exploration and or extraction occurred in the Sydney, Gunnedah, Gloucester, and Clarence-Moreton basins (New South Wales Government 2017a, b). Overall, around 40,000 coal seam gas wells are estimated to be drilled in Australia by 2030, while pipelines are under construction in the Bowen and Surat basins to transport CSG and convert it into liquefied natural gas (LNG) for export (Carey 2012; Chen and Randall 2013; Fleming and Measham 2014; Lloyd et al. 2013; Mercer et al. 2014; Thomas 2015).

Following the global imperative to reduce greenhouse emissions to address climate change, but also informing the urge to find new sources of energy, natural gas is a transitional fuel to a low carbon economy supported by renewable energy (Day et al. 2012). In addition, the expansion of the CSG industry poses as a new source of income, with increased investment and economic activity in regions such as the Surat Basin or the Darling Downs, and the projection of thousands of new jobs (De Rijke 2013).

However, the expansion of the CSG industry has also produced a polarised debate between environmentalists allied to many farmers and rural host communities on the one side, and governments and developers or mining companies on the other side (Lloyd et al. 2013; Colvin et al 2015). The main issues raised by CSG contesters include, but are not limited to, human health, water contamination, land appropriation
and devaluation, and greenhouse emissions of CSG mining and their impact on global climate change.

On the latter, however, the extent to which CSG reduces greenhouse emissions in comparison to conventional gas is still uncertain. This is particularly in relation to the amount and impact on fugitive emissions (or leakage) of methane in the production, processing, transport, and distribution of unconventional gas (Day et al. 2012; Jackson et al. 2014; Leather et al. 2013; Lloyd et al. 2013; Stephenson et al. 2012; Vickas et al. 2015).

More emissions can occur during ‘drill-out’, the stage where the gas is released for production. Once the well is completed, some methane leakage continues due to routine venting of the fracturing equipment (US Government Accountability Office 2010). Furthermore, emissions might derive from processing some natural gas, depending on its quality. ‘Processing’ refers to removing impurities and heavy hydrocarbons before the gas is pipeline ready (Howarth et al. 2011; Shires et al. 2009). Finally, other fugitive emissions may occur during gas transport and distribution (Howarth et al. 2011; Lloyd-Smith and Senjen 2011).

The most serious short-term environmental raised issue is water impacts. Fracking processes utilise and modify the composition of huge amounts of water; accordingly, environmental activists have raised concerns on both unsustainable water consumption and contamination (Bec et al. 2016; Phelan et al. 2017). Farmers and private landowners are also concerned as they use water for irrigation and stocking livestock (Gibbs 2016).

Even though fracking processes release large quantities of ‘co-produced’ water, it has been found to be often contaminated with organic and inorganic compounds. Water can be either stored in ponds or held in other structures or, if it passes federal and state quality standards, it can supplement local water supplies or reintroduced into subsurface aquifers. However, concerns rise in relation to the quality of the water to be re-used and in the contamination of water through toxic chemicals used in the fracturing mix (Davis et al. 2010; Hamawand et al. 2013; Orem et al. 2007; Ortiz et al. 1993; Rice and Nuccio 2000).

Yet another issue is that CSG reservoirs are often located beneath agricultural land, as is the case of the Darling Downs in Queensland, or the Liverpool Plains in New South Wales. Landowners do not own the mineral rights to what is under the surface of the land they own; accordingly, the state or the federal government can
license mining companies to access those lands for exploration and extraction (Bodenmann et al. 2012; Gibbs 2016).

Even though landowners (mostly farmers) have no legal right to refuse access to mining companies, they are concerned that their farming activities, the value of their properties, and their domestic life will be harmed by the unconventional gas industry (Chen & Randall 2013; Galloway 2012; Kerr 2012; Ross and Darby 2013). In addition, concerns over impacts of the CSG industry over vegetation, biodiversity, and endangered species, arose (Ross and Darby 2013; Williams et al. 2012).

Consequently, civic engagement against the CSG industry is strong in Australia (Bahnisch 2012; Mercer et al. 2014). Local communities, environmental activists, and farmers and many other local organisations have formed atypical alliances – the largest being the Lock the Gate Alliance. Mobilisation actions range from informative activities to blockades to obstruct the operations of CSG facilities that include both online and offline actions to raise community awareness; for example, through producing and disseminating movies and documentaries, including ‘The Frackman’,\textsuperscript{10} or ‘Fractured country: An Unconventional Invasion’.\textsuperscript{11}

These and many other videos are available online on YouTube and on other platforms for video sharing, for example, on Vimeo, and shared on websites and social media pages of environmental groups and organisations opposing the coal seam gas industry. Such actions particularly aim to pressure government to consider local and regional concerns over the siting of CSG wells.

**Conclusions and conceptual framework**

This chapter had a twofold focus: first, on the evolution of the environmental movement in Australia, and second, the subsequent focus on the adoption of new media by environmental activists. Through the exploration of this focus, one meta-theme was identified to further inform my conceptual framework: ‘Digital environmental activism in the Australian context’. This meta theme was informed by two themes: ‘The environmental challenge in Australia’, in relation to the issues that drove the evolution of the Australian environmental movement; and ‘Digital environmental activism in Australia’, in relation to the use of new media for environmental activism in Australia.
These two themes were further investigated through two case studies of Australian contemporary environmental activists opposing (i) logging of old-growth forest; and (ii) coal seam gas development. Building on the two themes identified in this chapter, I provided a background to the two case studies. The latter are explored in more depth through web analysis presented in Chapter 6. The latter follows Chapter 5, that outlines the research design in more detail including designing and implementing the web analysis, structuring of the interview guide, selecting interview respondents, and presenting substance and process of the analytical framework.

Before moving to the next chapters, though, I present the conceptual framework as developed through the review of the literature for this study, as it guides the next stages of the study.

**Conceptual framework**

To better understand the relationship between new media and environmental activism, and thus to fulfil and address my research aim and research questions, a conceptual framework was developed for this study. As discussed more in detail in Chapter 5, which presents the methodology adopted for conducting this study, a conceptual framework is ‘the system of concepts, assumptions, expectations, beliefs, and theories’ that supports and informs the research’ (Maxwell 2013: 402). The purpose of a conceptual framework is thus to critically analyse the literature in relation to the research focus or problem under scrutiny (Maxwell 2013).

As such, the conceptual framework guiding this study answers Research Question 1 (RQ1): *How can theories of environmental politics, science, technology and society (STS), social movement theory, and media studies be applied to the study of the potential of new media to enhance environmental activism with an emphasis on better protecting the environment?*

From the process of reviewing the literature in the areas mentioned in RQ1, three meta-themes (each informed by themes or key concepts and subthemes) were identified as most relevant to the research focus that, to reiterate, lies on the claimed beneficial potential of new media to provide environmental activists with new conduits for communication and campaigning, and on how this potential is perceived by environmental activists in Australia.
The three meta-themes informing my conceptual framework are: (i) Environmental politics and activism (ii) New media and environmental activism; and (iii) Digital environmental activism in the Australian context. The three meta-themes and the themes and subthemes informing them are reported in Table 1.

Table 1: Conceptual framework

<table>
<thead>
<tr>
<th>Meta-themes</th>
<th>Themes</th>
<th>Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Environmental politics and activism</td>
<td>1. Environmental issues and globalisation of environmental risk</td>
<td>– Environmental degradation&lt;br&gt;– Environmental awareness&lt;br&gt;– Pressure for change</td>
</tr>
<tr>
<td></td>
<td>2. Social movements</td>
<td>– Civic action&lt;br&gt;– Movements as complex networks&lt;br&gt;– Interaction</td>
</tr>
<tr>
<td></td>
<td>3. Environmental activism</td>
<td>– Environmental protection&lt;br&gt;– Diversity of networks&lt;br&gt;– Mass communication</td>
</tr>
<tr>
<td>2. New media and environmental activism</td>
<td>4. New media as a sociotechnological system</td>
<td>– Society and digital technology bound&lt;br&gt;– Decentralised communication</td>
</tr>
<tr>
<td></td>
<td>5. New media and activism</td>
<td>– Social movements seeking media coverage&lt;br&gt;– Alternative media</td>
</tr>
<tr>
<td></td>
<td>6. New media and environmental activism</td>
<td>– Mediated visibility of environmental conflict&lt;br&gt;– Communication strategies of environmental activists</td>
</tr>
<tr>
<td></td>
<td>7. Challenges to new media for environmental activism</td>
<td>– Corporate media ownership&lt;br&gt;– Digital surveillance</td>
</tr>
<tr>
<td>3. Digital environmental activism in the Australian context</td>
<td>8. The environmental challenge in Australia</td>
<td>– Environmental degradation, public awareness, and activism&lt;br&gt;– Environmental conflict and politics</td>
</tr>
<tr>
<td></td>
<td>9. Digital environmental activism in Australia</td>
<td>– digital spaces for enhanced environmental protection&lt;br&gt;– new communication tools&lt;br&gt;– Interactivity and mobilisation</td>
</tr>
</tbody>
</table>
The first meta-theme, ‘Environmental politics and activism’, investigates the relationship between environmental degradation, the extent to which globalisation affected it, and the actions of those protecting it. This relationship revealed that environmental activists increasingly pressured governments and developed networks to communicate their concerns to do more for the environment and act by taking part in social movements – in this case, the environmental movement. In contemporary context, this suggested the concept of ‘digital environmental activism’ (Hindmarsh and Calibeo 2017: 1), in relation to the substance and expression of new media and regarding environmental activism.

The second meta-theme, ‘New media and environmental activism’, focuses on new media being integrated in the everyday life of individuals as a socio-technological system. As integral part of society and of individuals’ lives, and due to their horizontal structure, which allows for more democratic, faster, and cheaper communication, new media are widely used (in addition to traditional mainstream media) as communication conduits within social movements, including the environmental movement. In using new media for their campaigns environmental groups and organisations are also presented with issues of increasing corporate media ownership and digital surveillance, which seemingly challenge such use for activist purposes.

The third meta-theme, ‘Environmental activism and new media in the Australian context’ is informed by two themes and discusses the environmental movement in Australia and its evolution over time. Such evolution also relates to investigating the adoption of communicative devices and practices by environmental activists in Australia, including new media, to communicate campaigns to the public as well as to strategize their activities (otherwise, digital environmental activism).

These three interrelated meta-themes constitute the basis for my conceptual framework, which intimately informed the next stage of investigation of this study (its empirical component). The latter is comprised, first, of the analysis of applied activist use of new media in Australian environmental activism, conducted via web content analysis (Chapter 6). Second, the empirical component of the study is comprised of the data collected through interviews.

The conceptual framework was of assistance in the data analysis of both web content and interview data. Regarding web content analysis, it was of assistance in the identification of digital communication practices and devices and the analysis of their use by environmental activists in the context of my case studies. In turn, regarding
interview data analysis, the conceptual framework was of assistance in two ways. First, it was used as a guide to produce the interview guide to my semi-structured interviews. Second, it was of assistance in the interview data analysis to identify recurring themes and patterns within interviews. The conceptual framework was also further informed by the new themes that emerged during data analysis, as also highlighted in the literature on the relationship between the conceptual framework and the research design as mutually informing (Anfara and Mertz 2006; Maxwell 2013; Ravitch and Riggan 2012).

Notes

1 On these developments in the case of New South Wales, in the late 1970s, the NSW Liberal Government approved planning regimes concerning massive high-rise plans for office and commercial construction and freeway development in inner suburban areas. However, ‘the legislative terrain of planning in New South Wales … provided little room for contestation or debate … Public housing tenants, activists, NGOs, for example, had no rights’ in submitting alternate claims, or to appeal planning decisions (Cook (2011: 2).


3 The RFA drew upon the conclusions of the ESD working group on forest management. The working group had the task to develop strategies and timelines, to ensure that ‘biological diversity, wilderness, old-growth, and other values were adequately reserved or managed, to ensure that forest use was sustainable, and to maximise economic development within these constraints’ (Kirkpatrick 1998: 33).

4 The federal government and most states and territories signed the National Forest Policy Statement in 1992, with Tasmania joining in 1995. The document set new directions for forest management in Australia and had as a key outcome the development of the Regional Forest Agreements (Kanowski 2015).

5 According to Kirkpatrick (1998), one reason why the RFAs failed was due to state government obstructionism in resisting the incorporation of world heritage values into the policy process. This was because large areas of forest might have easily qualified for listing as world heritage, and, accordingly, been free from potential development (Kirkpatrick 1998). However, Kirkpatrick (1998: 35) argued that, ‘this threat [to development] was more imagined than real, as forested land with sufficient integrity to have a chance of being recommended for listing … was almost entirely within the existing reserve system’. In addition, the policy process to include large areas of forestland into world heritage listing
was not easy, as it had to constitute ‘a very strong case for its universally outstanding quality’ (Kirkpatrick 1998: 35).

Examples of online forums where action was discussed and organised were Dive-Oz, an Australian website focused on scuba diving that also hosted forums (see http://goo.gl/oRh1d7), or Home of Poi, an online shopping website also hosting forums on diverse topics (see https://goo.gl/P0CNs8). In the Ningaloo campaign, online forums added to the websites of environmental organisations (see http://www.saveningaloo.org/).

According to the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES 2017: 1) a forest is ‘an area, incorporating all living and non-living components, that is dominated by trees having usually a single stem and a mature or potentially mature stand height exceeding 2 metres ... This includes Australia’s diverse native forests and plantations, regardless of age, and encompasses areas of trees that are sometimes described as woodlands’.

As reported by Evans (2016: 130) the term ‘forest’ indicated ‘forest and woodland dominated by trees at least 2 m high, with at least 20% canopy cover and a minimum area of 0.2 ha’.

‘Basins’ are geological formations comprised of tectonic units consisting of aquifers and confining layers deposited in Australia from 65-250 million year ago, in the Triassic, Jurassic, and Cretaceous periods (CSIRO 2017).

See http://frackmanthemovie.com/ [accessed 11 September 2017].

See http://goo.gl/0ePGa4 [accessed 11 September 2017].
5. Research Design

Introduction

This chapter outlines the research design of the study, as especially focussed on my field research of interviews with environmental activists working in campaigns across Australia to better protect the environment; and subsequent analysis of the data. In coming to this part of the study, we are reminded first of the focus of the research, the aim and research questions, by which to set the appropriate summary background and rationale for outlining the field research methodology, methods and data analysis.

First, to recall, the focus of this study is on discerning more clearly the posited beneficial potential of new media in Australia to enhance environmental activism, as also contextualised by the posited limitations to that potential. As such, the research aim is to investigate the potential benefits and limitations of new media for Australian environmental activism regarding environmental protection, as particularly informed by campaigner perceptions of such potentiality.

The qualitative approach

According to Layder (1998: 9), ‘the purpose of social inquiry is to produce even more adequate knowledge’ about the social phenomenon under study and an adequate and reliable ‘explanatory framework’ to describe the way, society and life are organised (see also Anfara and Merz 2006). Thus, social research presents a system to better visualise and understand the complexity of the world (Neuman 2011). This system organises and condenses knowledge through interconnecting and organising ideas according to certain research methodologies (Bryman 2008; Layder 1998; Neuman 2014).

Distinguishing research methodologies are two broad categories of the qualitative and the quantitative, on ways to conduct social research (Neuman 2014: 17). Adopted for this study was a qualitative approach, from literature review to data collection and analysis. In the following, I illustrate why qualitative methodology was considered best suited for this study. As such, I outline the main differences between the two approaches starting with quantitative methodology.

Quantitative research methodology applies a deductive approach to theory. Typically, a hypothesis is deduced from theory. It is then scrutinised through empirical
testing strategies to confirm or reject it and critically reflect on the theory (Bryman 2008; Creswell and Plano Clark 2007). Quantitative strategies most often include statistical analysis of numerical data to connect theory to findings and draw conclusions based on logic, evidence, and argument (Soiferman 2010; Walle 1997). The ontological assumption of quantitative research is ‘objectivism’, which implies that social phenomena are ‘objective identities’ separated and independent from social actors (Bryman 2008: 18).

The objective ‘distance’ then allows researchers to generalise their results beyond the context in which experiments are conducted, so that results can also apply to contexts and individuals not included in the study (Soiferman 2010; Bryman 2008). However, a key criticism of the quantitative approach is that a too ‘static’ view of social life is the outcome, which is too simplistic regarding the many nuances of ‘subjective’ social life. Indeed, that it ‘dehumanises’ research ‘to reduce bias and increase “rigor”’ (Walle 1997: 525). Instead, interpretive approaches found in the qualitative methodology offer better understandings of these nuances (Bryman 2008: 160; Walle 1997).

Qualitative methodology thus analyses data to tell a ‘story’ on the phenomenon under investigation and interprets data to describe ‘what the story means’ (Le Compte and Schensul 2010: 220). In contrast to objectivism, the ontological assumption of qualitative methodology is ‘constructivism’. Constructivism considers the interactions of individuals as part of social phenomena and ‘in constant state of revision’ by social actors (Bryman 2008: 19), thus any numerical measurement can be inaccurate as soon as the measurement occurs. To study social phenomena, then, qualitative research focuses on interpreting the social construction of ‘words’ to best grasp the subjective perspectives of individuals on how they interact and give meaning to these interactions (Bryman 2008: 22; Neuman 2011).

As such, qualitative research explores textual and spoken data in a vast range of diverse forms, including interviews, observations, photos, and observations. Data collection occurs through literature review, documentary research, field research, and historical-comparative research (Neuman 2014). While the latter involves collecting and comparing data from different periods in history and different society settings (Neuman 2014), field research involves collecting observations in the field through respondents and the meanings they give to social phenomena. Nevertheless, qualitative methodology has attracted criticisms, especially in relation to the difficulty of replicating qualitative
results, generalisation problems, and being too subjective to the researcher’s point of view (Bryman 2008; Sarantakos 2013).

In sum, qualitative and quantitative methodologies differ on many levels, including the type of data analysed, epistemological and ontological orientations toward theory, and the interpretation and utilisation of results. Nevertheless, the distinction between these two methodologies is not strictly rigid (Bryman 2008; Flick 2009; Hardy and Bryman 2004; Mahoney and Goertz 2006). Hardy and Bryman (2004), for example, identified a number of commonalities between the two methodologies. For example, both qualitative and quantitative researchers can be concerned with answering research questions about social reality, even though the nature of the questions differs as well as the type of analysis to answer such questions. In addition, both quantitative and qualitative researchers compare the results of their analysis back to the literature for research validation and contribution to the literature ideally (Hardy and Bryman 2004; Neuman 2011).

It is thus the researcher’s task or approach to use and/or select methodology that is best seen to fit the field of study and/or topic of study in the most effective way; which also informs the selection of the research topic, and the development of aims, intended use of the results, and theoretical orientations (Neuman 2011). For my study, to reiterate, the research methodology approach considered most suitable was qualitative, with a minor quantitative component used in thematic data analysis. This approach was most suitable to investigate, capture, and interpret the perspectives of environmental activists according to their ‘everyday settings’. Alternatively, their ‘lived experiences’ as social actors of using new media for environmental activism, which was the social context mediating the respondent actions and behaviours, including their interview responses (Neuman 2011; Smith 1992).

In addition, with my research focus on Australia, the study could not attempt, or even propose generalised, universal explanations (such as the quantitative approach proposes) on the use of new media for environmental activism in local and global contexts of differences and geopolitics. Through field work, I was also ‘immersed’ in the everyday setting of the respondents to grasp their perspectives in relation to how and to what extent they valued new media to protect the environment more effectively in Australia.

As such, according to an interpretivist-social constructive approach I co-produced knowledge in discursive context with the respondents though the interview questioning stage of my study; which again indicates this type of research is subjective rather than
objective (Lincoln et al. 2011). As such, it helped me to interpret the respondents’ meanings more accurately than a quantitative approach could achieve. In the following, I address the research process that the qualitative approach informed.

**Designing the qualitative study**

The research design of the research activities at every stage of the study – including developing the research aim and questions and collecting and interpreting the data (and any adjustments of these activities considered necessary through the progress of the research) – inform and influence each other due to the flexibility that qualitative methodology enables (Maxwell 2013). Hammersley and Atkinson (2007: i) call this process ‘a reflexive process’ that applies to every stage of the study. Such process informed this study, where at certain points of the research adjustments occurred in the finalisation of the research questions, the collection and interpretation of data, and in the analysis of results and their presentation.

As such, the reflexive process in this study aligned to the view of Maxwell (2013) that qualitative research does not indicate a lack of structure or design, but that the concept of design reflects a ‘looser sense’ that enables necessary flexibility regarding research aims and objectives, significance, theoretical design, analysis, and methods. Therefore, my research design also demonstrated this ‘structured-flexibility’ approach through a pre-structured approach in contrast to an unstructured one (Maxwell 2013; Mertens 2010; Miles and Huberman 1994; Punch 2006).

While unstructured (or unfolding) research design is characterised by a loose design and open-ended questions, a pre-structured research design relies on pre-structured research questions and the development of a conceptual framework for research direction (Mertens 2010; Maxwell 2008; Punch 2006). The qualitative design of this study comprised two stages of investigation: (i) literature review and developing the conceptual framework; and (ii) fieldwork investigation, comprised of web content analysis and qualitative interviews. The conceptual framework then informed every stage of the research design, from some refocusing of the research questions to selecting the most appropriate method of data collection and analysis, as illustrated in the next two sections on (i) literature review and the development of the conceptual framework; and (ii) The analytical approach: Web analysis and fieldwork through interviews.

**First stage of investigation: Literature review and development of the conceptual framework**
The first stage of investigation was to conduct a literature review of theoretical areas considered most relevant to my topic, as indicated by my research aim and questions. These areas were environmental politics, media studies, social movement theory, and science, technology and society (STS) studies. The literature review (alternatively, the theoretical framework) is a necessary and fundamental step in conducting research as it provides knowledge and perspectives to better understand the phenomena under inquiry (Anfara and Mertz 2006; Neuman 2011).

In short, the review analyses the theories and findings in the literature about the topic area under inquiry to be understood more in depth through the downstream data collection and analytical components of the research (Bryman 2008; Flick 2009; Kumar 2011; Maxwell 2013; Neuman 2011). In sum, conducting a literature review helps researchers to organise their ideas and research direction by linking them to existing knowledge and methods (Flinders and Mills 1993). As such, I became more familiar with the research area under inquiry, and connected existing knowledge with the research project, which stimulated my ideas for further research, and eventually led to the conceptual framework I developed from the literature (following Neuman 2011: 124).

This was because my experience of the literature review aligned to the method of Kumar (2011) that the literature review comprises three stages. First, I identified the literatures in the topic area. Second, I selected the key areas among those literatures identified in the previous stage, to inform the topic under inquiry. Third, I reviewed these key areas to develop the literature review (or) theoretical framework, from which the conceptual framework emerged, as presented in Chapters 4.

Informed by the interrelationships of the theories, concepts, arguments, practices and understandings in the literature of these two areas (Miles and Huberman 1994), my conceptual framework thus mapped the interconnections of the relevant theories for my downstream research and refined the research questions slightly, as well as other adjustments (as mentioned above) (Maxwell 2005; also, Ravitch and Riggan 2012). As such, in accordance with Maxwell (2005: 39), the conceptual framework acted as a ‘tentative theory of the phenomena’ under observation to inform the rest of the research design. In other words, the conceptual framework becomes ‘the researcher’s idea on how the research problem [was] explored … [and] outlined the input, process and output of the whole investigation’ (Regoniel 2010: 1).
Informing the conceptual framework, I identified these key aspects, also referred to as ‘themes’. I followed Owen’s (1984) thematic analysis, which implies finding words or expressions in text typically characterising and categorising concepts for their ‘recurrence’, ‘repetition’ and ‘forcefulness’ (Owen 1984: 274). According to Owen (1984), recurrence occurs when finding the same thread of meaning even when a word choice changes. Repetition, in turn, extends recurrence, as it refers to the repetitive mention of the same word or expression in a discourse. Forcefulness, in turn, occurs when emphasis reflects the use of a particular expression or word. In Owen’s (1984: 274) words, ‘themes’ present ‘a limited range of interpretations that are used to conceptualize and constitute relationships’; as the most salient aspects in the literature related to the topic under inquiry (Bryman 2008; Owen 1984; Riessman 2008).

The conceptual framework was then built on the nine themes identified through the literature review in Chapters 2-4 (using Owen’s approach) to inform my study, as also mentioned in Chapter 1. To reiterate, these themes were: (i) environmental issues and globalisation of environmental risk; (ii) social movements; (iii) environmental activism; (iv) new media as a sociotechnological system; (v) new media and civic participation and activism; (vi) new media and environmental activism; (vii) challenges to new media; (viii) environmental issues in Australia; and, (ix) digital environmental activism in Australia.

As such, the conceptual framework responded to Research Question 1: How can theories of media studies, STS studies, and environmental politics be applied to the study of the potential of new media to enhance environmental activism with an emphasis on better protecting the environment? In turn, the conceptual framework informed the design of fieldwork methodology from web analysis to fieldwork through interviews, including the development of the interview guide, fieldwork ethical clearance, web content analysis, interview pilot testing, and interview site selection, selection of respondents, the interview process, and finally, data analysis; as presented in this chapter.

Second stage of investigation: Web content analysis and fieldwork through qualitative interviews

The second stage of investigation involved data collection by way of (i) web content analysis, and (ii) semi-structured, face-to-face interviews. The purpose was to gather on-the-ground data and then analyse it to help generate findings and understandings relevant
to the study, in addressing Research Questions 2-6. The data collection and subsequent analysis also aimed at identifying differences and variations between the perceptions of groups and organisations in relation to three variables in following the analysis of the two case studies presented in Chapter 4.

The first variable, ‘activist organisational structure’ (or ‘group type’), referred to large groups (ENGOs) and small ones (community groups). The second variable ‘campaign issue’ referred to the campaign focus that both ENGOs and community groups had in relation to the two case studies (fracking campaigns or old-growth forest logging ones). Then, the third variable ‘location’ aimed at identifying variations between activist perceptions according to their location (by Australian state). The identification of these variations was aimed at better informing the analysis in regard to both web content and interview data analysis and, therefore, in addressing Research Question 5: How are activist practices and perceptions of new media tempered by activist organisational structures (group types), issues (campaigns), and campaign location?

Web content analysis
Web content analysis was employed to investigate the uses and communication strategies of Australian environmental activist organisations and groups contesting old-growth forest logging and coal seam gas, as discussed in Chapter 4 in relation to my case studies. The web content analysis focused on the identification and occurrence of campaign features characterising the websites, as well as those characterising the social media pages of these organisations and groups (Foot and Schneider 2006; Kavada 2012).

The web content analysis built upon Foot and Schneider’s study (2006) on the role of the Internet and websites, as used by campaign organisations during the 2000, 2002, and 2004 US election campaigns. The analysis developed by Foot and Schneider (2006) involved a ‘web features content analysis’, which refers to the analysis of web links (or URLs) linking to campaign issue definition and awareness, online opinion polls, campaign actions and news, other promotion activities, and recruitment and support actions, as found in the analysis below (see also Kavada 2012: 36).

The coding model developed by Foot and Schneider (2006) involved four key web-informed practices of the web for campaigning. The first ‘foundational’ practice was to create and distribute content to ‘inform’ those who visited a campaign website. The second practice aimed to ‘involve’ website visitors to interact with the activist group, for example, by inviting visitors to join a mailing list be a volunteer, and/or make donations
to the campaign group. In turn, the third practice aimed to ‘connect’ visitors to other political actors such as other organisations and groups, policy makers, and other activists, or opponents through creating digital ‘bridges’ for the public to reach them. Finally, the fourth practice aimed to use the web for ‘mobilisation’ purposes (Foot and Schneider 2006: 47).

As such, the features analysis involved the identification and use of web features used by environmental groups in the Australian campaigns on forest logging and coal seam gas (Foot and Schneider 2006; also, De Bakker 2015; Jun 2011; Kavada 2005; Shumate and Dewitt 2008). That said, the web analysis in my study involved 15 organisations and groups, at the time of writing (December 2017), prominent in Australian campaigns of logging of old growth forest and coal seam gas through new media. The analysis thus focused on the websites of these organisations and groups and the online features used.

In relation to analysing the key communication features on social media platforms, the focus was on Twitter and Facebook as most used by the selected groups and organisations. In turn, the social media feature analysis focused on publicly accessible Facebook and Twitter ‘pages’, as the most often used communication devices. By contrast, for example, to Facebook ‘groups’, which were typically ‘private’ (Facebook 2017). The content analysis for each Facebook and Twitter page also sampled several posts published by each group and organisation.

**Interviews**

Following the web features content analysis, which analysed the ‘nuts and bolts’ of new media informing environmental campaigning through the website interface, were interviews. The interviews aimed to attain a better or deeper understanding of the perspectives of environmental activists on new media used for activist purposes (Bryman 2008; Patton 2002; Seidman 2013), in relation to Research Questions 2-6.

As mentioned above, interviews enable a process of co-production of knowledge through the conversational relationship between researcher and respondent (Mason 2002: 62; see also, Gray 2017; Kumar 2011; Kvale and Brinkmann 2009). The purpose of qualitative interviews is thus to grasp the view of the world of the respondents in relation to the topic under inquiry (Kvale and Brinkmann 2009). Because they allow researchers to collect such in-depth and rich data about people’s perspectives, interviews are a key method in qualitative research, among other methods of data collection, including focus
groups and observations and analysis of written text or video and audio material (Silverman 2016).

The approaches to qualitative interviewing depend on the structure of the interview and on the extent to which questions are pre-formulated (Berg 2002; Patton 2002). As such, qualitative interviews range from unstructured to semi-structured ones (Bryman 2008; Adler and Clark 2015). Unstructured interviews are of an informal, conversational nature, and usually consist of a few open-ended questions with no predetermination informing the structure of the interview, except from a brief set of prompts (Bryman 2008; Patton 2002).

In turn, semi-structured interviews aim to gather respondent perspectives through a more guided pre-determined interview guide. The interview guide usually includes a set of structured questions, which allow flexibility through prompts, and a few open-ended questions. These questions and prompts are designed before the interview and listed in a suggested order and can be modified after one or two interviews to achieve an enhanced interview under field conditions (Adler and Clarke 2015).

A more serious modification can see semi-structured interviews allowing question modification for each participant, and for broad openness to discuss topics that may arise during the interview (Adler and Clarke 2015; Kvale and Brinkmann 2009). However, time constraints can temper the depth of such modification, also if the responses to each interview are to be compared within certain pre-structured boundaries of investigation (Bryman 2008; Mertens 2010). Overall, semi-structured interviews allow both the researcher and the participants to be flexible in the way arguments are discussed and processed (Gill et al. 2008 Patton, 2002: 248; Teddlie and Tashakkori, 2009).

Therefore, to address the specific topics delineated in my research questions and conceptual framework, I chose semi-structured interviews as the most suitable for my study, with questions structured for comparison. In addition, face-to-face over interviews were preferred over written questionnaires or Skype interviews. Several reasons informed this decision. For example, in contrast to written questionnaires, face-to-face interview researchers can detect social cues such as body language, voice and facial expression. These cues according to Kvale (2007: 56) ‘provide a valuable context for the later analysis of transcripts’ (see also Kivits 2005; Opdenakker 2006).

In addition, although face-to-face interviews are time consuming and there may be significant costs involved with their implementation, they were still preferred to Skype/telephone interviews. This is because the latter are often characterised by
significant technical problems, from potential interruptions to breakdowns in computer and video operations. In addition, both interviewers and interviewees usually have to arrange special or suitable online interview facilities. Such problematic aspects often lead to the disinterest of potential interviewees to engage in the first place and/or for interviewees to continue once any interruptions were experienced (Deakin and Wakefield 2013). Such complications, of course, increase with the number of interviewees and their location, which, in my case, was 34 scattered across Australia, which already presented several logistical problems regarding setting the interview schedule to a rather tight timetable.

Therefore, to get the best in-depth understanding possible of the perspectives of environmental activists in Australia on the potential of new media for protecting the environment more effectively, I conducted face-to-face, semi-structured interviews whose interview guide was, to reiterate, based on the conceptual framework (Chapters 2-4).

**Interview guide development**

Conditioning the design of the interview guide is the research aim and questions, and the yielding of as much information as possible about the project (Gill et al. 2008). Accordingly, the three meta-themes on which the conceptual framework is built upon, as identified from the literature review: (i) environmental politics and activism; (ii) new media and environmental activism; and (iii) environmental activism and new media in the Australian context. These three meta-themes, and the subthemes informing them, informed the development of the interview guide.

The interview guide was organised in two main parts (as meta-themes) for data collection and analysis, which reflected my two research questions on ‘benefits’ and ‘limitations’ regarding the potential of new media for environmental activism to protect the environment in Australia, respectively. The first meta-theme comprised four questions aiming to solicit respondent perspectives on the beneficial potentialities.

In turn, the second meta-theme comprised five questions aiming to solicit respondent perspectives on the limitation potentialities, of digital surveillance and corporate ownership and any other issues that respondents wanted to raise. For every question I also had a list of prompts, which also reflected the themes of the two meta-themes to facilitate the conversation and engage more with the respondents in case certain topics were not brought up by them (Leech 2002). In turn, any questions that respondents
might have about the study, the interview process, or the treatment of their personal data in relation to their storage and use and publication of my results, with a consent form handed out, according to the interview ethical clearance guidelines of the university.

Introducing the two meta-themes of the interview guide was a section of introductory questions. In this section, I first introduced myself and went briefly over the study again for clarity (following the earlier dissemination of an initial contact email and then a formal interview information sheet once they accepted). I then invited respondents to introduce themselves and the activities of the environmental groups and organisations they were representing or involved with.

This introduction was aimed at presenting the study to the respondents and getting them to feel more comfortable with the issues being discussed (and the interview process in general); and also as a way to get to know more about the respondents in relation to the investigation. As part of this process, for example, I increased my understanding that some respondents belonged to larger and more hierarchically structured organisations (ENGOs) and were in powerful organisational careerist positions, while others belonged to smaller and more grass roots groups (community groups) characterised by less hierarchical structures and voluntarism (for further detail on the substance and status of respondents see selection of respondents’ section below).

*Interview ethical clearance*

Griffith University Human Research Ethics approval informed the process of implementing the interviews, including approaching the respondents for interviews in the first place, conducting the interviews according to consent requirements, and data de-identification, transcription, evaluation, and storage. Ethical clearance of the field research was granted to the research on 21 December 2016 (reference number: GU Ref No: 2016/893), in accordance with the ethical requirements at Griffith University. These requirements are set out in the Griffith University Code for the Responsible Conduct of Research, as informed by Australia’s National Statement for Ethical Conduct in Research Involving Humans (National Health and Medical Research Council 2015).

The documents submitted for approval were first, the initial contact letter, which summarised the project, and invited participation. Second, the formal information sheet, which followed if the targeted participant agreed to be involved in response to the initial contact email (see Appendix A). It contained explanation of the research aims, the voluntary nature of participation in the research, the de-identification process to safeguard
the respondents’ privacy, and several other items of information regarding other risk safeguards. Third was the consent form, which aimed to ensure participants fully understood and accepted the interview arrangements (see Appendix B). This document was also sent digitally to respondents before interviews took place. It was again referred to at the beginning of the interview for participant signing or non-signing once the project had been explained again and after any clarifications sought. As it occurred, all my respondents signed the consent form.

The consent form also did not contain references, to ensure respondent anonymity, and stated that confidentiality was employed in the treatment of their personal information. In more detail, anonymity is the elimination of any identifying information about participants in a research project. As Sieber and Tolich (2013: 153) stated, anonymity in qualitative research refers to the researcher not acquiring any ‘unique identifiers’ about the respondents (for example, their full name, or home address). As such, anonymity is a hardly achievable goal, especially for research projects that involve face-to-face interviews and use of snowballing sampling technique (such in the case of this thesis). This is because, especially in the case of face-to-face interviews, both the researcher and the interviewees acquire information about each other (van den Hoonoord 2002).

The concept of anonymity is closely related to that of confidentiality; however, the two concepts do not share the same meaning (Wallace 2010; Wiles et al. 2006). Confidentiality refers to how respondents’ data and privacy are treated by the researcher, thus implying the researcher knows some of the ‘unique identifiers’ of the respondents but does not disclose them (Sieber and Tolich 2013). According to Mertens (2010: 342), by ensuring confidentiality ‘the privacy of individuals will be protected in that the data they provide will be handled and reported in such a way they cannot be associated with them personally’ (also Kaiser 2012). In sum, confidentiality in qualitative research is aimed at protecting participants from any risk of harm, for example in the form of repercussions by third parties if their identity is made public.

While aiming at protecting the identity of participants, however, confidentiality can also present researchers with some challenges (Kaiser 2009; Saunders et al. 2014). These include, for example, as noted by Brinkmann and Kvale (2015), legal problems in the case the researcher becomes aware of criminal behaviours by the participants or other individuals associated to them. As Brinkmann and Kvale (2015: 95) commented, the ethical requirement for confidentiality might impact on the quality of the research, for
example, by enabling researchers to interpret the statements of the respondents ‘without being gainsaid’. Also, because their names are not mentioned in the study, respondents wishing to have their name disclosed are denied direct credit to the contribution to the research (Brinkmann and Kvale 2015; Parker 2005).

However, Grey (2004) suggested that although not an absolute requirement to research, the application of ethical principles and confidentiality aimed at protecting welfare of participants should be a priority for researchers. More importantly, the Griffith University’s Research Ethics Manual (2015: 15) reports that there are circumstances where confidentiality and or anonymity are necessary, for example, ‘where there is at least a perceived risk associated with the collected data (e.g. disclosures of illegal behaviour) it might be preferable that no one can associate responses with individuals’.

As such, even though the perceived risks associated to the data collection were low for my respondents, in accordance with the ethical clearance requirements at Griffith University the data was kept confidential and the names of the respondents not disclosed in this thesis. In addition, and in consultation with the Research Ethics’ office (pers. com. K. Madison on 17.08.2018), I was specified to keep confidential also the names of organisations or community groups that my respondents were representing. This is because key persons or spokespersons for certain organisations could be easily identifiable, for example, through the name of their organisation or group. However, while not disclosing the names and the names of their organisations, to provide context to the interviews I was allowed to describe the principal activities respondents carried out in terms of campaigning as well as the respondents’ role, as described in more detail in the ‘Selection of Respondents’ section below.

**Pilot testing**

With ethical clearance received for the fieldwork, I conducted two pilot interviews on 10 February 2017, at the Nathan campus of Griffith University. The purpose of pilot testing is to ensure that respondents understand the interview questions. Second, to test their operability rewarding the time it takes (where one-hour interviews are considered the most efficient to conduct for both interviewer and respondent), and the structure of format of questions and their content to elicit the most meaningful responses (Bryman 2008; Neuman 2011).

I selected two university colleagues to conduct my pilot test. Both had prior experience in conducting face-to-face and focus groups interviews. Therefore, the useful
feedback they provided reflected their experience on how to get the best from the interviews regarding terms mentioned above. For most effect, I tape-recorded the interviews, and took notes during and after the interviews occurred. Later, this useful practice informed my field practice to keep record of my observations in relation to the respondents’ reactions during the interview, as well as to new ideas emerging over the course of the interview (see also Bryman 2008; Patton 2002).

In addition, highly useful was that through pilot testing I gained familiarity with, and insights to, the practice of interviewing, which helped build my confidence in using this research method to my advantage in eliciting meaningful information in a timely manner (Bryman 2008). Second, I identified areas in the interview guide that needed strengthening. For example, I improved and simplified the explanation of one of the key concepts in the second part of the interview and added a few prompts to the questions. Nevertheless, the process of applying small refinements to the interview guide occurred in the field as normal business, thus reflecting the flexible nature of qualitative research (Gill et al. 2008; Patton 2002: 248; Teddlie and Tashakkori 2009). Overall, I gained efficiency and effectiveness of conducting my interviews by way of the pilot testing.

**Site selection**

Initially, and following my case studies on campaigns opposing old-growth forest logging and coal seam gas (Chapter 4) my fieldwork investigation was limited to the eastern seaboard of Queensland, New South Wales, Victoria and Tasmania for reasons of time and respondent representation regarding the production of my thesis. The latter reason was due to the strong and well-established environmental campaigning and activist tradition or culture in these state, as also explored across the two key case studies of the logging of old-growth forest and controversial coal seam gas (CSG) development, as discussed in the previous chapter (Chapter 4); in addition to any number of other environmental issues.

However, on reflection, the study sought a whole of Australia representation, and by the time of the fieldwork looming, strong environmental campaigns that employed new media were also occurring in Western Australia, Australian Capital Territory, and South Australia. Therefore, the scope of investigation was widened to include these areas, with the exception the Northern Territory, mainly due to its remoteness from where I was based (Brisbane), and especially due to time and funding constraints for me as a PhD candidate. As such, Figure 1 illustrates the site selection for the interviews.
As we can see from Figure 1, the sites included metropolitan city, regional, and local ones. The type of locations was due to the status and nature of the environmental group or organisation interviewed. Larger organisations (ENGOs) were mostly in metropolitan city settings. Accordingly, interviews with representatives of these organisations occurred in Brisbane, Sydney, Melbourne, Canberra, Adelaide, Hobart, and Perth. In turn, and with a few exceptions, interviews with environmental groups (typically as local and small) occurred in the Scenic Rim region, Queensland; the Northern Rivers and North-West Slopes regions, New South Wales; the East Gippsland region, Victoria; the Waratah-Wynyard Council and Tamar Valley region, Tasmania; and the South West region, Western Australia.

**Selection of respondents**

Informing the selection of respondents was that they must be environmental activists belonging to groups and organisations that used digital media for their activities and campaigns. Literature interrogation and web searches first selected potential participants as ‘key informants’ with experience and knowledge about ‘the enquiry setting’ (following Patton 2002: 321; Kumar 2011; Marshall 1996; Padgett 2016). In other words, key informants in qualitative interviewing are individuals who have a formal role in the
community they represent, which ‘expose them to the kind of information being sought by the researcher’ (Marshall 1996: 92).

Then I applied a non-random, ‘purposeful’ sampling strategy to the pool of potential participants to identify the ‘most knowledgeable’ individuals in relation to the phenomenon of interest’ (Neuman 2011: 257); which was complemented by ‘snowballing sampling’, through which I selected five respondents through the recommendations of other key informants (Patton 2002: 237). Although initially 42 groups and organisations were identified and approached to take part to my study, 34 agreed to be interviewed. These respondents were representatives of environmental organisations as community groups and/or ENGOs, as organisations most involved in the Australian environmental movement, especially the case studies investigated.

As discussed in Chapter 2, the environmental movement is an ‘amorphous’ social movement that aims to create social change, and, as such, can also be referred to as ‘a social protest or challenge movement’ (Schnaiberg 1980: 364; also, Doyle and Kellow 1995; Doyle and McEachern 2008; Rootes 2007). The amorphous nature of the environmental movement indicates the diversity and constant transformation that characterises its composition, both in terms of ideologies and the participants who work within it (Rootes 2007; Saunders 2013; Doyle and McEachern 2015). The diversity of the environmental movement was visually presented in (Chapter 2, pages 34-35) by the ‘Palimpsest Model’ of Doyle and Kellow (1995: 97). The model illustrates how the environmental movement is comprised of diverse networks and streams that continuously form, reform, and change, define and redefine their scopes, and are characterised by various organisational structures (Doyle and Kellow 1995), which also includes my case study groups as shown in Table 2 below.

The organisational structures of environmental groups are diverse and range from formal (vertical) ones, typical of large ENGOs, to informal (horizontal) ones, typical of community groups. Formal structures are highly hierarchical ones that comprise boards of directors, committees, paid staff, a constitution, and field volunteers. Large ENGOs are often coordinated in geographically-defined hierarchies. Typically, as shown regarding my case studies on CSG and old-growth logging, members are coordinated at the local level by state members of an organisation’s headquarters, usually located in capital cities (Willets 2006). This is the case of large organisations such as the transnational groups Greenpeace or The World-Wide Fund for Nature (WWF), as well as
(on a smaller scale) of Australian conservation councils such as the Nature Conservation Council in NSW, or the Conservation Council South Australia.

As mentioned above, the organisational structures of environmental groups can vary considerably. For example, some ENGOs share some key features with traditional organisations, such as a board of directors and a constitution, but their organisational structures are more decentralised structures, as in the case of Avaaz, 350.org, or the Australian GetUp! (Cox 2013; Vromen 2015; Chadwick 2013). These characteristics are typical of ‘hybrid’ organisations or groups (Vromen 2017: 77), discussed in more detail in Chapter 4 in relation to the evolution of the environmental movement and its use of new media.

Informal structures, in turn, characterise environmental community groups (also as grassroots ones), which can form either spontaneously through citizen concerns or are derived from larger organisations. Single-issue community groups, for example, regarding wind farms, CSG, or logging, can develop spontaneously and/or from existing local social groups. They are usually voluntary and have a shared view on the ‘ethical or appropriate relationship between humans and the world around them’ (Kempton et al. 2001: 561) in having environmental landscape and place identities and values (Hindmarsh 2010: 556-557). In such context, the campaign focus and tactics of community groups can be quite diverse, as campaigns vary. For example, from preservation of pristine natural environments to human induced damages to the environment like toxic waste disposal and climate change. Tactics, in turn, can vary widely from educational activities to mobilisation and protest actions (Kempton et al. 2001).

That said, once identified groups and organisations operating in Australia in the campaigning areas of fracking and old-growth logging I developed a list of potential respondents. After the project was granted ethical clearance, I started to contact the potential respondents via email. However, this process took longer than expected, as I often had to follow up the email correspondence with phone calls, which turned out to be very convenient (perhaps because of the accessibility advantages of cell phones), although more time and energy consuming than emails. The potential participants also appeared to like phone contact. I had the impression they particularly appreciated having a phone conversation with me where I took the time to explain the interview process and could answer their questions directly, in a more personal way than I could per email, at least for some of them.
Another tool, again highlighting the potential benefits of new media, found useful in making first contact with potential respondents was Facebook’s messenger app, for several reasons. For example, sometimes the environmental groups and organisations I was trying to contact did not indicate their email address or phone number on their websites; or, some did not have a website at all. All of them, though, had Facebook pages (which mirrors my findings in Chapter 4 about Facebook). As such, Facebook messenger was an even handier tool for me to quickly contact these groups and organisations and ask for an email address or for the contact details with the most knowledgeable person in relation to my topic.

However, the ethical process for the conduct of research necessitated I send an email to all potential participants with information about my research project, summarised in the body of the email, which I did. When they communicated their availability and/or interest to be interviewed, I then sent them the formal information sheet and the consent form as documents attached to the email, as described above in the interview ethical clearance section.

Some issues also arose with one of the key environmental groups I wanted to include in my fieldwork. This group raised concerns in relation to their privacy, the interview process, and the research project. It requested that I filled out a protocol form with further information about my research for their final evaluation, which was eventually approved by the group and allowed me to contact them further to organise an interview with it. However, the group overturned this decision a bit later on, and gave me the feedback that due to them having received an overwhelming number of interview requests in the past, they could not be further involved with other researchers. Although the outcome of this experience did not affect the process or outcome of my research – as they were just one among the many groups I was interested in interviewing – the process deferred the start of my field work of approximately one month.

As a result, and eventually over three months of seeking participants, 34 key activists were recruited for my fieldwork, a number considered be sufficiently representative of the phenomenon under inquiry, and manageable in terms of data analysis (Baker and Edwards 2013). The 34 environmental groups and organisations included in this study were both single-issue and multi-issue focused. Typically, multi-issue organisations were formally structured and focused on a range of issues that included fracking and/or old-growth forest logging, for a total of 17 between ENGOs and State Conservation Councils, which existed across all Australian States. In turn, single-
issue groups were typically informally structured ones, for a total of 17 community
groups. Of these, eight were focused on fracking and nine on old growth forest logging.

The list of respondents is shown in Table 2 is comprised of two parts. The first
part indicates respondents belonging to large (state or national) organisations with state
branches, usually with multiple-issue campaign focus. The second part indicates
respondents belonging to community groups (local or regional), usually with single-issue
campaign focus. Specifically, column one (‘Organisation Type and Code’) shows the
organisation type, and the code used to refer to each respondent in the analysis. The
acronym ‘ENGO’ signifies non-governmental environmental organisations and ‘CG’
signifies community groups, with a number added at the end to differentiate them.
Column two (‘Role of Respondent’) indicates which role the respondents had in the
organisations or groups they represented.

In turn, Column three (‘Headquarters Location’) indicates where the respondents
and their organisations and groups were primarily based. Column four (‘Campaign focus
regarding case studies’) indicates the focus of the campaign groups and organisations as
either logging of old-growth forest or fracking. In column four, two blank spaces indicate
multiple-issue organisations that, although not actively running campaigns on fracking or
old-growth forest logging at the time of my fieldtrip, did so in the past or supported other
groups that focused on those campaigns.

Table 2: List of respondents (n = 34)

<table>
<thead>
<tr>
<th>Organisation type and respondent code</th>
<th>Role of respondent</th>
<th>Headquarters location</th>
<th>Campaign focus regarding case studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Large organisations (state/national with state branches, multiple-issue) (n=17)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ENGO1</td>
<td>CEO</td>
<td>Hobart, TAS</td>
<td>Old-growth forest logging</td>
</tr>
<tr>
<td>ENGO2</td>
<td>CEO</td>
<td>Brisbane, QLD</td>
<td>Old-growth forest logging</td>
</tr>
<tr>
<td>ENGO3</td>
<td>Digital coordinator</td>
<td>Canberra, ACT</td>
<td>Old-growth forest logging</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fracking</td>
</tr>
<tr>
<td>ENGO4</td>
<td>Public narrative coordinator</td>
<td>Melbourne, VIC</td>
<td>Old-growth forest logging</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Fracking</td>
</tr>
<tr>
<td>Organisation type and respondent code</td>
<td>Role of respondent</td>
<td>Headquarters location</td>
<td>Campaign focus regarding case studies</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>--------------------</td>
<td>-----------------------</td>
<td>---------------------------------------</td>
</tr>
<tr>
<td>ENGO5</td>
<td>Communication and creative director</td>
<td>Melbourne, VIC</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>ENGO6</td>
<td>Campaigns director</td>
<td>Sydney NSW</td>
<td></td>
</tr>
<tr>
<td>ENGO7</td>
<td>Coordinator</td>
<td>Brisbane QLD</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Fracking</td>
</tr>
<tr>
<td>ENGO8</td>
<td>Convenor</td>
<td>Brisbane QLD</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Fracking</td>
</tr>
<tr>
<td>ENGO9</td>
<td>Communication manager</td>
<td>Sydney NSW</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>ENGO10</td>
<td>CEO</td>
<td>Canberra ACT</td>
<td></td>
</tr>
<tr>
<td>ENGO11</td>
<td>Communication manager</td>
<td>Melbourne VIC</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>– Fracking</td>
</tr>
<tr>
<td>ENGO12</td>
<td>Campaign director</td>
<td>Melbourne VIC</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>ENGO13</td>
<td>Campaign manager</td>
<td>Hobart, TAS</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>ENGO14</td>
<td>Campaign coordinator</td>
<td>Adelaide SA</td>
<td>– Fracking</td>
</tr>
<tr>
<td>ENGO15</td>
<td>Communication coordinator</td>
<td>Perth WA</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>ENGO16</td>
<td>Director</td>
<td>Perth WA</td>
<td>– Fracking</td>
</tr>
<tr>
<td>ENGO17</td>
<td>Campaign coordinator</td>
<td>Hobart, TAS</td>
<td>– Old-growth forest logging</td>
</tr>
</tbody>
</table>

Community groups (local, single issue) (n=17)

<table>
<thead>
<tr>
<th>Community groups</th>
<th>Role of community group</th>
<th>Location</th>
<th>Campaign focus</th>
</tr>
</thead>
<tbody>
<tr>
<td>CG1</td>
<td>Secretary</td>
<td>Northern Rivers, NSW</td>
<td>– Fracking</td>
</tr>
<tr>
<td>CG2</td>
<td>Founder, spokesperson</td>
<td>South East QLD</td>
<td>– Fracking</td>
</tr>
<tr>
<td>CG3</td>
<td>Chairperson</td>
<td>Narrabri Shire, NSW</td>
<td>– Fracking</td>
</tr>
<tr>
<td>Organisation type and respondent code</td>
<td>Role of respondent</td>
<td>Headquarters location</td>
<td>Campaign focus regarding case studies</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------------</td>
<td>----------------------</td>
<td>-------------------------------------</td>
</tr>
<tr>
<td>CG4</td>
<td>Director</td>
<td>Sydney NSW</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>CG5</td>
<td>Coordinator</td>
<td>Gippsland, VIC</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>CG6</td>
<td>Coordinator</td>
<td>Yarra Valley, VIC</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>CG7</td>
<td>Coordinator</td>
<td>North-West TAS</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>CG8</td>
<td>Coordinator</td>
<td>Launceston, TAS</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>CG9</td>
<td>Coordinator</td>
<td>Perth, WA</td>
<td>– Fracking</td>
</tr>
<tr>
<td>CG10</td>
<td>Secretary</td>
<td>Perth, WA</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>CG11</td>
<td>Coordinator</td>
<td>Perth, WA</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>CG12</td>
<td>Vice chairman</td>
<td>Perth, WA</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>CG13</td>
<td>Spokesperson and campaign strategist</td>
<td>Northern Rivers, NSW</td>
<td>– Fracking</td>
</tr>
<tr>
<td>CG14</td>
<td>Spokesperson</td>
<td>Brisbane, QLD</td>
<td>– Fracking</td>
</tr>
<tr>
<td>CG15</td>
<td>President</td>
<td>Sydney, NSW</td>
<td>– Fracking</td>
</tr>
<tr>
<td>CG16</td>
<td>Coordinator</td>
<td>Sydney, NSW</td>
<td>– Old-growth forest logging</td>
</tr>
<tr>
<td>CG17</td>
<td>Coordinator</td>
<td>Adelaide, SA</td>
<td>– Fracking</td>
</tr>
</tbody>
</table>

**The interview process**

The interview fieldwork eventually occurred between 15 February and 30 March 2017 through face-to-face, semi structured interviews. In general, and allowing for the availability of respondents and changes or overlaps in the interview schedule, I conducted two interviews a day that approximately lasted between 50–90 minutes per interview. Most respondents had a lot they wanted to say. My interview schedule was organised this
way to allow me enough time for travel between locations, breaks, and post-interview note writing-up about my respondent observations and the flow of the interview itself. Thankfully, all interviews were tape-recorded, following the respondents’ consent, which allowed deeper and more meaningful conversation.

**Interview data analysis**

Transcription of interview data followed. Thereafter, the transcripts were imported into the NVivo qualitative data analysis software package (QSR International Pty Ltd, Version 11, 2016), for qualitative content analysis, which is a ‘research method for the subjective interpretation of the content of text data through the systematic classification process of coding and identifying themes or patterns’ (Hsieh & Shannon, 2005, p. 1278). I adopted two strategies of analysis: structural coding and thematic analysis. Structural coding, as Saldaña (2016: 97; also, Namey et al. 2008) outlined is understood as the ‘foundation work for further detailed coding’. In structural coding, a ‘code’ in the form of a word or short phrase is applied to a particular set of text or visual data to capture its meaning (also Charmaz 2011; MacQueen et al. 2008; Saldaña 2016).

When dealing with transcribed data, structural coding is thus useful to organise, and segment data based on commonalities and differences, and on how they are interrelated (Miles and Huberman 1994; Saldaña 2016). It is important to note that although codes can become themes, themes and codes are not exactly synonyms, or refer necessarily to the same concept. Braun and Clarke (2006: 82) defined ‘themes’ as ‘something important about the data in relation to the research question’, in representing a ‘patterned response or meaning within the data set’ (as also outlined above).

As such, through a combination of ‘theory-driven’ and ‘data-driven’ thematic analysis, themes and subthemes informing the analysis were identified, as expressed here through coding of the ‘raw’ interview data (Gibbs 2007; Ryan and Bernard 2003). In turn, theory-driven analysis referred to the analysis of the respondent perspectives regarding the themes informing the conceptual framework.

Once the collected data was analysed, I proceeded to discuss the key findings that emerged from the analysis (Chapter 9). The discussion of the findings was aimed at answering the research questions through the identification of similarities and divergences, as well as new findings, in comparison to the international and Australian literature on the research topic (Evans et al. 1995; Paltridge 2002).
Conclusions

This chapter outlined the research design for the study. Starting with a recapitulation of progress so far, I discussed the choice and value of qualitative research methodology in relation to my study, and then outlined the its qualitative research design. The first stage of the investigation was based on the review of the literature on my topic, presented in Chapters 2-4. The first stage of investigation delineated the development of my conceptual framework based on the themes identified across the literature review. The conceptual framework informed both the development and of web content analysis and fieldwork research.

The second stage of investigation consisted in data collection through web content analysis (Chapter 6) and qualitative interviews (Chapters 7-8). Web content analysis, as presented in the next chapter, was employed to explore how new media these were utilised by a sample of 15 environmental groups and organisations in Australia for activist purposes. These groups were identified in two case studies, whose background was provided in Chapter 4.

Following web analysis, data was collected through the key method of face-to-face, semi-structured interview. On how I conducted interviews, I first provided the process to obtain ethical clearance for the fieldwork, which included interview questions, and contact processes for recruitment and respondent consent. Following this, I discussed in more detail the interview guide development process including interview pilot testing, the interview site and participant selection processes, to interviews were organised and conducted, and finally, my data analytical techniques.

We can now turn to the next chapters. In the next chapter I present the data analysed through web content analysis, in regard to, first, my Case Study 1 on environmental groups and organisations using new media to oppose logging of old-growth forest; and, second, to my Case Study 2 on coal seam gas. Then, following on Chapter 6, Chapters 7-8 present the results of the interview data analysis, which are discussed in Chapter 9.

Notes

1 Regarding campaigning groups opposing coal seam gas, a caveat here is that in Western Australia, Australian Capital Territory, and South Australia, the process of hydraulic fracturing (or fracking) is conducted to extract types of unconventional gas (tight gas and shale gas) other than coal seam gas, which is predominantly present in the eastern states. Thus, from hereon in
the text, the term ‘fracking’ is used in the broader unconventional gas context to refer to both campaigns opposing coal seam gas as well as other types of unconventional natural gas, as anti-fracking campaigners raised completely similar concerns and socio-political issues (see Chapter 4).
6. Digital environmental activism in action in Australia: Web content analysis of two big case studies

Introduction

This chapter builds on the literature review provided in Chapter 4 on the evolution of environmental activism in Australia and the adoption of strategies and communication practices that also included digital technologies. In doing so, the chapter also presents the background to two key Australian case studies on environmental activism that robustly contested: (i) old-growth forest logging; and (ii) coal seam gas development and well siting. Regarding these two case studies, and in following on from Chapter 4, this chapter analyses the empirical component of the two case studies through web content analysis in partly addressing Research Question 3 on new media devices deployed by activists for their campaigns, and Research Question 4, on how such deployment of new media devices and strategies is tempered in relation to the organisational structures of activist groups, campaign issues, and group location.

In more detail, the web content analysis involved a ‘web features content analysis’. It was based on the model of Foot and Schneider (2006), also Kavada (2012), which analysed the substance of social networks focused on the occurrence of features characterising web pages (as also mentioned in Chapter 5). Such features aim to, for example, provide information to the public on the activities of the campaigning organisation; provide the public with ways to be involved in a group’s initiatives including participating in protest activities; interact and network with campaigners and groups; and mobilise for action (Foot and Schneider 2006; Kavada 2012).

As such, the web features content analysis of the case studies focused on new media platforms that included (i) websites of groups or organisations, which are often used for online petitions as well as tools for digital mobilisation; (ii) Facebook and Twitter as most campaign groups used these social media platforms; (iii) video sharing platforms, mainly YouTube and Facebook as the most popular choices of activists for organisational aspects.

The analysis thus explored how each group or organisation deployed the platforms and their features as: (i) ways to share information (ii) ways to mobilise; (iii) ways for supporters to offer support, either through volunteering or financially through...
donations; (iv) ways to disseminate video content; and (iv) ways to create and promote online petitions. In the following, the web content analysis is presented for each case study in turn, with each one preceded by a short introduction on its campaign activities.

**Case study 1: Forest logging in Tasmania, Victoria, and New South Wales**

Case Study 1 which, to reiterate from Chapter 4, was: ‘Environmental campaigns on forest logging in Tasmania, Victoria, and New South Wales’ – focused on environmental activism to stop the logging industry from unsustainably destroying native forests, and especially, old growth rainforest. In relation to this case study, I analysed the digital campaign activities of four community groups: Forests of Lapoinya Action Group, Save the Tarkine, South East Forest Rescue, and South East Region Conservation Alliance, and three environmental NGOs: The Bob Brown Foundation, The Wilderness Society, and the Nature Conservation Council NSW.

**Contesting old-growth forest logging in Tasmania**

Informing case study 1, two notable cases of anti-logging activism located in Tasmania’s north-west have made good use of the Internet as a tool for campaigning. The first case focuses on the campaigning activities of Friends of Lapoinya Action Group (FLAG) to protect the regrowth forest of Lapoinya from being logged by Forestry Tasmania. The second one focuses on the campaigning activities in the Tarkine forest reserve by the Tarkine National Coalition and The Bob Brown Foundation.

**Lapoinya**

Since 2012, the Friends of Lapoinya Action Group (FLAG) – comprised of residents in the area – has protested the decision of Forestry Tasmania to cut 49 hectares of regrowth forest in the Lapoinya area from 2012 to 2015, a coupe that took over 60 years to regenerate (Bryan and Blucher 2015). As stated by FLAG on its Facebook page, the forest is habitat for several vulnerable plants and animal species, and threatened ones like the Brooker’s Gum, the Tasmanian Giant Freshwater Lobster, and the Tasmanian devil (McIntyre 2017).

Even though Forestry Tasmania reassured the community about the sustainability of its harvesting processes and the future regeneration of the forest after
logging, community efforts to pressure the Tasmanian government and Forestry Tasmania to stop the project have endured. Indeed, they intensified after the announcement of the clearing to include several arrests – including ex-Greens Senator Bob Brown in 2016 – for not complying with anti-protest law regarding blocking access to a business area (Blucher 2015; Ruddick 2015).

In addition to direct actions, lobbying at the state and federal levels occurred through new media, for example, through online petitions. One petition set up on Avaaz.org was named ‘Bob Annells, Chair, Forestry Tasmania: Stop the Destruction of the Lapoinya Forest’. At the time of writing (December 2017) it had 992 signatures.¹ A second petition (now closed) hosted on ThePetitionSite.com, was ‘Urge the Tasmanian Government to Ban Clear-Felling of Trees in the Lapoinya Forest’. It gathered 39,789 signatures to this day (December 2017).²

FLAG also organises actions to raise public awareness on the campaign. These actions have involved public disclosure of clear-felling operations in the Lapoinya Forest by way of, for example, public community forums, which are also promoted on social media;³ for example Facebook, through crowd-funding events to cover the costs of the campaign, and peaceful protests outside the coupe (Richards 2016).

**The Tarkine**

The Tarkine forest is a 447,000-hectare forest area in north-west Tasmania. Its forest conservation history goes back to the late 1930s, when the first proposals to set up a National Park in the Tarkine occurred. Stronger campaigning efforts to protect the area started in the late 1960s (Ajani 2007; Davis 1989; Macintosh and Wilkinson 2011). In 1990, the Wilderness Society and the ACF formally proposed that the Tarkine should be included in the Tasmanian Wilderness World Heritage area. According to the environmentalists, the proposal should have been integrated into the Tasmanian Regional Forest Agreement (RFA) proceedings, signed in 1997. However, the Tasmanian RFA failed to protect the Tarkine, and left it open to harvesting. Subsequently, during the 2000s, the conflict to stop forest logging of the Tarkine escalated between environmentalists and forestry management and remains tense to this day (for example, Bolger 2016; Macintosh and Wilkinson 2011).

The groups involved in the campaign to protect the Tarkine include Save the Tarkine, The Wilderness Society, and The Bob Brown Foundation. These groups
heavily relied on new media for campaigning. Their actions involved lobbying federal and state governments; targeting traditional news media; raising public awareness about the issue, for example, producing documentaries and developing a walking track in the Tarkine wilderness; and contacting politicians; art exhibitions; and, peaceful demonstrations.

In the following, more detail is provided on the frequency of new media that each of these environmental groups and organisations used on forest logging in Tasmania, during the time of analysis (September 2017), as shown in Table 3.

Table 3: New media use on forest logging in Tasmania

<table>
<thead>
<tr>
<th>Group</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Website</th>
<th>Video</th>
<th>Petition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forests of Lapoinya Action Group</td>
<td>x (1262 likes)</td>
<td></td>
<td></td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Bob Brown Foundation</td>
<td>x (105,436 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Save The Tarkine</td>
<td>x (3808 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>The Wilderness Society</td>
<td>x (209,003 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

The number of likes per page (shown in each table) is here only used as an approximation for the size of the Facebook page in terms of how many Facebook users chose to be involved with it by clicking ‘like’ on the page (Facebook 2017). Table 3 shows that the Forests of Lapoinya Action Group (FLAG) used Facebook, videos, and online petitions. In relation to video content, FLAG did not hold a YouTube account, but supporters produced and posted YouTube videos mentioning the group. In addition, FLAG published a video on the platform ‘Pozible’ for crowdfunding purposes. FLAG did not have a website. Finally, FLAG hosted an online petition, as mentioned above.

In turn, The Bob Brown Foundation used Facebook, a website, video content, and online petitions for its campaigns. Posts on the Facebook page included news articles; post updates on its current campaigns through videos or images; updates on other campaigns carried by other environmental groups regarding the Tarkine; and informative material produced by the Foundation. In addition, most shared posts had
a mobilisation component, for example, when including links on how to join a campaign or volunteer. Additionally, Facebook posts also encouraged supporters to engage in digital activities including signing petitions or share the pages content on their personal profiles and invite friends to participate; while posted Facebook events engaged supporters and invited them to attend event nights, including theatre screening and art exhibitions, as well as to call for online and offline action.

Regarding Twitter, tweets reflected the content published on the Facebook page, which consisted of news articles, campaign updates, events, and invites to act. Regarding the website, it shared information with the public mostly about past and present campaigns. The type of information shared on the website ranged from encouraging the webpage visitors to engage with the group’s digital campaigning activities to attend events, for example, a rally, to attend a rally. The website also promoted membership signing and donations. The Bob Brown Foundation also produced video content, both on Facebook and YouTube.

The third group analysed in the case of campaigning against tree logging in Tasmania was Save the Tarkine. In relation to the group’s use of Facebook, posts consisted of campaigning updates through media releases or videos and photos, and news articles, with copy to Twitter. In turn, the website contained information on the area of the Tarkine and the threats to the forest due to logging operations; information on the ongoing campaigns; opportunities to participate in the campaigning activities of Save the Tarkine, for example, through volunteering. In relation to video content, Save the Tarkine was present on YouTube with its own account. In turn, videos were posted on the Facebook page.

The Wilderness Society has different branches and, accordingly, different Facebook pages; in this analysis, I investigated its national Facebook page. In Facebook posts, The Wilderness Society shared news articles; updates on campaigns carried on by other groups and organisations; mobilisation posts, for example, those inviting supporters to donate or participate in the campaigning activities of the organisation. In relation to mobilisation, the ‘events’ section was also utilised to invite supporters through Facebook to take part in rallies or protest gatherings as well as to attend concerts and forums. The Facebook page linked to Twitter and YouTube.

On the Twitter account of The Wilderness Society, the tweets consisted of content shared on the Facebook page, and ‘mentions’ to political parties or
personalities. In turn, the website of The Wilderness Society delivers information on campaigns and the state of the environment and calls for offline and online action; from volunteering opportunities and invites to events to donations and online petitions. The website also carried social media updates.

Contesting old-growth forest logging in East Gippsland, Victoria
The second state jurisdiction investigated was East Gippsland, Victoria, where the signing of Regional Forest Agreement (RFA) occurred on 3 February 1997 (Australian Government 2017). As reported by the Wilderness Society (2017; also, Asher 2017), at the time of submitting this research (December 2017), the goals and objectives of the East Gippsland RFA were not realised, either in delivering more jobs or in protecting old growth forest from being logged. Although the Goolengook forest was included in the National Park of Errinundra in 2006 and thus protected, other areas were still subject to forestry exploitation. This included the Kuark Forest, south of the Errinundra National Park, home to the threatened Long-footed potoroo and the Greater Glider, with the latter listed as a threatened species in May 2017 (DELWP 2017; Jacobs 2016; Morton 2017; Slezak 2017).

In 2015, the state-owned Forestry Company VicForests approved its Timber Release Plan for conducting intensive logging operations in East Gippsland over 2013-2016 (VicForests 2017). Local communities and environmental groups claimed the logging operations were unlawful. This was because VicForests had not conducted targeted surveys to identify and protect endangered species in the proposed harvesting areas (Kinsella 2016).

Accordingly, legal actions by Environmental Justice Australia occurred on behalf of EEG and other community groups. In February 2016, a Supreme Court action was launched against VicForests and the Victorian government (Arup 2016; Jacobs 2016; Kinsella 2016). Ten months later, the court orders recognised VicForests’ obligation to halt logging in three coupes in the Kuark forest until their actions complied with the outcomes of the court proceedings (Environment East Gippsland v. VicForests 2016). As such, in August 2017, VicForests approved a new Timber Release Plan, which included approved changes to its proposal following community consultation 2-23 November 2016 (VicForests 2017). However, on 7 September 2017 – National Threatened Species Day – Friends of the Earth, Melbourne, in partnership
with Goongerah Environment Centre Office (GECO) and the Fauna and Flora Research Collective, released a report documenting 27 unlawful logging operations in Victoria (Friends of the Earth 2017).

The environmental groups leading the campaign were the Goongerah Environment Centre Office (GECO), and Environment East Gippsland (EEG). Their actions undertaken included ‘citizen science’ programs of data collection reported periodically to the Victorian government by GECO; online petitions; lobbying politicians; and peaceful rallies and events promoted online through newsletters and through Twitter and Facebook.

The Goongerah Environment Centre Office is described on its website as ‘an independent grassroots environment organisation based in East Gippsland dedicated to protecting the remaining old growth forests of the region’ (GECO 2017: 1). In turn, Environment East Gippsland described itself as a locally based group ‘playing a vital role in information gathering on the local logging industry’, working ‘to protect East Gippsland’s natural areas and wildlife since the early 1980s’ (EEG 2017: 1).

These groups focused their campaigning activities on the protection of endangered species that habitat the East Gippsland forests, including the Sooty, the Masked Owl, the Powerful Owl, the Long-Footed Potoroo, the East Gippsland Galaxias, and the Gliding possum. In addition, the campaign aim was to protect ‘unique rainforest types, found nowhere else on earth’ from being logged (GECO 2017; also, Arup 2016; Beranek and Hill 2016; Smith 2014).

In Table 4, more detail is provided on the frequency of new media that each of these environmental groups and organisations used on forest logging in Victoria, during the time of analysis (September 2017).
Table 4: New media use on forest logging in Victoria

<table>
<thead>
<tr>
<th>Group</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Website</th>
<th>Video</th>
<th>Petitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>EEG</td>
<td>x (8485 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>GECO</td>
<td>x (8599 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

Starting with Facebook, posts published by Environment East Gippsland consisted of updates from other environmental groups, updates on the logging operations in East Gippsland, news articles, and posts to mobilise supporters. In relation to mobilisation, the events section of the page reported community gatherings, camps, workshops, and rallies.

Tweets relayed Facebook page posts. Several videos were published on the Facebook page; at the same time, campaign videos about were shared on YouTube by supporters. The website provided visitors to the page with information on current and past campaigns and legal cases undertaken by the group; volunteering opportunities, media releases, and campaigning history. The group also promoted online petitions, for example, the Save Basin Creek Rainforest Complex, East Gippsland, which to 8 September 2017 had 2074 signatures.

In turn, Goongerah Environment Centre Office used Facebook to mobilise supporters to take online actions, for example, by contacting politicians; sharing information save the East Gippsland forest form logging, through news articles, videos, and photos of recent events; which included citizen science camp nights, peaceful demonstrations, movie nights, and information sessions. Tweets shared the same news and included photos of a recent demonstration in front of the Parliament of Victoria. GECO also produced video content on multiple platforms, including Facebook, Twitter, Vimeo, and YouTube. The group shared information about campaigns on its website, also linked to Twitter and Facebook, which included information on upcoming events, citizen science programs, and volunteering opportunities.

**Contesting old-growth forest logging in the southeast region of NSW**

In NSW, in 1986, forest protection from logging occurred for the Terania Creek area in the Nightcap forest of Northern NSW (Somerville 2005), following extensive direct action and protests in the forests. One of the first high-profile forest battles against
forest logging was the Terania Creek campaign in Northern New South Wales. The campaign started in 1975 and escalated into a robust blockade in 1979. The blockade attracted thousands of protesters across Australia and internationally and lasted for several weeks (Hutton and Connors 1999).

Similarly, between 1983 and 1984 another high-profile campaign against forest logging was organised in Far-North Queensland to save damaging the Daintree forest from road development (Markus 2009; Wilkie 2017). Three decades later, on 1 March 2016, in the NSW southern coast region; Mumbulla, Murrah, and Tanja State Forests and half of the Bermagui State Forests were gazetted as ‘Flora Reserves’ to protect koalas and other wildlife (Brown 2016a).

However, other old-growth forests in southeast NSW remained open to logging operations, including the Tantawangalo State Forest in the Bega Valley region, where the Eden wood-chip mill was built in the 1980s. Since its opening, anti-logging campaigners have strongly opposed it (Brown 2016b). As reported by local environmental group South East Forest Rescue (SEFR 2016), and by the National Park Association of NSW (NPA 2017), the state-run Forestry Corporation of NSW consistently illegally logged trees on rock outcrops in the Tantawangalo forest.

The forest is protected under the Eden Region RFA (signed in 1999) and the Northern Region of New South Wales RFA (signed in 2000), due to its function to maintain biological diversity (Fitzsimmons and Michael 2017). In addition, the National Park Association of NSW reported that the Forestry Corporation had breached environmental standards on several occasions (Sweeney 2016). Forestry Corporation is a state-owned company that manages more than 2 million hectares of commercial forests in NSW. Several environmental groups contest it logging operations when it intrudes into old-growth forests areas. Three key environmental campaign groups were the South East Region Conservation Alliance (SERCA), South East Forest Rescue (SEFR), and the Nature Conservation Council of NSW (NCC).

In 2005, SERCA formed. Its members include ‘conservation, environment and concerned citizens groups on the South Coast’ campaigning ‘to protect Australia’s unique forest environmental values’ in the shires of ‘Eurobodalla, Bega Valley and Bombala (plus parts of Cooma-Monaro and Snowy River)’ (SERCA 2017: 1). Its campaigning activities included writing submissions to government agencies at the local, state, and federal levels.
In addition, it conducted peaceful direct action. On 16 March 2016, it held a protest in front of the head office of Forestry Corporation NSW in West Pennant Hills on the International Day of Forests. SERCA often operates with the South East Forest Rescue (SEFR). The latter, founded in 2001, has the aim to protect native forest and, as stated on its website to ‘take all opportunities presented to advocate for native forest justice’ (SEFR 2017: 1). Like SERCA, SEFR (2017: 1) operates through ‘research, auditing and survey[ing] of State forests’ to pressure regulators.

In turn, the Nature Conservation Council of NSW (NCC) was established in 1955, ‘to provide a shared voice for community environmental organisations from across New South Wales’ (NCC 2017: 1). In relation to forest management, the NCC stated on its website that among its strategic priorities is to expose illegal logging (NCC 2017). The way the NCC operates towards its priorities is through advocacy and campaigns. One of them was, for example, the ‘Stand Up for Nature’ campaign launched in 2015 through NationBuilder.10

Several other environmental groups and organisations – including the National Park Association of NSW (NPA), the World Wildlife Fund (WWF), and the Coolong Foundation for Wilderness – supported the campaign. Its aim was to gather support to send submissions to the Berejiklian government on the changes to tree clearing laws in NE NSW, which took effect on 26 August 2017 (Hannam 2017; NCC 2017).

Overall, Table 5 shows a visual representation of the use of new media by these groups on forest logging in New South Wales, during the time of analysis (September 2017).
Table 5: New media use on forest logging in NSW

<table>
<thead>
<tr>
<th>Group</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Website</th>
<th>Video</th>
<th>Petitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>SEFR</td>
<td>x (1362 likes)</td>
<td></td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>SERCA</td>
<td>x (206 likes)</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>NCC</td>
<td>x (19,304 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

As shown in Table 5, South East Forest Rescue (SEFR) used new media mostly through Facebook and its website. Facebook posts consisted of updates on demonstrations through photos and media releases, informative materials, including reports, news articles; and invites to mobilisation. There was no ‘event’ section or videos uploaded on the page. In turn, the group’s website showed information on the status of the campaigns, and provided supporters with informative materials including submissions, reports, photos, and updates on the current state of tree ‘harvest plans’ in South-East NSW, as updated to December 2017 (at the time of writing).

In turn, the South-East Region Conservation Alliance (SERCA) conducted digital environmental campaigning by way of its website, Facebook, and Twitter. Facebook posts consisted of news articles; updates on campaigns by other environmental groups; videos or articles informing supporters on environmental issues; and posts to encourage digital mobilisation such as signing petitions. Like SEFR, SERCA did not have an ‘events’ section on its Facebook page. Instead, Twitter was used as an information tool as well as to call supporters to action online, for example, by signing petitions. In turn, the website was updated with information on the different campaigns the group supported or conducted; information on how to send submissions, and media releases.

Posts by the Nature Conservation Council NSW campaign also invited supporters to take online action through petitions, shared news articles, and posted information on environmental issues including climate change. Events created on the page invited supporters to attend community meetings or rallies. Video content was also present. Tweets again most often linked back to the website and the Facebook profile of the organisation, and posts. Apart from videos posted on Facebook, the NCC also had a YouTube account. Overall, the NCC website provided a reference point for informing the public on campaigns (past and present); encouraging more supporters to
join the organisation; and providing resources and information on how to take part in campaigning activities.

Case study 2: Coal seam gas in Queensland, NSW, and Victoria

In turn, Case Study 2, as discussed in Chapter 4, focused on ‘Environmental campaigns on the coal seam gas (CSG) industry in Queensland, New South Wales, and Victoria’ – focused on environmental activism to stop gas companies extracting unconventional gas in Australia with unsustainable environmental and special consequences, in particular, coal seam gas (CSG). For this case study, I analysed the digital activities of four large environmental organisations: Lock the Gate; Stop Adani; Quit Coal; Knitting Nannas, and two community groups: Lock Gippsland Gates to CSG, and Groundswell Gloucester.

Contesting coal seam gas in Queensland

The most popular and largest protest group campaigning against coal seam gas in Australia is the Queensland-based Lock the Gate Alliance (or ‘Lock the Gate’): a grassroots social movement formed in 2010 by citizens of Qld and NSW, now comprised of over 250 groups and 97,000 supporters (Lock the Gate 2017). The contestational social movement to CSG development comprises ‘local groups who are concerned about unsafe coal and gas mining.

These groups are in all parts of Australia and include farmers, traditional custodians, conservationists, and urban residents’ (Lock the Gate 2017). Branches of Lock the Gate are located across Australia, along with local activist groups and NGOs. However, in looking at contemporary environmental and mining issues in addition to illustrating the new media activities of Lock the Gate on new media, these type of campaigning activities to ‘Stop Adani’ were also investigated.

The Stop Adani action – supported by many citizens and other NGOs including 350.org, ACF, and GetUp! – is a grassroots movement campaigning against the energy multinational Adani to drill for coal in the Galilee Basin in central Queensland. At the time of writing (September 2017), Adani’s biggest project was the Carmichael Mine, north Galilee Basin. Lock the Gate and Stop Adani’s online campaigning activities are summarised in Table 6.
Table 6: New media use on coal seam gas in Queensland

<table>
<thead>
<tr>
<th>Groups</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Website</th>
<th>Video</th>
<th>Petitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock the Gate</td>
<td>x (99,696 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Stop Adani</td>
<td>x (29,295 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

As shown in Table 6, Lock the Gate uses new media for campaigning in all five categories considered in this analysis. Facebook posts supported other environmental groups against fracking (twice in the form of online petitions), and campaign news. In the ‘events’ section on the Facebook page, the group invited supporters to attend rallies, public forums, as well as to sign petitions. In turn, Tweets included information on ongoing or upcoming campaigns; online petitions; and photos of recent demonstrations.

Lock the Gate also shared videos through Facebook, Vimeo, and YouTube to raise public awareness on CSG issues, call supporters to action, and document campaigning activities, provide information on coal and gas campaigns, information on events, and online petitions. One notable video was an online petition launched to ask the governments of NSW and Queensland to force companies to rehabilitate the mines once they left a mining site, for example, in the case their license expired or in case of disinvestment in the mine. The petition called ‘Make coal giants pay for mine clean-up’ at the time of writing (December 2017) had 8143 signatures.11

In turn, the grassroots movement Stop Adani uses new media on the Adani project in Queensland. Facebook posts included news articles shared from other pages or platforms; pictures and videos of the most recent demonstrations organised by the movement; mobilisation posts, encouraging supporters to attend the events organised by the movement, or sign petitions. The events created and shared through the Stop Adani page invited supporters to attend rallies, movie nights, forums, and city runs. Videos were also largely present on the page.

In turn, tweets were both re-tweets from other groups or platforms consisting of news stories, or directly created by Stop Adani. The later content ranged from documenting the protest activity of the group through videos and photos, to inviting more people to join the campaign. Videos produced by the movement featured on the Facebook pages. Although there was not a YouTube account linked to Stop Adani, a
number of videos with the hashtag ‘#StopAdani’ were present on YouTube, as published by supporters.

Finally, the website of the movement contained information on the concerns that the movement held in relation to coal and gas mining in Australia. Its content invited supporters to take action, for example, by attending rallies and demonstrations. Stop Adani also supported actions by other groups, for example, one organised by the ACF called ‘Protect our reef & our children’s future: demand no public funding for Adani’s coal mine’ had 121,710 at the time of writing (December 2017).12

Contesting coal seam gas in East Gippsland, Victoria

In 2012, Victoria’s Minister for Resources and Energy, Martin Ferguson, announced the government’s plans to develop a CSG industry (Morton 2012). Subsequently, in response to the proliferation of ‘exploration licenses for unconventional gas mining covering farming properties across the region’, protest groups opposed to UG began to form (ABC News (2014: 1). These groups, initially formed by landowners in the Gippsland region, were concerned about water contamination that UG mining would cause. However, residential, and rural communities soon joined the landowners in opposing the development of the UG industry, with its focus on CSG (Ollis and Hamel-Green 2015; Pinkerton 2016).

Concomitantly, a Lock the Gate branch called ‘Lock Gippsland Gates to CSG’ formed in 2012 by residents campaigning against CSG development to pressure the government to ban CSG from Victoria (Whitson 2012). Peak environmental group Friends of the Earth (FoE) (Melbourne) also joined in. It had already created ‘Quit Coal’, a leading campaign against coal and CSG in Victoria. The FoE website reported that throughout 2012, individuals, councils, and organisations opposed unconventional gas in Victoria and called for the government to institute a ban on new explorations (Quit Coal 2017).

Subsequently, between June and July 2012, local government councils in the South Gippsland Shire, Wellington Shire, Bass Shire, and Latrobe City voted to call on a moratorium on CSG (ABC News 2012a). Very soon, due to the escalating political pressure, by the end of August 2012, the Government of Victoria decided to impose a ban on further approvals for CSG explorations valid until 2015 (Foenander 2013). While welcoming the government decision, however, FoE also declared that
for the moratorium to be acceptable it would have to apply to existing exploration wells as well (ABC News 2012b). Similarly, Lock the Gate declared in November 2013 that the moratorium would not ‘stop the growing movement against unconventional gas’ (Foenander 2013: 1).

As such, the Committee of the Legislative Council on Environment and Planning, appointed by the Victorian government to inquire on unconventional gas mining, reported that the extent and ferocity of civic engagement on CSG was unprecedented (EPC 2015). As declared by the Inquiry Committee Chair, the Hon. David Davis, the inquiry ‘likely received more submissions than any other Inquiry in recent Victorian Parliamentary history’ (EPC 2015: ix). The parliament received a total of 1942 community ‘interventions’ both in written submissions, and appearances at the Inquiry’s public hearings (EPC 2015). The response of the Victorian Government to the Inquiry came in August 2016. It decided to impose a permanent ban on onshore unconventional gas mining involving hydraulic fracking operations (Davey 2016; Victoria State Government 2016). On 7 March 2017, the legislation passed the parliament, as declared by the Victorian Minister for Resources Wade Noonan (Lusted 2017; Victoria State Government 2017).

Against this background, Table 7 illustrates the digital campaigning activities of these two groups opposing coal seam gas in Victoria, as investigated at the time of writing (September 2107).

Table 7: New media use on coal seam gas in Victoria

<table>
<thead>
<tr>
<th>Group</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Website</th>
<th>Video</th>
<th>Petitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lock Gippsland Gates to CSG</td>
<td>x (1571 likes)</td>
<td></td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Quit Coal</td>
<td>x (6059 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
</tbody>
</table>

In its campaign opposing coal seam gas, Lock Gippsland Gates to CSG has used several digital activities. Facebook posts varied from sharing news articles to campaigning updates and posts to encourage mobilisation such as inviting supporters to attend public meetings. Regarding the ‘events’ section on the page, only two events were created by the group, presumably due to the shortness of the campaign given its
early success, but also included other events organised by other groups. Again, and alluding to the velocity of Victorian anti-CSG campaign and its effect, the group’s website had little video content and no Twitter or YouTube accounts, nor any mention of any petition circulating in digital format. However, there was mention of a petition on the website when the group attended an event hosted by another group (Sustainable Boolarra) opposing CSG in the Gippsland region.

In contrast, the Quit Coal collective formed to become part of FoE Melbourne by 2011. In a much more entrenched campaign, Facebook posts aimed to mobilise supporters to join the organisation or attend events; sharing news articles in relation to energy policies in Victoria, or CSG issues in other states; and sharing or networking campaign updates with other groups. The events created through Facebook included information nights and social gatherings as well as rallies and fundraising activities. Several videos were also present. Tweets consisted of information on upcoming events, updates on campaigns, and news articles. The website also contained information on past and present campaigns organised by Quit Coal and Friends of the Earth; information on how to get involved, for example, through volunteering, news articles, and links to Facebook and Twitter. Although Quit Coal did not have a YouTube account, supporters shared diverse videos mentioning the collective on YouTube.

**Contesting coal seam gas in north-west NSW**

Intense opposition of communities and environmental groups to the development of CSG the industry was also well present in NSW. In this section, I briefly present the background for campaigning operations by communities and environmental groups in NSW; where all groups utilised new media as key channels for their activities. First, I investigate the AGL fracking project in the Gloucester valley (mid-north NSW), which was approved in 2014 and later dismissed. Then, I investigate the ongoing Narrabri project by Santos to produce CSG in the Pilliga forest of north-central NSW.

The AGL project in Gloucester dates to 2009 when the energy company started conducting community consultation on the proposed project (AGL 2014). In 2012, the Environment Defenders Office NSW commenced a judicial review against the NSW government decision to approve the project on behalf of the Barrington-Gloucester-
Stroud Preservation Alliance Inc. At that time, however, the court upheld the approval decision (EDO NSW 2012; Willing 2012).

Subsequently, community opposition in the valley grew, especially when AGL received approval by the NSW government in 2014 to start with CSG exploration in the Gloucester valley (ABC News 2015; AGL 2014; Hasham 2014). Almost immediately, controversy began. At the beginning of 2015, toxic chemicals were detected in a sample of water from four pilot wells in Waukivory Pilot Project, near Gloucester. Subsequently, AGL suspended its operations in the area due to public outrage (ABC News 2015b).13 Groundswell Gloucester commented on the discovery as a confirmation of community concerns and a trigger for reviewing the whole project (Hannam 2015).

In 2016, AGL announced that it was no longer investing in the project (ABC News 2016a). The official reason given by the company did not mention the effects that community campaigning had on the decision (Bice 2016; ABC News 2016b). However, as observed by University of Melbourne researcher Sara Bice (2016: 1), ‘the withdrawal was hailed as an important victory by the activist groups’. For example, immediately after AGL’s announcement to withdraw from the project, Groundswell Gloucester (2016: 1) published a media release on their website and social media platforms celebrating the efforts of the community as such, ‘we can stand up against these fossil fuel giants and a colluding state government and win’.

The Pilliga Forest is 350km north-west from Gloucester. It is where energy giant Santos has been developing a project to produce CSG since 2011 (Miskelly and Daniel 2017). The project, called Narrabri Gas Project, is to date (December 2017) under assessment by the NSW government (Santos 2017). Like the case of Gloucester, community groups and environmentalists strongly opposed the project. Inquiring into the debate, approximately 23,000 submissions were sent in from Australian and overseas interests to the Department of Planning and Environment (NSW government 2017c). The Director of Resource Assessments, Mike Young, reported that most submissions opposed the project, or demanded authorities do further assessment of it. The main concerns expressed were in relation to ‘groundwater and agriculture, health risks related to air emissions and water pollution, the conservation values of the Pilliga Forest, management of waste products such as salt, and lighting impacts’ (New South Wales Government 2017c: 1).
Environmental NGOs including The Wilderness Society and GetUp! have campaigned against the Narrabri project, as well as Lock the Gate and other smaller community groups (Hannam 2017; Miskelly and Daniel 2017). Among them, I investigated the digital campaigning activities of The Knitting Nannas Against Gas as a large, networked community group working across Australia through ‘nanna loops’, as the organisation called local groups.

Knitting Nannas Against Gas (KNAG) is a community group formed in 2012 in response to increased exploration for CSG in the Northern Rivers region of NSW. As described on its website, KNAG boasts ‘an extensive national and international membership, maintaining connections through our website, facebook and twitter’ (Knitting Nannas Against Gas 2017: 1). The second community group investigated regarding opposition to coal seam gas in NSW was Groundswell Gloucester, formed by local residents concerned about coal seam gas primarily in the Stroud Gloucester Valley (NSW). The web content analysis regarding the new media use of these two groups is summarised in Table 8.

Table 8: New media use on coal seam gas in NSW

<table>
<thead>
<tr>
<th>Group</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Website</th>
<th>Video</th>
<th>Petitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knitting Nannas</td>
<td>x (13,383 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Groundswell Gloucester</td>
<td>x (3640 likes)</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
</tr>
</tbody>
</table>

In relation to KNAG, their Facebook posts provided supporters with campaign updates, for example, by sharing photos of demonstrations, updates on other groups and organisations’ campaigns, and news articles. Several events were organised through Facebook to raise awareness on CSG issues (for example, movie nights and forums), as well as to invite supporters to get involved in direct action, including rallies and demonstrations. Shared photos and videos documented direct actions undertaken by the group.

In one digital campaign KNAG supported anti-fracking British campaigner Tina Louise Rothery, who was sued for trespass in August 2016 after she took part in a 3-week occupation of a field in Cuadrilla, UK, being considered for shale exploration.
(Parveen 2016). Following this protest, KNAG participated in the campaign ‘I am Tina Too’, which included posting pictures online of the Nannas holding a sign in support of the case. The Knitting Nannas also had a Twitter account. Tweets consisted of news articles, campaign updates, celebration of victories, and promotion of events. In relation to video content, in addition to those on Facebook, the group also had a YouTube account.

In turn, on new media use by Groundswell Gloucester, its Facebook posts included news articles; campaign updates, informative events open to the community to attend, and campaign updates of other groups. Facebook also posed as a platform to invite the community to participate in public forums to discuss the developments of the campaign. Similarly, tweets provided news and campaign updates, and retweets from supporters of the campaign. Supporters also published video content concerning campaigning activities on YouTube, although the group did not directly hold an account. The website, finally, was used by Groundswell Gloucester to raise awareness on the concerns that the group held regarding CSG, shared news and stories (through videos of campaigners sharing their story), and campaign updates.

Analysis of results
The high usage of new media for contemporary environmental activism is clear from the evidences presented in this chapter, as Table 9 illustrates in comparing the digital campaigning activities of the 15 Australian groups and organisations investigated in this chapter, as strongly informing both case studies. The comparison shows that the use of new media for campaign activities is somewhat variable in some aspects of the usage of diverse strategies but quite consistent on others.
Table 9: Web content analysis of case studies 1 and 2: Summary of results

<table>
<thead>
<tr>
<th>Groups</th>
<th>Facebook</th>
<th>Twitter</th>
<th>Website</th>
<th>Video</th>
<th>Petitions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Forests of Lapoinya Action Group</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Bob Brown Foundation</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Save The Tarkine</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Wilderness Society</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>South East Forest Rescue</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South East Region Conservation Alliance</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environment East Gippsland</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Goongerah Environment Centre</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Nature Conservation Council NSW</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Lock The Gate</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Stop Adani</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Lock Gippsland Gates to CSG</td>
<td>x</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Quit Coal</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Knitting Nannas</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>Groundswell Gloucester</td>
<td>x</td>
<td>x</td>
<td>x</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Overall, regarding consistency, new media appeared well integrated into the campaigning activities of all Australian environmental campaign groups and organisations surveyed. Such integration demonstrated a flexible style of communicating and engagement that did not exist with traditional media. This was because it showed that both community groups and ENGOs used digital tools to communicate with their support base, celebrate victories, organise events, mobilise their support base, and raise public awareness; in other words, it represented their core communications conduits, which was done largely manually before, as in meetings, or by landline telephone.
As shown in Table 9, Facebook was by far the digital platform most used by all these campaign groups and organisations (small and large groups regarding both coal seam gas and forest logging, across all eastern states). However, some variations were found on how Facebook was used. The most common use of Facebook was an informative one, aimed at raising public awareness on environmental issues and current campaigns. The Facebook page posts of these organisations and groups included:

a) News articles from news media outlets or other environmental groups pages (all 15 groups)
b) Updates on their own campaigns, typically as videos or photos of recent demonstrations (all 15 groups);
c) Posts aimed at mobilising supporters both to act online and offline by volunteering, donating, or taking part to demonstrations (all 15 groups).
d) Invites to support other groups or campaign updates of other groups (all 15 groups contesting coal seam gas across all eastern states, except FLAG, a small group contesting forest logging in TAS, and GECO, contesting forest logging in VIC);

The website was the second most used platform for digital environmental campaigning, as used by 13 groups. In relation to the websites, these were the main points that emerged from the analysis:

a) All 15 groups used a website except FLAG, a small group opposing forest logging in TAS, Lock Gippsland Gates to CSG, a small group opposing coal seam gas in NSW;
b) Websites were used to store information about past and present campaigns, as well as to archive relevant publications, media releases, legal cases, and news articles that related to the group or organisation and its campaign foci (all 13 groups);
c) Websites were a reference point with information about volunteering and donations (all 13 groups using the website except SEFR, a small group opposing forest logging in NSW);
d) Websites did not pose as particularly interactive platforms for website visitors because they did not enable, for example, sections where visitors could comment and interact with others. However, most websites linked visitors to Facebook, Twitter, and YouTube (all 13 groups using the website except SEFR, a small group opposing forest logging in NSW).

**Twitter**, after Facebook and the website, was the third most used new media tool: 12 of these groups used it for digital campaigning. In relation to Twitter usage by these groups, the following points emerged:

a) All groups used Twitter except FLAG, a small group in TAS and SEFR, a small group in NSW, both opposing forest logging; Lock Gippsland Gates to CSG, a small group opposing coal seam gas in NSW.
b) Twitter was mostly used as a tool to link back to the Facebook profile of an organisation and its Facebook posts; to re-tweet news articles and campaign updates in other cases and in support of other environmental groups; and to redirect Twitter users to content on the website (all 12 groups).

**Video content** was also commonly used for campaign purposes by 12 groups, for example, to share live updates on ongoing campaigns or raise awareness on environmental issues. On video content, it emerged that:

a) All 15 groups shared video content on new media, except SERCA and SEFR, two small groups opposing forest logging in NSW; and Lock Gippsland Gates to CSG, a small group opposing coal seam gas in NSW.
b) Three groups shared video content via Facebook only: FLAG, a small group in TAS opposing forest logging; Stop Adani in QLD and Lock Gippsland Gates to CSG in NSW, both opposing coal seam gas.

**Online petitions** aimed at raising public awareness on environmental issues or pressure politicians, finally, were only used by 10 groups. In particular:
a) The five groups that did not appear to be using online petitions (during the time of the investigation, September 2017) were three small groups opposing forest logging, namely Save the Tarkine in TAS, and SEFR and SERCA in NSW; and two small groups opposing coal seam gas in NSW, namely Knitting Nannas and Groundswell Gloucester.

b) New media were also used to encourage supporters to sign petitions in person when attending events (the groups were one large organisation, Lock the Gate, regarding contestation of coal seam gas in QLD, and Stop Adani, a small group also operating in QLD opposing coal seam gas).

In sum, this demonstrative web content analysis highlighted the importance of using new media for campaigning activities to establish networks with both supporters and potential supporters, as core business. More specifically, new media enabled the 15 groups to disseminate information about environmental concerns on particular topics; raise public awareness about issues; engage supporters in campaign activities; and mobilise them to pressure governments both offline and digitally. Such capacity to communicate with supporters and diverse audiences online offered innovations for campaigning not realised before through traditional media.

**Conclusions**

The purpose of this chapter was aimed at presenting the results on Meta-theme 2 on the limitations of new media to challenge or cause significant constraints to the potential of new media for environmental activism in Australia, and to what extent, according to the perspectives of the interview respondents. Several limitations were found to challenge the potential of new media for enhancing environmental activism in Australia, as informed by six themes.

I now turn to Chapter 9 where I discuss the key findings of this chapter as well as the findings of chapters 6 and 7, before turning to the conclusive and last chapter of this thesis (Chapter 10). As such, in the next chapter I discuss the findings on this study on the potential of new media to enhance environmental activism in Australia to attain better protection of the environment to relevant aspects on my research topic as found in the international and Australian literature. This exercise then enables me to draw
my conclusions and on the implication of my study, consideration on the research design, ideas for future research, and make some concluding remarks.

Notes

1. The link to the petition is http://goo.gl/91uuMe [accessed 17 September 2017].
2. The link to the petition is http://goo.gl/5LDyhQ [accessed 17 September 2016].
5. The link to the petition is http://www.takayna.org/#action [accessed 17 September 2017].
6. ‘Artists for the Tarkine’ was a fundraising exhibition by over 50 artists in May 2016. More information is available at http://goo.gl/iG87SZ [accessed 31 August 2017].
7. The number of likes for all the environmental groups and organisations investigated in the two case studies was updated to 14 September 2017.
8. See note 11.
9. ‘Mention’ tweets are general tweets ‘containing another account’s Twitter username, preceded by the “@” symbol’ (Twitter 2017: 1). This practice is used as a campaign tool to get the recipient notified about an action or Tweet (Bode and Dalrymple 2016).
13. The chemicals found in the water were Benzene, Toluene, Ethylbenzene and Xylene (BTEX), which, in high enough concentrations can have harmful toxic effects on human health (Leusch and Bartkow 2010).
7. Fieldwork analysis on the benefits of new media for environmental activism

Introduction

This, and the following, chapter present the findings of data analysis of interviews conducted between February-March 2017 with 34 representatives of environmental non-governmental organisations ENGOs and community groups campaigning on environmental issues in Australia. The interview guide comprised Section 1 which introduced the project in person and engaged and prepared the respondents for the interview, and Sections 2 and 3 on the topic of the interview. In Section 2, on Meta-theme 1, which this chapter discusses, asked respondents about their perceptions on the potential benefits of new media for environmental activism. In turn, Section 3, on Meta-theme 2, presented in the next chapter, asked respondents about their perceptions on the limitations of new media for environmental activism.

Regarding the thematic analysis of the meta-themes, each one is discussed according to the subthemes identified that inform it. First, through an analytical explanation of the content of each subtheme. Second, at the end of each theme through a comparative results summary informed by a representation of percentages of the respondent engagement with each theme and subtheme. However, before discussing Meta-theme 1, Section 1 on the Interview introduction is presented.

Section 1 of the interview guide: The interview introduction

Once the respondents provided me with their signed copy of the consent form, and before starting the interview, the respondents were asked if they had any questions related to the interview process or to the research project. Most respondents seemed to understand the project, and some asked clarification questions in relation to the terminology of ‘new media’ and ‘social media’. The type of questions they asked included, for example:
When you say new, what do you mean by new? Because I understand social media, but what are new media? (Respondent CG2)

So how would you then classify new media, can you give me a definition? … Does it include websites, Google? (Respondent ENGO8)

So, social media is interactive, whereas new media is just using digital media to get stuff out? (Respondent CG5)

To these questions, I responded that the term ‘new media’ as explained most widely in the literature referred to the whole system of content accessed from digital devices and also circulating via the Internet. In turn, social media was widely understood to be embedded in new media as the interactive and social communicative part of it. These understandings were also something the respondents seemed to understand in a similar sort of way. After responding to clarifications, the second section of the interview guide began on meta-theme 1.

**Meta-theme 1: On the benefits of new media for activism**

Three themes were identified in the case of meta-theme 1, as illustrated in Table 10. In turn, they comprised several subthemes where each was identified through similar characteristics as also detected in the NVivo coding analysis. The subthemes in descending order of mention (from most to least) are shown in column 2 of Table 10.
Table 10: Meta-theme 1: Themes and subthemes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform for delivery and engagement</td>
<td>Mediated visibility</td>
</tr>
<tr>
<td></td>
<td>Networking</td>
</tr>
<tr>
<td></td>
<td>Self-representation</td>
</tr>
<tr>
<td></td>
<td>Digital communication strategies</td>
</tr>
<tr>
<td>Practical advantages</td>
<td>Cost and time effective</td>
</tr>
<tr>
<td></td>
<td>Easy to use</td>
</tr>
<tr>
<td></td>
<td>Reduced geographical distance</td>
</tr>
<tr>
<td></td>
<td>Data management</td>
</tr>
<tr>
<td></td>
<td>Measuring impact</td>
</tr>
<tr>
<td></td>
<td>Flexible</td>
</tr>
<tr>
<td>Taking action</td>
<td>Mobilisation</td>
</tr>
<tr>
<td></td>
<td>Pressure politics</td>
</tr>
</tbody>
</table>

The findings on the meta-theme of benefits are now presented, starting with Theme 1 on ‘platforms for delivery and engagement’.

Results and analysis

Theme 1: Platform for delivery and engagement
Theme 1 discusses the benefits of new media as a ‘platform for delivery and engagement’, as discussed by all (34) respondents. This theme was informed by four sub-themes: networking, mediated visibility and outreach, coverage, and raising awareness.

Subtheme 1: Mediated visibility (31 respondents)
Thirty-one respondents commented on this sub-theme when they mentioned that new media were beneficial to them to increase visibility for their campaigns or improving their outreach. ‘mediated visibility’ was discussed in Chapters 2 and 3 as the ability for environmental activists to achieve visibility through new media to reach vast audiences beyond the immediate level to external audiences, such as national and international ones (Thompson 2005; also, Castells 2012; Hutchins and Lester 2015;
Hindmarsh and Calibeo 2017; Lester 2011; Pickerill 2001). The following respondent comments, for example, demonstrate this is a key aim of environmental activists using new media:

We are a group based in a very small region of North West Tasmania, and for us to win this campaign we need to get our message people not just in the country but all over the world. (Respondent CG7)

For forest events you have to use social media, because there’s no newspaper down there, and some newspapers won’t publish things like the action that we have there. They just publish letters, or if there’s going to be a meeting, but not that type of actions. On Facebook you can publish what you like. (Respondent CG12)

In support of this view, nine respondents compared the mediated visibility they obtained for their campaigns on new media with traditional media. More than half (55%) of the 31 respondents noted that the new media reach was hardly realisable through traditional media. This was demonstrated, for example, by the following comment:

We would have never achieved those levels of engagement …. For our campaign I tried really hard to get traditional media, Google tried hard too, the biggest company in the world. One article appeared on ABC only once. So, if you only read the newspaper or watch TV you would have never heard of the campaign. But if you are online, 20 million of you heard about it and about our organisation. We could have never got that just by focusing on traditional media. (Respondent ENGO15)

For ten (32%) respondents, mediated visibility on new media was thus a huge beneficial opportunity to reach out to both ‘like-minded’ and ‘new’ audiences. With ‘like-minded’ audiences, respondents referred to those individuals who were already familiar with, and supportive of, the campaigns. On the potential for activism of reaching out to like-minded audiences, respondent CG15 commented:
I think you need to talk to people that are thinking roughly the same way as you and that know what you are doing, to show that this is a continuing campaign and that people are taking initiatives, and all the rest.

Being so ‘visible’ to like-minded audiences thus reinforced the power of new media to increase the engagement of these audiences with the campaign. As, for example, suggested by respondent ENGO16:

It can be a recruitment tool for people who are not already engaged with the issue, but the predominant way we use these tools is speaking to people who are already engaged, to activate them or engage them in different ways.

In sum, visibility on new media to reach existing supporters was an important component of environmental activism also in terms of engagement:

When you’re in the process of finding people that are keen and that want to take action and are looking for the next step to take action, there’s nothing better than social media for finding those leads. (Respondent ENGO7)

Twenty respondents opined that mediated visibility through new media was a way to enhance civic engagement with environmental campaigns, as also discussed in Chapter 3 in relation to the relationship between these media, social movements, and the environmental movement (c.f. Anderson 2014; Lester and Hutchins 2009, 2013; Hindmarsh and Calibeo 2017; Pickerill 2003). Concerning new media engagement, respondent CG9 commented:

We realise it is an important channel, and that a lot of people engage in it. We know that if we put up a post, written or video, it gets up to 40,000 views and shares and that’s a good thing, much better than 1 or 2 phone calls obviously.

So, what extent does more visibility on new media help activists to reach out to new audiences? According to the majority (65%) of the 31 respondents, new media helps reach larger audiences. As such, this can potentially increase pressure on governments to protect the environment, as the following respondent commented upon:
If we had to fight this campaign alone, it’s likely we would never win it. The area is too small, and it would never get federal government attention … people in Sydney and Melbourne are listening to what is happening through social media, online articles, and on various platforms; and they get outraged, they talk to their local members and all of a sudden, it’s not just a problem for the members here, it is a problem for the whole parliament. (Respondent CG7)

There were several ways to engage audiences, from sending emails to sharing petitions on new media, or ‘boosting’ posts on Facebook, as demonstrated by the following comments:

Last year we were having a rally…we had a petition going previously, and we got a very good response to the petition, we pushed it out using a special designated Facebook page. And, we were able to get people signing the petition, and ask them for their full address and phone number. And the fact that heaps of people gave us all their information, phone number, full address, meant we could target exactly what electorate they were in and we could send them a text and prompt them to come to this event (Respondent ENGO14).

I recently shared an article talking about the benefits of getting out in nature and science saying that it affects not spending time in nature…I shared the article and boosted it and said if you are concerned about this, and you want to do something about it, maybe you want to become a member. And I shared it and boosted so more of our followers and their friends would see it. And we did get a spike in new member sign up, so there was a direct link there (Respondent ENGO12).

Respondents described reaching out to more people as a great outcome for environmental activists. Even if local campaigns rarely went ‘viral’, the rapid spread of digital content through social media to reach a global audience of millions made respondents pleased to get exposure for their campaigns even at the small scale (c.f. Cohen 2014; Postill 2014; Watts et al. 2007).

However, a few (16%) of the 31 respondents commented positively that some of their campaigns did ‘go viral’ and acknowledged the potential of new media for this scope of mobilisation. Respondent NGO15 opined, ‘if you get the idea right, if the thing is right … it gets all over the world, it has the power to just go viral’. In addition,
on the importance of ‘virality’ on new media, as especially driven by social media conduits in relation to traditional media, respondent ENGO3 argued:

Viral is from the people. It’s from the other people who are like me who liked this particular thing. And you have only seen it because someone you know has shared it. So your trust within it is much more profound. While who’s really deciding what’s newsworthy? We, the people, don’t. We can influence, maybe, but we don’t really get a say.

**Subtheme 2: Networking (27 respondents)**

Twenty-seven respondents mentioned ‘networking’, for which new media and social media was central for social movements’ mobilisation and for activists to be interconnected (Bennett and Segerberg 2012; Dahlgren 2006; Lester and Hutchins 2009; Pickerill 2003; Juris 2005; Nabatchi and Leighninger 2015; Papacharissi 2010). As such, this interconnection was useful for organising, communicating, and mobilising supporters for their campaigns. Respondent CG1 observed this use in the case of the Bentley Blockade of CSG mining that occurred in 2014 in the NSW Northern Rivers region:

> During the Bentley campaign, we posted on Facebook … because that is how many people catch up with each other these days.

Similarly, on networking during the Bentley Blockade and on the strategies for strengthening networking through social media, another respondent (C13) commented:

> We started a “will you show up/I showed up” thing, and so to everybody who came we’d say hold this “I showed up/will you show up” [sign], and then share it to your personal Facebook profile so all of your friends will see the picture. It goes out to their friends who might be more conservative, and if three of them come and do it, then it goes out again. So, that’s how we worked it out.

Also commented upon favourably was the networking capacity of new media and social media in relation to the interconnections made between groups and activists across geographical boundaries to offer each other support and learn from each other’s
experiences. When talking about networking, for example, one respondent referred to social media as a ‘macro family’ thus:

It is really great because if something comes up and it would be helpful for some other states, I tweet it to the colleague in that state. Or if they find something that would help me, they tweet it to me. So, we are all watching each other’s back through social media.

(Respondent CG18)

Networking was also a way for individuals to engage and get involved with other individuals with shared interests and concerns, as well as with other individuals necessarily belonging to a group or organisation, as noted by almost half (45%) of the 27 respondents. For example, respondent ENGO16 commented:

I would say that all the activities that we are involved in, like the shark cull, were organised by people meeting each other and engaging online through social media tools [by way of] groups, chat rooms, Facebook chats … it’s about social media being used by a community of people to achieve an outcome, through enhanced ways of communication and meeting with each other.

Another example was by ENGO7 in relation to the possibility for environmental activists to expand their new media networks with the aim of reaching diverse audiences:

The potential is there for us to learn how to tap into those broader networks and reaching out beyond our own list of contacts and social networks, and into those broader ones.

Finally, three respondents reflected on the life of the networks built during campaigns once the campaign ended. One respondent, for example, commented that she did not want to lose the support base that formed around the campaign:

Now we have come to the end of the campaign…and the question is: how do I close that down without losing people? I am trying to move people down [to another group] and engage them once I am in the committee for it. But how do I close my website down, how do I manage these things, or Facebooks? How do I transition the 11,000 people?
This is something that many people don’t talk about, how do you close all those pages on Facebook for example, do they just fade away? (Respondent CG11)

This aspect was also mentioned in Chapter 4 in relation to the analysis of Facebook pages of campaigns that, once concluded, continued to be used by the page owners as channels to support other (often similar) campaigns in other locations. Alternatively, these pages were kept open to keep the support base alerted if any environmental issue would emerge again in their area. For example, in relation to keeping the Facebook page active once the campaign concluded, respondent CG8 commented:

We are still getting likes even though there is not really happening. But we still put on posts every now and again. And people are still following, still keeping an eye on what’s going on … We know this government is crazy, they are going to be logging, so that’s why we kept it. But other groups dismantled those pages.

**Subtheme 3: Self-representation (23 respondents)**

Twenty-three respondents mentioned the third subtheme ‘coverage’ This subtheme refers to the capability of environmental activists to self-represent themselves and their campaigns through communicating them on new media (Lester and Hutchins 2012; Cox 2013). Thus, as opposed to traditional mainstream media, new media allowed users to be consumers as well as producers of information (Fuchs 2012; Mosco 2009; Taylor 2014). As such, the (23) respondents mentioned their campaigns got more coverage on new media than they did on traditional media due to the possibility of producing content and sharing it directly on their own platforms.

Respondent CG5, for example, commented: ‘They [traditional media] refuse to put the other side in, exposing their lies. So, it becomes very frustrating’. Similarly, respondent CG1 argued: ‘A lot of environmental things aren’t covered in the [traditional media] news’. This was the case, for example, of a protest camp organised in opposition to tree logging in Tasmania that lasted 31 days, as respondent CG7 commented: ‘With traditional media, since you are relying on a reporter showing up, and a photographer, we would have been 31 days with nobody knowing we were doing a thing.’
Quite clearly then, in contrast to traditional mass media, new media provided activists with more opportunities to share their own message as, for example, stated by respondent CG1. This respondent mentioned the 2017 Dakota Pipeline protest in the US (Levin 2016) and commented on new media coverage that it did not matter if the event was not been covered by the mainstream media, because it was ‘all over Facebook’ anyway and social media raised ‘the voices of the people who were there’. Similarly, another respondent (CG5) commented, ‘we became our own media’ in relation to the possibility for activists to report on their activities directly on their new media platforms and communication channels.

Self-representation on new media, as noted by four respondents, also had the effect to help activists overcome the negative stereotyping of environmental activists as ‘greenies’, as sometimes tended to occur on mainstream media (respondent CG8). For example, respondent CG10 reported that her group would target news articles where environmental activists were portrayed as ‘unemployed hippy serial protesters’. They would overturn that stereotyping with ‘a lot of evidence and economic arguments to debate and try to show what happened [during the protest] in the most positive light’. Accordingly, these respondents experienced new media as more democratic and open with information disseminated more effectively: a perspective that echoes the before mentioned potential of new media for networking and visibility.

In turn, seven respondents also noted that reportage of their campaigns on new media had some influence on the reportage of traditional media outlets, which was useful in terms of exposure. Such observed influence supports the use of new media in complementary ways with traditional media by social and environment movements. Respondent ENGO11, for example, described how some campaigns conducted on Twitter gained momentum and ‘ended up trending nationally’, as assisted by traditional media ‘because then journalists would ask why is everyone talking about this?’ A similar perspective offered by respondent CG7 was:

The ability of new media for us to develop our own content and get it out to our own means in some ways entitles traditional media to do some easy journalism, when they take things that we have done all the work on. But it sorts of allows us to get to that space and it gives us a bit of control over it and if we are clever on how we present it and how we package it up, it’s like fishing; we can entice them to grab the bait and run with it.
Subtheme 4: Digital communication strategies (21 respondents)

Several digital strategies for communicating environmental campaigns were identified by 21 respondents during the interviews. These strategies were deployed with the intent to raise public awareness on environmental issues by spreading as much information as possible as well as gaining more support both in a financial sense and in terms of participation for offline and online actions.

One of the most used and effective digital communication strategies was sharing images and videos with information on the ongoing campaigns. In relation to the campaigning area of old-growth forest logging, 12 respondents highlighted the crucial role of images and videos shared on new media to raise public awareness around the issue of forest logging. Two respondents, for example commented:

You can do things with social media that are engaging and highlighting the seriousness of it. You can put the straight news article out. Or, you can use a cute koala to highlight the fact that our koalas are dying to advertise your cause and get enough people to take notice of it; if we didn’t have social media, I really don’t know how it would be done. (Respondent CG3)

Still in relation to forest logging, ENGO9 highlighted that of digital devices (such as drones) could be powerful in raising public awareness on environmental issues when deployed strategically:

Most of the logging takes place in remote state forests, and forestry corporations are reasonably savvy they know people don’t like logging when they see it because it’s massively destructive. So, they would leave a strip of trees a couple of hundred meters wide on the road side, so that the logging will take place beyond that. This way, very few people would actually be exposed to it. But using drone footage and then targeting that to reach areas and certain people is also powerful (Respondent ENGO9).

Twelve respondents opined that posts with videos and images were more efficient in attracting users’ attention because the content shared was ‘user friendly’, as opposed to posts with too much text or details that were often ignored. In the words of respondent CG8: ‘people would focus on an image rather than reading the words’. As such:
When I put up a pretty picture up it gets a lot more hits and shares. I put a very nice photo of a goanna, saying it’s beautiful, rare, and endangered, and its habitat is being destroyed … the pretty picture was what captured people, but it also got the message out too. (Respondent CG5)

Whenever I post an image of all the destruction, that tends to go pretty viral. So, the amount of people that are now aware that logging is happening…[is] really great (Respondent CG6).

Another powerful way of using new media to raise awareness on environmental issues was digital storytelling, as observed by seven respondents. With storytelling, activists aimed at engaging the public in a more personal way, through appealing to audiences’ emotional sphere. The efficacy of storytelling was described, for example, by respondent CG7:

Social media lets you tell a story, you can go out there with a video and say this is beautiful and create it in a format that has an influence on these people who don’t care about politics and don’t understand the science. But you know that if you move them and you show that there is something that is beautiful that is threatened, and if they leave that 90-sec video on and they feel they don’t want that to happen, then you have achieved what you had set out to do.

In turn, two respondents mentioned that a successful communicating strategy effective to raise public awareness via new media was the involvement of supportive celebrities who publicly shared their support to the campaign with fans on their public online profiles. For example, the success of this strategy was evident in the 2017 anti-fracking campaign in Western Australia, in which several celebrities became involved.³ On the impact that these actions had on that campaign, Respondent CG9 commented:

Any of these people [celebrities] who have got their own fans or followers, when they post something about our campaign it reaches out to them too … It makes a lot of difference because anyone can make a film about these people, but when these people post this stuff [about the campaign] themselves, that’s obviously massive.
Summary of results for Theme 1: Platform for delivery and civic engagement

Table 11 shows a summary of the results presented above for Theme 1. Column 1 shows subthemes in descending order as engaged with by the 34 respondents. In turn, Column 2, Row 1, shows that all 34 respondents engaged with Theme 1. Rows 2–5 then show the number of engaged respondents’ variation for each subtheme, as indicated first by number in Column 2 and then by a percentage of 34 in Column 3. This process enabled analysis of the respondent engagement with each subtheme and comparison of the variations to produce results (as discussed below). This analytical process is then repeated for each theme in this chapter; as well as in the next chapter (Chapter 8) on limitations.

As shown in Table 11, all 34 respondents engaged with Theme 1, which indicates its very high significance regarding the benefits of new media as platforms for delivery and civic engagement for environmental activism. However, weighting and variance according to how the respondents saw each theme regarding the subthemes was variable from very high to medium engagement, as now addressed in turn.

Table 11: Summary of results for Theme 1

<table>
<thead>
<tr>
<th>Subthemes</th>
<th>No. of respondents (total: 34)</th>
<th>% (n=34)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mediated visibility</td>
<td>31</td>
<td>91</td>
</tr>
<tr>
<td>2. Networking</td>
<td>27</td>
<td>79</td>
</tr>
<tr>
<td>3. Self-representation</td>
<td>23</td>
<td>68</td>
</tr>
<tr>
<td>4. Digital communication strategies</td>
<td>21</td>
<td>61</td>
</tr>
</tbody>
</table>

*Some respondents mentioned more than one subtheme. These percentages indicate the frequency of their responses.

Mediated visibility showed a very high respondent engagement (31 respondents, 91% of total). The main narratives that emerged within this theme and the respondents that raised them, as shown in the brackets at the end of each analysis – by small or large groups, case study of fracking or forest logging, and location – were:

a) New media enabled and facilitated outreach to large and diverse audiences, with positive results on enhanced engagement of the public with environmental
campaigns and recruitment of new supporters (convergence between 31 community groups and ENGOs regarding fracking and forest logging across all states);

b) New media facilitated outreach to like-minded individuals (respondents of small groups focused on fracking across all states except SA and ACT);

c) Increased campaign exposure through new media led to positive campaign outcomes (community groups as well as a few ENGOs regarding both forest logging and fracking, across all states)

On networking, respondent engagement was **high** (27 respondents, 79% of the total). The key narratives that emerged in relation to this subtheme were:

a) Networking on new media enhanced communication between environmental activists (with convergence between 27 community groups and ENGOs across all states and regarding fracking and forest logging);

b) Networking allowed environmental activists to harvest support within and beyond their support base, as it enabled interaction between people with different interests and backgrounds (community groups mentioned this as well as a few ENGOs, regarding both forest logging and fracking, across all states except QLD and SA);

c) Networks developed for specific campaigning purposes become useless when the campaign is over (community groups and ENGOs mostly focused on fracking, across all states except ACT and VIC).

**Self-representation** had **medium** respondent engagement (23 respondents, 68% of the total). These were the key narrative that emerged in relation to this theme:

a) New media were considered more democratic than traditional mass media because they allowed activists to express their views more freely (convergence between all 23 community groups across all states and regarding both fracking and forest logging);

b) Because of (a), activists countered negative stereotyping on traditional media through with self-representation via alternative media (community groups and
only one ENGO raised this, both regarding fracking and forest logging, across all states except ACT and SA)

c) New media and traditional media were found complementary in that they ‘feed each other’ in terms of trending topics (raised mostly by ENGOs and only a few community groups, both regarding fracking and forest logging, across TAS, WA, and SA).

**Digital communication strategies** also registered medium respondent engagement (with 21 respondents, 61% of the total). The key narratives emerged in relation to this subtheme were:

a) The utilisation of powerful imagery, sometimes obtained to a greater effect through drones, was paramount to attract public attention to environmental issues and attain positive campaign outcomes (convergence between 21 community groups and ENGOs regarding both fracking and forest logging across all states);

b) Digital storytelling was an effective communication and campaign strategy (small community groups and ENGOs, mostly regarding forest logging, in all states except SA and ACT).

**Theme 2: Practical advantages**
The theme on ‘practical advantages’ attracted the comments of 33 respondents, who identified several advantages in using new media for environmental activism. Seven subthemes informed this theme, as discussed below in descending order of mention: cost effective, time effective, data management, easy to use, no geographical barriers, flexibility, and measuring impact.
**Subtheme 1: Cost and time effective (25 respondents)**

On Theme 2, twenty-five respondents mentioned the first subtheme ‘cost and time effective’. On cost effectiveness in particular, these respondents focused especially on social media, commenting on how they were cost-effective compared to traditional media. A typical comment was that of respondent CG15:

> We use it a lot because it’s sort of free. I mean, if an organisation has got little or nothing then it doesn’t cost you anything to set up a Facebook page and use it like that.

With a few exceptions, 13 (51%) of the 25 respondents made comparisons with traditional media, when talking about the cost effectiveness of social media. For example, in relation to the costs involved in creating ads on traditional media, respondent NGO4 commented:

> It is certainly cheaper to do social media than it is to put an ad on TV; those can cost 10 thousand dollars … Or to put a billboard up: again, very expensive.

In this context, also, new media and social media were preferred to traditional media to communicate with supporters and potential supporters. This referred to, for example, the significant costs of printing and postage to reach many supporters through letterboxing, in comparison to emails and social media messaging or posts. Respondent NGO8 commented:

> I was an activist before social media and I remember the difficulties of communicating, and it was so narrow, and we didn't have any money, and even sometimes to make flyers we had to stand and hold machines, wax stencils and all that, so it’s definitely improved for us.

Similarly, on costs associated with traditional campaigning, respondent NGO9 noted:

> It’s a dollar a stamp, you know. So, if you’re going to send letters to your supporters, even thank you letters … it doesn’t take long before it starts to eat into your financial revenues. So being able to use call outs on social media to try to get people on board campaigning rather than writing letters all the time is good.
New media were also described as ‘time-effective’ in at least two ways: (i) to create campaign content materials, (ii) to distribute and communicate content more widely. On creating content quickly, in contrast to traditional methods, the following responses were informative:

You need to be able to go out there, film something and get it online quickly, not like the old days when you had films and it had to go through processes of developing. They can go out through a computer that processes it and you can share it the following day. (Respondent CG8)

Hard copy newsletter has become less frequent. It used to be four times a year, and it used to take two weeks of my time to write the story and edit and lay it out with the illustration for it, send it out, print, fold stick addresses, etc. That was all really time consuming (Respondent. CG5)

Part of creating content was the ability to modify content more easily as a benefit of new media than if one were preparing the content for traditional media dissemination, over which respondents had little control. For example, one respondent referred to enabling their communication through the conduit of a ‘new media space, as such:

We are essentially advertising our causes and asking people to sign up to our view and to what we want to achieve. So, it allows us to do that ... in a very fast and effective way that we can adapt to change quickly, as opposed to the old media where we raised some money and booked a newspaper ad, for example, a forum on a Saturday, and then if you changed your mind to run it Thursday night then it would be too late for content change. (Respondent CG7)

In terms of distributing content, respondents also made comparisons to traditional ways of sharing content. For example, on newsletters, both their production and distribution were time consuming the traditional media way (as also indicated above). In contrast, these respondents observed that information sent to wide audiences was very quick by way of new media. As respondent NGO1 commented:
[we can] quickly and easily and cheaply reach large numbers of people with a message; anybody, anywhere, in the world, with a message … A Facebook post or an Instagram post cost nothing and it can reach millions of people. In the old paradigm that was unthinkable.

Subtheme 2: Easy to use (17 respondents)

New media and (especially) social media were also seen by 17 respondents as ‘easy to use’. As respondent CG1 commented:

If you can use Facebook, you don’t need any kind of special technical background … We have two people who are our Facebook posters, and one of them was computer illiterate, the other one was on computers a bit more … she's right up on Facebook now.

This practical benefit of easy adoption and operability of new media was noted by six ENGOs respondents and 11 respondents from community groups, with the latter more likely to have untrained media members involved in communication vis-à-vis the more professional groups, thus more of a benefit for community groups (c.f. Freudenberg and Steinsapir 1991: 237). For example, of the 11 community group respondents, four remarked they did not have a personal Facebook account before campaigning, and had to learn how to use it on the job:

I didn’t know much about Facebook and Twitter until a couple of years ago and wish I had known it earlier. I was wasting a lot of time. (Respondent CG17)

I knew nothing and then was asked to be an admin for the page. I wasn't even on Facebook, so I had to join Facebook …. So, I learnt on the job and still don’t consider myself an expert and I probably wouldn’t be on Facebook if it wasn’t for the campaign. (Respondent CG8)

In contrast, even though ENGOs respondents recognised that new media easy to use, they explained that their management done by a team or at least one dedicated and experienced media and communication person made it much easier to reach large audiences.
**Subtheme 3: Data management (11 respondents)**

The fourth subtheme informing Theme 2 on practical advantages of new media was ‘data management’, as mentioned by 11 respondents. These respondents acknowledged the utility of new media to better organise and manage large amounts of data, particularly in relation to creating, growing, and managing campaigns and associated databases.

Databases, in particular, were described as an essential tool to communicate with supporters and potential supporters. As the 11 respondents explained, databases contained all the relevant information about an organisation’s or group’s support base, including contacts; the latter among the most valuable resources for activism. For example, this data aided respondents to perform strategic targeting of key electorates during election times, a practice that respondents usually described as politically influential. Supporters and potential supporters provided personal details (sometimes unwittingly), for example, when they signed online petitions. New media allowed for more in-depth analysis of supporters and their behaviours, which, in turn, would enable more precise targeting. As one respondent commented:

> If you’ve got someone’s name, address, and ideally their date of birth … If you’ve got some key identifier, you can start to match data. And you can do demographic profiling, or political profiling, and start to stich sets of data together. (Respondent ENGO7)

To maximise the way data can be matched and used for targeting, four of these 11 respondents’ groups and organisations also invested in ‘customer relationship management’ strategies (CRMs). Such strategies can be defined as a ‘process that utilises technology as an enabler to capture, analyse and disseminate current and prospective customer data to identify customer needs more precisely and to develop insightful relationships’ (Paulissen et al. 2007: 1; also, Reinhold and Alt 2013).

As shown by the following comments, these strategies aim to attain in-depth insights about their supporters and potential supporters with the purpose being to also engage and later mobilise them more easily and efficiently:

> You can amass huge databases, which banks do, and corporations. They do it for commercial purposes, to track your consumer behaviour or particular purchasing...
choices. I guess you don’t just collect data for the sake of it: you have got to do something with it. (Respondent ENGO7)

We have our CRM, which is our database, that’s the tool we use to (a) send emails out to everybody, and (b) create sign up forms and action pages and events and things. It all happens through one CRM (Respondent ENGO3).

**Subtheme 4: Reduced geographical distance (9 respondents)**

Nine respondents commented on the fourth subtheme ‘reduced geographical distance’, referred to respondents being able to contact each other even if geographically distant. For example, one respondent commented that although it was difficult to collaborate on the same issue with overseas activists through Twitter, for example, reduced geographical distance was a real benefit for activists in Australia.

The campaigning activities of respondent C18, for example, required talks and meetings with other activists in different locations in Australia. Skype overcame considerable travel expenses, as well as time in being able to make faster decisions on complex issues usually accomplished through face-to-face meetings. This respondent used Skype as much as possible instead of long distance travel.

Similarly, three respondents highlighted advantages derived from reduced geographical distances for campaigning from remote areas in Australia, for example:

I think because we live in an isolated place … driving around here, we have done promotional mailboxes for our area for land care, and it takes all day driving around, and it costs too much money to put it with the mailman. So, we did drive but I am not going to do it again. And I am not going to do anymore letterbox drops, it takes too long … I just don’t see any need for it any longer. (Respondent CG3)

Another respondent reason for seeing reduced geographical distance as a practical advantage was that new media and social media allowed them to stay up-to-date with a campaign, despite whether they could be physically present in meetings and/or attend actions, as eight of these respondents noted. In this regard, for example, respondent CG10 commented on the convenience of using social media for campaigning:
I spend a lot of time on this campaign, but I have to go to work. So, I would be at work stressing about what’s being bulldozed; while I am at work there were people on the frontline who would post live updates, or videos, which is a bit of a trap if you are at work: you can’t really be watching Facebook live … you are not supposed to be. But, I can look at that live video later and it would be literally, “this is what we lost today”. (Respondent CG10)

**Subtheme 5: Measuring impact (8 respondents)**

Eight respondents mentioned the subtheme of ‘measuring impact’ to indicate the benefit offered by new media to respondents of statistics and analytics for them to get a better idea of the impact of their campaigning activities online. In using them, respondents could learn from the failure (or ineffectiveness) and success of their digital campaigning actions to achieve more effectiveness.

This advantage was unique to new media, especially because as respondents noted mainstream media offered limited capacity to measure the impact of their actions. For example, respondent ENGO11 commented, ‘it’s easier to monitor community sentiment about issues, because you can do that through Facebook tools, likes, or comments’; so ‘you can really know your audience in a way that you can't on other [traditional media] platforms’.

Indeed, these respondents reflected on social media as one of the main ways they were getting feedback from supporters. For example:

> When you post again and again you see what resonates with people and what people care about, and what makes people angry. So, it’s really useful just to see what people care about just by have them respond on Facebook. And, that can shape our campaigns as well. (Respondent ENGO4)

New media platforms also provided respondents with different tools to measure the impact of their online actions. Facebook analytics, for example, is a Facebook marketing platform that indicates the level of engagement that each post or advertisement has by the number of impressions of delivery, as measured in reach, views, likes, and so on (Facebook 2017c; Waite and Wheeler 2014). Two respondents mentioned Facebook as a good way to measure impact: one of them, respondent ENGO11, commented that measuring impact of online actions was ‘more accountable,
because you know exactly how many people saw it. You can never tell that with printed media’.

Five respondents also mentioned that another way to measure impact of online activities was by analysing the opening rate of the emails they sent to the contacts in their databases. Email opening rates calculate the number of emails being open divided by the number of emails sent minus bounced ones (MailChimp 2017). As, for example, the following respondents commented:

Opening rates are telling: if you have a 40% opening rate you are doing really well from what I can understand. (Respondent ENGO10)

We all get a very small, like 30%, of email opening. You can monitor that. We send thousands of emails, and then we know that 300 would be opened, that only about 2% convert reading to action, meaning that clicked on the link and filled in the donate now page. We are ‘aiming’ for 2% that sounds extraordinarily low, and we are not at that even right yet. (Respondent ENGO15)

However, although these respondents explained that email opening rates were an indicator of how many people would open the emails they had sent, this was not an indicator of how many people would take further action, such as donating or attending an event:

This [email opening rates] is something we check, we don’t assume that just because we have sent something to somebody they have opened it up. Also, just because people have opened it, it doesn’t mean they read it, so we need to keep thinking how is that message getting to people. (Respondent ENGO10)

Subtheme 6: Flexibility (7 respondents)

Lastly, the subtheme of ‘flexibility’ collected the comments of seven respondents. This referred to new media as an easily adaptive means of communication, and as compatible with the structure of the environmental movement. As discussed in Chapter 2, the environmental movement is made of loosely bounded and decentralised networks of groups, organisations, and individuals. This structure echoes the non-hierarchical, horizontal structure of new media (Baek 2010 Meikle and Young 2011; Jensen 2008). In this regard, respondent CG13 commented about new media as
Fortunately compatible with the kind of complex networks that environmental campaigning has traditionally worked through. They’re complex adaptive systems, horizontal opt-in social movements. I think long before there was social media and the Internet, they operated in a way that the internet kind of mimics, replicates, or it’s compatible with. There’s just a real, instant compatibility between the two.

As such, these respondents saw new media compatible with the structure of the movement. Accordingly, respondent CG13 described the movement he was involved in as a ‘giant’, decentralised, and horizontal network’ where new ideas ‘would just arise from individuals inside the network’. Similarly, respondent ENGO11 commented that new media was a model that worked better for environmental organisations and for any sort of social organisation whose main asset is people. And so, we can use that to our advantage. Capitalise on that to respond to large companies and the government.

This flexibility characteristic of new media to facilitate collaboration and communication between individuals, for example, in sharing ideas, was recurrent among respondents. For example, three opined that new media allowed activists to collaborate in creating and modifying content in difference to mainstream media. For example, they could collaborate through the ‘functionality of sharing documents and collaborating on things’ of Google Docs (Respondent ENGO14). As such, respondent CG6 commented that collaborating in the creation of documents through Google Docs allowed the organisation to ‘be inclusive especially when you’re talking to a large and diverse amalgamation of these different groups’. Again, this perception referred to the diversity of groups comprising the environmental movement and its compatibility with new media for communication.

**Summary of results for Theme 2: Practical advantages**

As indicated in Table 12, 33 (or 97%) respondents engaged with Theme 2 on practical advantages. This very high engagement rate indicated it was also a significant theme for activists to engage with, although the weighting given to the subthemes was variable from high to very low.
Table 12: Summary of results for Theme 2

<table>
<thead>
<tr>
<th>Subthemes</th>
<th>No. of respondents (total: 34)</th>
<th>% (n=34)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mediated visibility</td>
<td>31</td>
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<td>68</td>
</tr>
<tr>
<td>4. Digital communication strategies</td>
<td>21</td>
<td>61</td>
</tr>
</tbody>
</table>

*Some respondents mentioned more than one subtheme. These percentages indicate the frequency of their responses.

On **time and cost effective**, respondent engagement was **high** (25 respondents, 75% of the total). The key narratives that emerged in relation to this subtheme were as follows.

a) From creation to distribution of campaign materials, new media were considered more effective than traditional media because of the reduced costs associated with it (financial and time) (convergence between all community groups and ENGOs regarding both fracking and forest logging across all states, although small groups were more numerous than large ones in raising this narrative);

b) However, and in relation to (a), the cost of using new media to create and distribute engaging content was still indicated as high by some respondents (community groups on forest logging and ENGOs regarding forest logging and fracking, across all states but SA and QLD).

On **easy to use**, respondent engagement was **medium** (17 respondents, 51% of the total). These are the narratives that emerged in relation to this subtheme:

a) Being easily operated, new media were accessible by a larger portion of the population for campaign purposes (mostly community groups and only one ENGO brought up this narrative regarding forest logging in NSW, TAS, and WA);
b) Some activists felt compelled to learn how to use new media due to the essential role of these media in campaigns (only community groups mentioned this narrative regarding fracking and forest logging in TAS, NSW, and SA).

On data management, respondent engagement was low (11 respondents, 33% of the total). The key narratives that emerged within this subtheme were:

a) It was easier to collect data of supporters (or potential supporters) through new media strategies (convergence between 11 community groups and ENGOs regarding fracking and forest logging across all states except QLD);
b) To influence political elections, digital databases were of great importance because they helped to profile supporters and match them with key electorates (ENGOs regarding fracking in ACT, SA, and QLD);
c) Sophisticated software was used for managing digital databases (ENGOs regarding forest logging and fracking across all states).

Reduced geographical distance also registered low respondent engagement (9 respondents, 27% of the total). One key narrative emerged within this subtheme:

a) New media were particularly useful for connecting activists operating in rural, remote, and/or isolated areas in Australia (mostly community groups and only a few ENGOs regarding forest logging raised this narrative across all states but ACT, WA, and SA).

Measuring impact had very low respondent engagement (8 respondents, 24% of the total). These were the key narratives that emerged:

a) Digital analytics tools available to respondents helped them shape their campaigns in the digital space (mostly ENGOs across all states and two community groups in QLD and NSW regarding fracking and forest logging);
b) Information gathered through digital analytics was not telling of further on-the-ground action undertaken by supporters but could sometimes be used to
predict it (mostly ENGOs across all states and two community groups in QLD and NSW regarding fracking and forest logging).

On **flexibility**, finally, very low respondent engagement was found (7 respondents, 21% of the total). The key narratives that emerged within this subtheme were:

a) The communication structure of new media was horizontal and flexible (both ENGOs and community groups mostly regarding forest logging and based in TAS and WA);

b) Horizontal communication worked well for environmental campaign purposes, compared to traditional mass media (both ENGOs and community groups regarding forest logging and fracking across all states except ACT and QLD).

**Theme 3: Taking action**

The last theme informing the meta-theme on the benefits of new media for environmental activism was ‘taking action’, as mentioned by 31 respondents. Theme 3 comprised two sub-themes: mobilisation; and pressure politics.

**Subtheme 1: Mobilisation (29 respondents)**

Subtheme 1, mentioned by 29 respondents, investigated the perspectives of respondents in relation to how effective were new media to mobilise to resolve environmental issues. Mobilisation, as discussed in Chapter 2, referred to the strategies aimed at mobilising individuals to take protest actions in the form of demonstrations, advocacy, and lobbying activities (Bennett and Segerberg 2009; Brulle 2010). The perceptions on how efficient and useful these media were for mobilisation varied between respondents.

Eleven of the 29 respondents found it difficult to imagine how mobilisation was organised prior to social media, as demonstrated by these comments:

> You have people that come to your community meeting saying oh I just saw this event that popped up on my Facebook feed and I thought I’ll go. I have never been able to do that before. So, it does work. (Respondent CG9)
It’s a good way to get to mobilise people to do stuff and to reach them through different channels. (Respondent ENGO4)

[The campaign] suddenly had this massive influx of people, and that’s probably thanks to social media because that was how people knew about our actions, they came from everywhere. (Respondent CG11)

Other respondents were more cautious about the potential of new media to enhance mobilisation of the audience, with a focus on social media for the mobilisation aspect. The respondents opined that in the absence of other ways of connecting to people and communicating campaigns, mobilisation would not occur so readily, for example:

But it [mobilisation] wasn’t just social media; that, of course, was very important, but it had to be on the back of a lot of work that we did. (Respondent CG11)

We had neighbour to neighbour [community] engagement in which every house in the region was surveyed and informed, and people signed on which was completely neighbour networking, and that created that mobilisation potential that we can then use social media to mobilise in the instant. (Respondent CG13)

A lot of those online activities are great ways of finding people and encouraging people to come to rally and events; so, we don’t dismiss them, but we are mindful that an online action in itself isn’t enough. (Respondent ENGO1)

A way to complement social media communication with traditional communication was the use of text messages (SMS), which were popular and effective, especially when used by software that allowed them to be sent in bulk. The strategic use of SMS for mobilisation was for example illustrated by the following comments:

We used sms a lot for our alerts. We had the big sms and the small sms group, so we could mobilise our intelligence group, the ‘core functional group’ of 600 people, or we could mobilise the people who we knew we could scale it up, 3000 people. We would leave the 3000 alone until we really need them. So, we had different sms groups. Sms was very effective, because it's very instant. (Respondent CG13)
We were able to get people signing our petition, and ask them for their full address and phone number … heaps of people gave us all their information, phone number, full address, which meant we could target exactly what electorate they were in and we could send them a text and prompt them to come to this event. (Respondent ENGO14)

**Subtheme 2: Pressure politics (23 respondents)**

New media were, according to 23 respondents, also beneficial for strategies of ‘pressure politics’ whose targets were governments, councillors, city mayors, directors and/or industry representatives (Baek 2010; Connelly et al. 2012; Doyle and McEachern 2008). For these respondents, the purpose of pressure politics was to make their adversaries aware that the community was opposing or contesting their activities, and that they were prepared to campaign against them. For respondent CG2, for example, the role of new media for pressure politics was crucial: ‘[new media] will be, I hope, the death knell of stupid decision making. No longer can a politician or a leader just get up and say bullshit and get away with it’.

Another reason for using new media to exert pressure on politicians and decision makers was to raise public awareness of the environmental issues they were campaigning on. Several digital strategies aimed to achieve both outcomes. One was online petitions, as mentioned by four respondents, who commented that online petitions were not always efficient to create change. Nevertheless, benefits existed in relation to using online petitions to keep supporters engaged with updates on campaigns and make individuals aware of certain environmental issues by asking them to sign online petitions (c.f. Escher and Riehm 2017). The number of signatures affected the effect of the online petition: the more signatures were on a petition, the greater chance it had of reaching parliament. As respondent ENGO15 opined:

> There is the official way to deal with petitions in parliament, members would stand up and say today I stand up because I received a petition from this organisation. Point is, if you are a local member and if it is signed by 150 people you might go “okay, why bother?” If it is signed by 150,000 people, well, you might consider it a bit more.

However, there were other ways to make use of online petitions, even if the signatures were not too numerous. For example, direct tweets or messages could be sent to the receiver of the petition:
It also gives you the option to send the message to the minister’s Twitter account, and that has a more direct impact I think because they see it constantly. Having that constant reminder of people individually contacting you makes the difference...If they are getting a message on Twitter 30 or 40 times a day it’s starting to be huge, and someone needs to do something about it, even if it’s just taking the Twitter account down. (Respondent CG15)

Complementing online petitions were other pressure politics strategies. For example, as respondent ENGO5 commented, a digital tool directly tagged the premier on his Facebook page, as such:

What we did, rather than a petition, was this thing called the ‘excuse generator’ ... So, you can come to this excuse generator, and it is about running out of excuses to create the National Park … So, I tag [the premier], post it on my Facebook wall, and it goes on his gallery. We had about 300 people submit, and it had a big impact. We had him on the phone saying, “okay we got the message, now give us a break”. To me this is something that yes, took a bit of time, but means people are participating genuinely using a generator, which is great for social, and amplifies our campaigns through their News Feeds.

In addition to targeting social media platforms of politicians, two respondents advanced that new media was an efficient tool to target specific electorates and engage in pressure politics on that basis. For example, respondent ENGO14 commented:

We started making use of that feature last year, which was the first time we had the ability to do it, and it was very powerful. It definitely had an impact to be able to target particular MPs who were in the position of influence; they needed to hear from their constituents.

Similarly, respondent ENGO9 opined:

Land clearing for people in Sydney is a very difficult concept to get their heads around. And politicians bank on that: nobody will see it, so the Liberal Government, for example, and their voters, are essentially Sydney based. So, they know they are unlikely to have to
face the consequences of relaxing land clearing laws, because very few of their voters will see it. Whereas … you can take drone footage or satellite image and target the north shore of Sydney where Mike Baird’s constituents live, the [NSW] ex-premier, so you can really start to drill into his voting base and start to freak the politicians out.

**Summary of results for Theme 3: Taking action**

As indicated in Table 13, 31 (or 91%) of the respondents engaged with the theme of ‘taking action’, thus showing high respondent engagement with this theme. This high respondent engagement was found also in the weighting given to each subtheme, which was high in both cases.

<table>
<thead>
<tr>
<th>Subthemes</th>
<th>No. of respondents (total: 31)</th>
<th>% (n=31)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mobilisation</td>
<td>29</td>
<td>93</td>
</tr>
<tr>
<td>2. Pressure politics</td>
<td>23</td>
<td>74</td>
</tr>
</tbody>
</table>

*Some respondents mentioned more than one subtheme. These percentages indicate the frequency of their responses.

On mobilisation, respondent engagement was very high (29 respondents, or 93% of the total) about it. The key narratives that emerged from this subtheme were as follows:

a) Mobilisation of supporters was enhanced by new media (convergence between both ENGOs and community groups regarding both forest logging and fracking across all states);

b) New media mobilisation was conditional to conducting offline campaign activities (community groups and a few ENGO mostly regarding forest logging across all states except the ACT and SA).

Pressure politics, in turn, registered high respondent engagement (23 respondents or 74% of the total). Key narratives within this subtheme were:

a) Among the different pressure politics strategies on new media, online petitions were perceived as among the least effective (mostly ENGOs and two
community groups, regarding forest logging across all states but QLD, SA, and the ACT);
b) Other pressure strategies that directly targeted politicians on their public social media profiles or targeted electorates were perceived as very effective (both ENGOs and community groups mentioned this regarding fracking and forest logging across all states except the ACT).

**Conclusions**

To reiterate, the aim of this chapter was to partly address my research questions (reported in the Introduction section of this chapter). The views of the respondents indicate many benefits of new media to facilitate and enable environmental activism in Australia. The analysis showed most benefit in three sub-themes: (i) platforms for delivery and engagement; (ii) practical advantages; and (iii) taking action.

I now turn to Chapter 8, which provides the results and analysis informing meta-theme 2 on ‘limitations’ posed in using new media for enhancing environmental activism according to the perspectives of the respondents. Once the analysis of results related to the meta-theme 2 are presented, I discuss them in Chapter 9 along with the analysis of the results presented in this chapter.

**Notes**

1 As a suitable scale could not be detected in the literature for this purpose, the Griffith University scale for assessment of undergraduate and Master student assignments was adopted with modification; as an arbitrary scale of the level of respondents’ engagement by way of five categories: very low (0–24%); low (25–49%), medium (50–74%), high (75–84%); and very high (85–100%).

2 As Facebook (2017) indicated on its website, boosting is a way to create an advertisement with a post published on a Facebook business page, shown to an audience selected by the page owner. A boosted post on Facebook can reach new and wider audiences. Boosted posts attract ‘people who are likely interested in your content but don't currently follow you on Facebook. Your boosted post can include a call-to-action button so that you can drive people to take other actions you care about’ (Facebook 2017).

3 For example, on the involvement of well-known Australian writer Tim Winton in the campaign against fracking in WA, see Young (2017) at http://bit.ly/2zAPYPc. The popular
Australian band ‘John Butler Trio’ also expressed their support for the anti-fracking cause, as announced on their website: http://bit.ly/2zA5laR [accessed 13 November 2017].
8. Fieldwork analysis on the limitations of new media for environmental activism

Introduction

This chapter presents the results and analysis of interview data in relation to Meta-theme 2 on ‘limitations’ of new media for environmental activism. Meta-theme 2 was explored through Section 3 of the interview guide, which asked respondents about their perceptions on the challenges and limitations to using new media for environmental campaign activities.

As such, this chapter follows and complements Chapter 7, which presented the results and analysis of Meta-theme 1 on ‘benefits’ of using new media for environmental activism. In a similar way to the analysis of Meta-theme 1 in the previous chapter, in this chapter the analysis of Meta-theme 2 is discussed through the themes and subthemes that inform it. First, the content of each theme and subtheme is presented. Second, the results are summarised at the end of each theme.

Meta-theme 2: On the limitations of new media for activism

On Meta-theme 2, six themes and several subthemes with similar characteristics that inform them were identified, as illustrated in Table 14 below. The themes and subthemes were identified through common patterns revealed in NVivo coding analysis. The themes are presented in column 1, and the subthemes are listed and organised in descending order from most to least mentioned in column 2.
Table 14: Meta-theme 2: Themes and subthemes

<table>
<thead>
<tr>
<th>Themes</th>
<th>Subthemes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Media ownership and digital surveillance</td>
<td>– Digital surveillance</td>
</tr>
<tr>
<td></td>
<td>– Corporate ownership</td>
</tr>
<tr>
<td>2. Issues with digital communication</td>
<td>– Not replacing face-to-face</td>
</tr>
<tr>
<td></td>
<td>– Abusive behaviour and trolling</td>
</tr>
<tr>
<td></td>
<td>– Easy to dismiss</td>
</tr>
<tr>
<td></td>
<td>– Commitment issues</td>
</tr>
<tr>
<td></td>
<td>– Clicktivism</td>
</tr>
<tr>
<td>3. Overwhelming</td>
<td>– Time consuming</td>
</tr>
<tr>
<td></td>
<td>– A competitive space</td>
</tr>
<tr>
<td>4. Non-inclusive</td>
<td>– Not everyone is digital</td>
</tr>
<tr>
<td></td>
<td>– Echo-chambers</td>
</tr>
<tr>
<td>5. Misinformation and Disinformation</td>
<td>– Fake news</td>
</tr>
<tr>
<td></td>
<td>– Decline of journalism</td>
</tr>
<tr>
<td>6. A vulnerable space</td>
<td>– Security flaws</td>
</tr>
<tr>
<td></td>
<td>– Technical issues</td>
</tr>
</tbody>
</table>

The findings on the meta-theme of limitations are now presented, starting with Theme 1 on ‘media ownership and surveillance’.

**Results and analysis**

**Theme 1: Media ownership and digital surveillance**

Theme 1 investigates the perspectives of respondents in relation to its two subthemes of digital surveillance and corporate ownership. All 34 respondents commented on this theme.

**Subtheme 1: Digital surveillance (34 respondents)**

This subtheme was mentioned by all 34 respondents. Digital surveillance refers to the monitoring of online activities by corporations of new media users for commercial purposes and by government for political purposes. Commercial digital surveillance involved surveillance by corporations for advertising and marketing revenues through marketing campaigns tailored to their individual tastes and preferences (Andrejevic
Only six respondents commented on commercial digital surveillance, as respondent CG13 typically opined:

Corporate commercial surveillance is big in terms of “this is what you buy”, “this is what you spend money on”, and “this is the website you have looked at”. You see it coming back at you all the time through Google ads. They know where I went fishing! How do they know I bought that thing? So, they are developing a massive consumer profile on you.

In turn, the use of digital surveillance for political reasons by governments and corporations referred to the surveillance operations exerted by governments and corporations to monitor certain activities of environmental campaigners (Arnsdorf 2015; Calibeo and Hindmarsh 2017; Fuchs et al. 2012; Potter 2011). As discussed in Chapter 3, this type of digital surveillance could target environmental activists involved in peaceful protests including rallies, sit-ins, and demonstrations (Dorling 2012; Leahy 2013). Many respondents (70%) had concerns in relation to this type of digital surveillance. Among these respondents, 11 indicated they experienced or potentially experienced digital surveillance, for example:

We have examples of how we believe our communications have been interfered with and hacked. Even when we were dealing with lawyers about suing the government, there was evidence that the other side was getting the emails between our lawyers and us. Nobody else would know, but they seemed to know about it. (Respondent CG5)

[Digital] surveillance is possible through this medium, and it can restrict the way that you do things … We realised that, a few of our actions were organised early in the morning and the cops would be there before us. (Respondent CG10)

Overall, most respondents were concerned about the impact of digital surveillance on the way existing and potential new supporters engaged with them. As such, 35% (12) of these respondents described digital surveillance as an intimidation strategy used by government to discourage citizens to engage in campaigning activities. One way was through ‘profiling’ those who participated in environmental protest actions as respondent CG11 commented:
I know that the police were quite openly videoing people’s faces and getting a record of everyone that was there, targeting what they thought were key people. And that put quite a chilling effect on some people, because they were targeting. You must be very careful when they do that. That made people step back.

To recall, in Chapter 3, I referred to the concept of a ‘chilling effect’ as a situation in which ‘laws, regulations, or state surveillance can deter people from exercising their freedoms or engaging in legal activities’ (Penney 2017: 2; Stoycheff 2016). When asked about their view on the chilling effect in relation to new media surveillance, eight respondents opined that individuals would prefer not to engage with environmental campaigns nor take part in protest activities if they feared their actions were being monitored offline and/or online. This view was illustrated, for example, by the following comments:

[Digital surveillance] does have a chilling effect. We have people who would say that they don’t want to get involved in some stuff because they are worried about where their data goes. (Respondent CG9)

That chilling effect, I didn’t know to call it that way, but it did exist. People would say “because of my work, I can’t be seen there”. (Respondent CG11)

I think for sure it could have a chilling effect. I think that it is hard enough for people to come out and protest … Being labelled as an activist, you know, people don’t like to be seen as activists. Especially in this day and age when people hesitate to like something or click on a site because that goes into your online file where every file is, and nothing gets deleted. (Respondent CG9)

Even though the chilling effect could affect civic participation in environmental campaigns, however, respondents did not consider it a particularly large deterrent for protestors: according to 12 respondents (35% of the total), environmental campaigns would be organised regardless of digital surveillance and people would protest anyway if they were passionate enough about their cause.

Digital surveillance was also associated with metadata regimes, adopted in Australia under the Abbott Liberal-National Coalition Government in 2014, and which took effect in 2015 (Griffiths 2015). Under metadata laws, Internet and
telecommunication providers were required to retain information (but not the content) of citizens’ phone calls, emails, and internet records for a period of two years (Cooper 2017). Regarding these laws, 20% (seven) of the respondents opined they were undemocratic and invasive, as for example shown by the following comments:

I think the metadata laws are outrageous … Knowing that information is basically like knowing all the information just about. So, it’s a massive invasion of privacy and I think it is of concern. (Respondent ENGO3)

Who honestly believes that the government is going to collect just the metadata and not actually collecting and analysing the rest? I mean it’s just bullshit! (Respondent ENGO7)

Respondents did not seem, however, particularly threatened by digital surveillance. As such, they indicated five reasons why digital surveillance did not represent a large threat to environmental activism. First, there were ways to avoid digital surveillance by being cautious about information shared online, which included paying attention to what was posted publicly as well as to exchanges via emails and private conversations. Such caution goes back to the previous era concerning the landline and phone tapping, as suggested by 24% (eight) of the respondents.

For example, four respondents considered Google and its services including Gmail and Google Docs unsafe. This was because it was believed that these services could be accessed by governments and corporations. As, for example, disclosed in early 2013 during the US NSA scandal by whistle-blower Edward Snowden (Greenwald 2013; Lyon 2014). As such, respondent CG4 opined:

You know that Gmail is not safe anymore because they share stuff with the US government … For an activist group doing the stuff that we do, you don’t keep stuff on Google docs.

The second reason alluded to the large amount of information to monitor, as commented upon by two respondents. One of them (respondent CG6) stated in relation to metadata regimes: ‘the amount of data they have to sift through, every day … I mean … good luck to them’ (c.f. Bingemann 2015; Calibeo and Hindmarsh 2017; Harvey 2014). Thirdly, 26% (nine) of the respondents added that people had become
more accustomed to sharing their personal information on social media platforms: to
the point that it had become normalised and sometimes not even noticed.

Ten or 20 years ago you would have said no, no way. You’d never give out your date of
birth or your address … Now people are so used to have all their stuff on Facebook.
(Respondent ENGO9)

Such acceptance of personal information sharing seemingly weakened the deterrent
power of digital surveillance to have a chilling effect on individuals interested in
campaigning and activism.

Fourthly, and by association, 20% (seven) of the respondents highlighted that
even if digital surveillance became a strong constraint to their activities in the future,
they would eventually ‘find ways to get around it’ (Respondent CG3). Fifthly, 20%
(seven) of the respondents stated they did not fear digital surveillance because they
were acting ‘within the law’. Therefore, they were not worried about disclosing
information on their activities, for example: ‘I don’t really worry if someone’s
watching me because I’m not breaking any laws’ (Respondent CG1).

Subtheme 2: Corporate ownership of new media (31 respondents)
Thirty-one respondents commented on the subtheme of ‘corporate ownership’ of new
media, which referred to large corporations such as Google, Microsoft, Facebook,
Twitter, Apple, and a few others mostly owning new media platforms (Bagdikian
2004). These corporate giants added to older ones that dominate the traditional
telecommunication sector, including Comcast, News Corp, and Time Warner
(Bagdikian 2004; Taylor 2014). As such, respondents were asked about their opinion
on using new media owned by these corporations, specifically, if such ownership
would impact the use that activists made of new media and if so, how.

In answering this question, many respondents (83% or 26) commented that
corporate media ownership could potentially affect the way their actions were
communicated and made visible on new media. For example, respondent ENGO1
commented:
Some people think of Facebook as the town square where you are free to say what you like. You are, but they own that town square, and they decide how many people each post goes to.

On how new media platforms owners regulated the visibility of those posts, 19 respondents mentioned it was through Facebook algorithms. While they were uncertain on how algorithms worked, these respondents were aware that, for example, the Facebook algorithm would prioritise certain types of posts over other types in its News Feed; which could potentially raise issues on the effectiveness of reaching audiences if the content posted was not being prioritised enough on the platform. For example, respondent CG11 commented:

We did have problems with algorithms within Facebook: they would only show certain things. People were frustrated, and asking “why isn’t this being shown here”? Similarly, respondent CG6 commented:

There is also for me something a bit disconcerting when we do highly political posts. The first one may go very well and get high reach, but the second one seems to be almost suppressed, like 7000 down to 300 impressions. Our normal average reach is around 1300. So how can you explain that large disparity? … It seems to be a pattern, and it’s not just me.

On the disparities between the visibility of posts on social media as mentioned by respondent CG6, 19 respondents opined they occurred because some posts were ‘boosted’ on Facebook; obviously, those were made more visible by the platform than those not boosted (the ‘organic’ ones, as per Facebook’s (2018) definition). For example, respondent CG11 commented:

Why is this post getting to 50,000 people and this one to 600 only on the same platform? There must be some reasons why some went further than others. Obviously, some of those depended on the fact that we would pay to get it out further.

The case of Facebook was emblematic regarding the changes applied to its algorithms in 2015 (Tandoc and Maitra 2017). Respondents opined that before these changes, audiences were easier to reach and communicate with. Once Facebook
changed the algorithm, however, the only way to reach larger audiences was to create advertisements or boost posts on Facebook. As for example demonstrated by the following comments:

The real change happened about two years ago, when Facebook changed the algorithm for pages. They made it more difficult for pages to reach more people than it was used to, and even grassroots groups that make no money, making them pay to reach more people. (Respondent CG14)

I have seen Facebook move from being capable of unplanned virality to completely commercialised virality. So, virality is more of a commodity now. It is problematic because activists put a lot of headway by being clever and smart and funny and getting virality. But there’s algorithms that cut them off now and say “oh, you’re getting viral, do you want to pay for this?” (Respondent CG13)

The changes in the algorithms and the consequent need to boost posts somehow affected the ability of activists to get their online actions more visible.

For example, 19 of these respondents (62%) opined that boosting could be a limitation for some environmental groups who did not have the financial resources to use that option, as opined by respondent CG9:

[The potential for outreach] is limited by how much money you have got, and by how many people are engaged with you already. The numbers you share your posts with is a big factor and Facebook will decide whether or not to let you go viral.

Overall, while respondents criticised this set up that enabled those who were financially stronger to express their views more effectively, they did not consider corporate ownership as a ‘new’ issue only typical of new media. As such, nine respondents observed corporate media ownership was very common phenomenon in traditional mass media. Accordingly, it was unsurprising that corporate ownership also characterised new media. For example, respondents ENGO 1 and ENGO 10 commented:
We are not exactly coming from a position where the media prior to new media was fabulously open and free. It was heavily controlled by certain people. And all that happened is that it’s a different set of people now that control the new media. I don’t really know whether you would say if they are more an open-minded or progressive bunch of oligarchs or not, but they still are controlling. (Respondent ENGO1)

It’s nothing new; who owns the Canberra times? Far out! The media tend to be owned by corporate interests who are there to make a profit … We have been manipulated forever by the media, so manipulation by these new ones? Yes, they are doing it. We just work within it. (Respondent ENGO 10)

It was noted by just over a third of the respondents (38%), however, that differently from traditional media that did not offer many opportunities to activists to manage how their activities were reported, at least new media allowed them to ‘work within’ these corporate ownership issues. For these respondents the strategy of boosting posts (especially on Facebook), was normalised one of digital environmental activism. This was noted, for example, by respondent ENGO4:

We do pay to reach more people. We tried not to for a while, then we realised that it’s the only way to do it. We have changed. We weren’t used to pay for any content a few years ago. But now if it’s important, we make ads … It [social media] became a thing that if we have to use it to reach people we have to pay for that. I wish it wasn’t like that but it’s how it is.

Except for respondent CG6, who did not boost posts on Facebook as a general policy of the group she belonged to, many respondents (69%) would boost posts to get to larger audiences even if they were reluctant to do so. There were two reasons for this. First, boosting posts was relatively affordable in comparison to advertising on traditional mass media (as also discussed in Chapter 6). Second, boosting posts was considered necessary in some cases, especially in the case of posts aimed at mobilising audiences to attend a rally, or publicly urge politicians to take actions on resolving environmental issues.

In the literature, it was also discussed that a consequence of corporate media ownership was that it could allow governments and corporations to censor, filter, or delete certain types of content (Doyle 2012; DiMaggio 2009; Durante and Knight
2012). However, only five respondents raised this issue, as demonstrated by the following two comments:

I had a bizarre experience where a post that I made on Facebook on an open site was removed by Facebook. It was a very innocuous piece of information that I had found on a public site. (Respondent CG10)

Facebook has arbitrarily decided that if something like a picture, or a symbol, is equated with terrorism and they would just take it down and ban. They have done it to two of my Turkish friends. (Respondent CG15)

In turn, two respondents also highlighted that it was equally problematic that, while new owners would censor some type of content, other content on the platform was allowed that included false news or offensive content:

The other day my daughter complained about some racist Facebook stuff, I think about natives … a completely racist page about indigenous Australians. She got the message back [from Facebook] that “we don’t think that it is offending anybody, it is within the guidelines”. (Respondent CG15)

In some ways it’s almost too [open]. They are very reluctant to regulate. Facebook doesn’t want to shut down accounts because every account there is another voice and potential source of income, whatever they think. (Respondent ENGO1)

**Summary of results for Theme 1: Media ownership and digital surveillance**

As shown in Table 15, there was very high respondent engagement with Theme 1 on media ownership and surveillance. Concerning the subthemes identified within this theme, the weighting given to both subthemes by the respondents was also very high.
Table 15: Summary of results for Theme 1: Media ownership and surveillance

<table>
<thead>
<tr>
<th>Subthemes</th>
<th>No. of respondents (total: 34)</th>
<th>% (n=34)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Digital surveillance</td>
<td>34</td>
<td>100</td>
</tr>
<tr>
<td>2. Corporate ownership</td>
<td>31</td>
<td>91</td>
</tr>
</tbody>
</table>

*Some respondents mentioned more than one subtheme. These percentages indicate the frequency of their responses.

On **digital surveillance**, respondent engagement was very high (all respondents engaged with the subtheme). The key narratives that emerged within this subtheme were:

a) Both ENGOs and community groups were of the idea that digital surveillance was exerted on them (or more generally on environmental activists) to some extent for political reasons (convergence between all groups);
b) Environmental activists were used to surveillance being exerted on them (mostly community groups and a few ENGOs regarding forest logging across all states except SA and the ACT);
c) Digital surveillance was not considered a threat or constraint to environmental activism (convergence between all groups);
d) Digital surveillance could have a chilling effect on protesters (mostly ENGOs and only three community groups regarding both fracking and forest logging across all states except QLD and SA);
e) Digital surveillance was ineffective as a deterrent to political participation due to online privacy settings increasingly disregarded by individuals (mostly ENGOs and a few community groups regarding both forest logging and fracking across all states except SA).

On **corporate ownership**, respondent engagement was also **very high** (31 respondents or 91%). The key narratives regarding this theme were:

a) The outreach of posts published on new media platforms was regulated by algorithms, on which activists had no control (convergence between all 31 groups);
b) A common (normalised) digital strategy of influencing Facebook algorithms for increased visibility was boosting posts (mostly ENGOs and a few community groups mentioned this narrative regarding both fracking and forest logging, across all states);

c) Boosting Facebook post was considered affordable especially in comparison to the cost of advertising on traditional mass media (mostly ENGOs and a few community groups mentioned this narrative mostly regarding forest logging in NSW, VIC, and the ACT);

d) Corporate media ownership was typical of both new media and traditional mass media (mostly ENGOs and a few community groups raised this narrative regarding both fracking and forest logging, across all states except QLD and SA);

e) Although new media prioritised certain types of content, this did not translate into censorship or limit freedom of speech in Australia (only ENGOs regarding forest logging in TAS, VIC, and NSW).

**Theme 2: Issues with digital communication**

This theme is the second one to inform the meta-theme on limitations of new media for environmental activism, engaged with by 32 respondents (94% of the total). It is informed by five subthemes: not replacing face-to-face; abusive behaviour and trolling; easy to dismiss; commitment issues; and clicktivism.

**Subtheme 1: Not replacing face-to-face (22 respondents)**

This subtheme emerged in relation to the concerns of 22 (or 69%) of the 32 respondents that new media communication would gradually reduce face-to-face interaction between individuals. This concern was, for example, expressed by respondent CG15:

> The digital age promises of this great collective sense of shared spaces, when in fact you are all sitting as individuals on your screens not sharing anything.

This aspect of digital communication was particularly relevant to the respondents: 16 (73%) of them described face-to-face interaction as a fundamental component of environmental activism. As such, the realisation of the potential of new media for
protecting the environment was only possible with the support of a ‘real life social movement’ with ‘roots in the ground’ (Respondent C13). As the following comments showed, social media communication was not effective enough if not complemented by other forms of engagement:

To just think that you can rely on social media without having an actual real life social movement is a mistake. And it’s one of the reasons why … you know, when corporations try to use Twitter to campaign it doesn’t tend to work so well because they don’t have the actual flesh and blood humans behind that. (Respondent CG13)

Similarly, respondent NGO7 stressed the importance of offline campaigning:

Regarding finding people that are keen and that want to take action and are looking for the next step to take action there’s nothing better than social media … But the work that we do, fundamentally, relies on people reconnecting with nature and with each other.

**Subtheme 2: Abusive language and trolling (20 respondents)**

The subtheme of abusive language and trolling was discussed by 20 (59%) of the 34 respondents. The expression ‘abusive language’ in the context of digital communication referred to the use of violent or threatening language online to intimidate opponents or express disagreement (Tagg 2015; O’Sullivan and Flanagin 2003). In turn, ‘trolling’ referred to provocative and inflammatory statements made by some users on other users’ social media profiles to generate more comments and reactions to a specific post, with the intent to discredit the post’s content or disrupt the conversation around it (Tagg 2015; Thacker and Griffiths 2012). According to 16 (or 80%) of these respondents, the recurrence of abusive language was typical of social media. Respondent CG8 opined:

You can say anything on social media and not really be aware of the consequences. People are just keyboard warriors who would never say that to your face, but they would troll you and make statements and accusations.

Abusive language and trolling were seen as limitations to digital environmental activism for at least two reasons. The first reason, as opined by six respondents, was that it was too time consuming to respond to trolls’ comments on social media:
We generally have a policy of not engaging in the comments on social media because it’s too time consuming. (Respondent ENGO1)

Trolls are a real pain. And they can just manufacture them and have gazillion identities that just keep trolling pages and being a nuisance. And we don’t have the time or the ability to do that as well. (Respondent CG5)

The second reason, opined by ten of these respondents, was that abusive language and trolling could also be a disincentive for individuals to engage with campaigns online:

Abusive behaviour is a real issue. You get all these angry people on Facebook responding angrily with threats and so on; and that would have a chilling effect on other people, psychologically. (Respondent CG9)

We have had, particularly over the last six years, constant death threats, people turning up and photographing my house, and putting my wife’s phone number on the internet … So, I guess that’s the dark side of social media: everything we can use it for, somebody else can use it for too, but they don’t necessarily play by the same rules. (Respondent CG7)

Respondents suggested three ways to contain problems of abusive language and trolling. First, ten of the 16 respondents commented on the need for activists to ‘moderate’ Facebook pages regarding removing or banning users and deleting abusive posts or posts from trolls (see Facebook 2017). Yet, seven opined that it was difficult for them to accept the idea of moderating. This discomfort derived from the perception that deleting users’ comments or banning users from the page contradicted the idea of freedom of speech.

Concomitantly, the respondents opined trolls were not interested in engaging in genuine conversations, thus deleting their comments favoured real conversations between activists and their audience. For example, as three respondents commented:

We were open with those asking questions and being interested in having genuine debate. But if your argument is fuck off and get a real job, then I have no time for you, sorry. (Respondent CG7)
We have a zero tolerance for that stuff. Some people think it is freedom of speech on Facebook, it's not … It’s our space. It’s there for constructive debate about issue, not to insult. (Respondent ENGO1)

I saw it with a website called the Tasmanian Times, it started off really great … and it degenerated into 6-8 people having incredibly polarised views. So, it became this totally inane, destructive conversation amongst these people, and it sort of ruined what could be a really great opportunity. (Respondent ENGO13)

Second, to contain the problem, five respondents suggested ignoring or making fun of trolls and individuals who were using abusive language, as, for example, respondents CG5 and ENGO12 opined, respectively:

I think one of the things that seem to upset them the most is just to make fun of them or satirise them. They don't have the response to that.

What do you do with them? I just totally ignored them, if you start talking about that then it suddenly starts having coverage all over the place. Sometimes the best way is to just ignore them.

Third, three respondents suggested that a good strategy to contain the issue of abusive behaviour online was keeping the record of conversations or messages and taking screenshots of the abusive messages to expose the abuse publicly to shame those making the messages or report them to the competent authorities. In this regard, respondent CG11 commented:

Occasionally this guy would really rant on, and then we had to delete his posts. But we had enough people who took screenshots of those posts, so we just reminded him: “this is what you said!” This was the language that was inciting violence against people. He’d be saying things like “why don’t they start to bulldoze and just run over that bitch?”

**Subtheme 3: Easy to dismiss (18 respondents)**

This subtheme, mentioned by 18 respondents, focused on online campaigns being easily dismissed by politicians, and therefore not very effective. The first aspect highlighted of this subtheme was in relation to online petitions: as mentioned by seven
respondents. It was common for politicians to dismiss online petitions unless they reached a high number of signatures, which was rarely the case, especially for small community groups. To increase chances for being successful, petitions should also be associated with local electorates and accordingly targeted.

This was observed, for example, by respondent ENGO16 who commented that unless petitions were signed by local constituents, politicians ‘would think that those signing the petition are just fake people or fake profiles we [the environmental organisation] have created’. Similarly, respondent ENGO15 stated:

One hour ago, I went to my email, someone sent me a thing about Norway resuming whaling and asked to click there to sign the petition … It’s not that I don’t want to do anything. I just wonder sometimes: is it really going to make a difference? If a politician in Norway gets 50k signatures from Australia, is it going to make much difference?

Another limitation of online petitions, as held by six respondents, was that there were too many of them circulating on new media and, as a consequence, politicians were getting desensitised to them For example, respondent CG7 opined that: ‘they [politicians] know that they are going to get petitions if they are going to talk about the Tarkine. So, they are immune to that to some extent.’

However, there were strategies in place to attract the attention of politicians and decision makers to environmental campaigns on new media. For example, a common practice was to invite supporters to email MPs or target politicians on their social media platforms through individually written messages instead of pro-forma ones. On emailing MPs, for example, respondent ENGO4 opined that emails were likely to be ignored by politicians if they were not written individually by supporters. In more detail, respondent ENGO4 commented:

We tend to get people to write letters from scratch, rather than give them a preform thing. If Turnbull gets 500 letters that are all the same, his staff will take notice, file them away, and not read them. Whereas if they are individual emails from constituents in the electorate that is relevant to them, then I think they are paying attention to that.

Similarly, respondent ENGO1 opined:
Probably, it is still more powerful strategically if you can get people to physically write a letter to an MP or a decision maker. It still carries more weight than an email. Because emails are kind of ephemeral and are less tangible … It’s a lot easier on social media. You can look at the numbers and be impressed, you can say there are 10,000 people who have contacted us on this, but it’s not quite the same as having a pile of letters on your desk. (Respondent ENGO1).

**Subtheme 4: Commitment issues (18 respondents)**

Eighteen (53%) of the 34 respondents observed that another limitation to digital environmental activism was that online commitment of supporters and did not always translate into further campaign actions. This was the case, for example, of events organised and disseminated on social media. Individuals would register online for campaigning activities and events but were found not really committed to attending them, as highlighted thus:

> We find that when people book for an event on Facebook they hardly ever turn up. It’s a hardly reliable reference point for turning up for an event. So, we don’t worry about that too much. (Respondent ENGO10)

> There’s so much on these days and people, if they sign up to do something, they won’t actually do it. That’s one of the big negatives of Facebook. You can’t make people commit to do things easily. (Respondent ENGO9)

> Accordingly, one of the biggest challenges for environmental activists was to ‘convert those likes, shares, and clicks into something more tangible’ (respondent NGO1). Similarly, CG16 commented:

> So perhaps, if we are saying that not enough young people are actively involved in environmental campaigning, and yet, we use social media and they too use social media, then perhaps we are not connecting with them well enough … They are not using the traditional media; they are using social media, they are using new media, but somehow, we are not hitting the mark. (Respondent CG16)

> A good way to connect with their audiences, as nine respondents suggested, was to combine digital strategies with more traditional ones. The latter included
making phone calls to supporters, or advertising in local newspapers, as highlighted in the following two comments:

Older campaigners often sit there and tell us “you need a phone tree”, and you go “we can do that with email now”. And then you look at the emails you sent, and the response rate, and say: “I should have done the phone tree!” It’s true, if you ring someone and ask, “we need you”, it means more. (Respondent CG7)

On Facebook you can publish what you like on your page, but is it getting people to come? Local papers probably work better for local meetings. (Respondent CG12)

**Subtheme 5: Clicktivism (14 respondents)**

The final subtheme informing Theme 2 on digital communication was clicktivism (or slacktivism), as mentioned by 14 of the 34 respondents. The concept of clicktivism negatively connotes digital activism as ‘effortless’ and with having little political and/or social significance (Kristofferson et al. 2014; Morozov 2009; White 2010). Alternatively, clicktivism can be referred to as a simple form of political participation (Halupka 2014; Karpf 2010). Nevertheless, respondents mainly referred to clicktivism as ineffective digital activism and thus a limitation to digital environmental activism. For example, respondent ENGO1 opined:

The hard dilemma about online activism, and sure you heard about clicktivism, a pretty common phenomenon, is where people feel that by liking something on Facebook or signing a petition or by sending an email, they feel they have done their bit.

Clicktivism was mentioned in relation to several digital campaigning and activist activities including signing online petitions, sending emails, or engaging with the social media channels of environmental groups, as demonstrated by the following comments:

There’s a danger of clicktivism: feeling that you are doing something just by signing online or clicking like. (Respondent CG6)
And some people, they feel, with slacktivism, like they are heavily involved but actually they haven’t done anything. All they have done is post things on Facebook. (Respondent CG10)

Eleven of the 14 respondents thus mentioned digital environmental campaigning being negatively affected by clicktivism because ‘people think that activism is just pressing a button and then dismiss campaigning activities as such’ (Respondent ENGO11).

**Summary of results for Theme 2: Issues with digital communication**

As shown in Table 16, there was very high engagement with Theme 2 on issues with digital communication. Even though almost all respondents commented on this theme, the weighting given to each subtheme was variable from low. Even though almost all respondents commented on this theme, the weighting given to each subtheme was variable from low (25-49%) to medium (50-74%).

<table>
<thead>
<tr>
<th>Subthemes</th>
<th>No. of respondents (total: 32)</th>
<th>% (n=32)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Not replacing face-to-face</td>
<td>22</td>
<td>68</td>
</tr>
<tr>
<td>2. Abusive language and trolling</td>
<td>20</td>
<td>62</td>
</tr>
<tr>
<td>3. Easy to dismiss</td>
<td>18</td>
<td>56</td>
</tr>
<tr>
<td>4. Commitment issues</td>
<td>18</td>
<td>56</td>
</tr>
<tr>
<td>5. Clicktivism</td>
<td>14</td>
<td>44</td>
</tr>
</tbody>
</table>

*Some respondents mentioned more than one subtheme. These percentages indicate the frequency of their responses.

On **not replacing face-to-face**, respondent engagement was **medium** (22 respondents, or 68% of the total). The key narratives that emerged within this subtheme were:

a) The environmental movement to be effective needed offline civic engagement first of all (convergence between all 22 groups);

b) New media could then enhance environmental activism if (a) occurred and in combination with on-the-ground civic engagement (convergence between ENGOs and community groups mostly regarding forest logging across all states except QLD and VIC);
On abusive language and trolling, respondent engagement also was medium (20 respondents or 62% of the total). Regarding this subtheme, the key narrative that emerged were:

a) Trolls and abusive individuals were time consuming to deal with and could damage the reputation of environmental groups (convergence between all groups across all states except QLD)

b) Activists employed expedients and strategies to contain the issues related to online trolling and abusive language (convergence between all groups mostly regarding forest logging across all states)

The subtheme easy to dismiss also registered medium respondent engagement (18 respondents or 56% of the total). Key narratives were:

a) The more digital campaigns targeted electorates directly, the higher the chances they were not dismissed by decision makers and politicians (ENGOs regarding forest logging and fracking in NSW and WA);

b) To achieve more effectiveness in campaigns, direct communication with politicians when possible was needed (phone calls, contact through social media, individually written emails, or hand-written letters) (ENGOs mostly regarding forest logging in TAS, WA, and NSW).

Commitment issues had medium respondent engagement (18 respondents or 56% of the total). The key narratives that emerged within this subtheme were:

a) New media made it easy for supporters to express their intention to participate to campaigns or events even if they were not really committed to it (ENGOs and a few community groups mostly regarding forest logging across all states);

b) Increased participation resulted from combining offline and online communication strategies (ENGOs and a few community groups mostly regarding forest logging across all states except SA, the ACT, and VIC).
On clicktivism, finally, respondent engagement was low (14 respondents or 44% of the total). The key narratives that emerged within this subtheme were:

a) Clicktivism was perceived as damaging digital environmental activism both ENGOs and community groups regarding both fracking and forest logging across all states except the ACT.

b) Digital campaigns to protect the environment could be perceived as clicktivism ones and therefore dismissed by audiences and policy makers (both ENGOs and community groups regarding both fracking and forest logging in only TAS and QLD).

Theme 3: Overwhelming

Theme 3 explored respondent perceptions of the amount of information available to users on new media as ‘overwhelming’. This aspect of new media was perceived as a limitation for digital environmental activism by 28 respondents (82%), thus indicating high respondent engagement with Theme 3. This theme was informed by two subthemes of ‘time consuming’ and ‘competition’.

Subtheme 1: Time consuming (24 respondents)

Twenty-four respondents observed that using new media for digital environmental activism was ‘time consuming’, due to the constant flow of large amounts of information running through new media platforms. Respondent CG11, for example, said she had to ‘take a break’ from new over the course of a campaign, because she was overwhelmed by the amount of information she was getting both online and offline. She commented:

Getting so much information, from so many different places … There was a time I had to go off for a day or two. And we [the organisers of the campaign] were the worst affected, because we were at the core of it. But even for people that were further out, it’s just too much information. We really need to be cognisant of the psychological effects of social media because people can get easily overwhelmed.

The issue of new media being time consuming was raised in relation to the production of engaging content to post online with potential to attract audience
interest. This potential was often dependent on the amount of resources (both financial and time resources) available to campaigners. According to eight respondents, it was especially hard for smaller groups to access such resources. For example, CG9 commented:

We could be doing so much more with Facebook, like getting beyond our page and getting on to other people’s pages and commenting there, expand our fan base, stuff like that. But we are not doing any of that. And that’s not for lack of knowledge, but because of not having time.

The differences in terms of resource availability between large ENGOs and small community groups were also commented on by respondent CG7, who was volunteering for a community group and at the same time employed by an ENGO. He commented:

[The work of the community group] has largely been limited by my technical abilities. Over the years I had to learn how to use Photoshop and video editors, so we could generate that stuff. But you know, working for [the ENGO] … We have designers and we send them an email saying, “we have this photo can you do it for that”? They do, and a couple of hours later it goes out. You want to do a video? You ring one of the volunteers, thousands of photographers, and film makers, and they will drive up … Having a pool of volunteers that have those capacities makes a big difference.

Respondent CG7 also commented:

In a smaller group we are limited by what I can learn, while I do everything else … I used to think that doing an email appeal was much easier than folding all the envelopes but in reality, it’s actually more work to do it well … We can manage four people sitting around the table and folding up envelopes in a night. But we can’t necessarily manage pulling together videos and having them edited, and all that stuff that the larger organisations can.

However, difficulties in managing time issues were also encountered by ENGOs, even if, differently to smaller groups, they had dedicated staff to produce engaging posts. For example, in the following comment, respondent ENGO4
explained how much time it would typically take to produce a short video to be shared on new media:

If we are creating a video, for example, we just did one … We were responding to the politicians in the parliament passing coal news. That meant coming up with the concept, the script, working on how we respond to what they said without helping their message getting stronger, so criticizing it, shooting the video, editing it very slightly, adding captions, and then writing a support email, so drafting it, getting campaigners to feed in on it, producing the supporting email, embedding the video and putting it on YouTube, on Facebook, and then testing it all and press send. That’s a day’s work! (Respondent ENGO4)

Email communication was also described as time consuming. Despite being a key tool for campaigning, as discussed in Chapter 6, the success rate of emails for digital environmental activism appeared limited. This limitation was demonstrated, for example, by the opening rate of emails, which according to five of these respondents was so low that it was unlikely they could be useful for increasing the effectiveness or reach of campaigns. For example:

Really there’s a limit to the number of things you can read, absorb, and act on. Because we are human and not robots, sometimes the bombardment is just stressful. There’s this moment I have to go “no more”. (Respondent ENGO8)

I think a lot of people just get over getting all these emails … You get bombarded with emails. It’s too much information overload … I am just constantly unsubscribing because my inbox is going out of control. (Respondent ENGO14)
**Subtheme 2: A competitive space (20 respondents)**

This subtheme was engaged with by 20 respondents. It addressed the topic of it being hard for environmental activists to attract attention on their campaigns because so many other users were also using these media at the same time as the environmental activists. For example:

The problem of social media, which is at the same time part of its success, is it goes to so many people. There’s so much stuff out there … You are competing with so much stuff. Yes, you can get it in front of two million eyeballs, but those eyeballs are so used to seeing all sorts of things. How do you cut through? How do you affect change? (Respondent ENGO1)

It also seems to me there’s a lot of competition because everyone is using it. So, it is quite a busy kind of marketplace for people’s attention using social media. (Respondent CG17)

Competition for audience attention mainly occurred in relation to other environmental groups, as 10 respondents observed, as well as to their adversaries. In the first case, competition from other environmental groups, respondent ENGO7 opined, for example, that digital environmental campaigns had become common practice for social movements. For this reason, the efficacy of some online campaign strategies was decreasing:

Everyone is kind of doing it [organising digital environmental campaigns]. The analogy is with street fundraising, I worked for the Wilderness Society, 20 or 25 years ago they would dress people up in koala suits and setting them on the bridge into the city asking for money, and they got a shitload of cash. No one else was doing it. [Then] everyone else started doing street fundraising as well to the point where the Wilderness Society doesn’t do street fundraising anymore. The same thing happens on the digital space. (Respondent ENGO7)

Similarly, respondent CG16 commented that some of the campaigning activities of her group had lost their ‘potency’ because they did not have ‘the novelty factor anymore’; she opined:

I think what has happened is that the idea of social media is fantastic. But the actual result, or what it delivers, is possibly less than it would seem to deliver because everybody does
it. If I go through my Facebook page, and even look at my emails, there will be letters from different organisations. And every one of them is a fantastic, really important group that is doing great work and you want to support. But in the end, you flick all of them. And I think that’s what has happened. Because everybody is doing it, it loses some of its potency.

In the second case, competition from adversaries, 10 of the 20 respondents observed they faced competition for audience attention by corporate and government actors. In this regard, one of the most recurrent respondents’ remarks was that adversaries had larger resources to fund their digital campaign activities, as opposed to smaller resources available to the environmental movement. For example:

The other side has access to it as well and they have much more money to manipulate their audiences … As far as social media goes, they have got more money and they can employ PR people to get the message out. Not to mention the surveillance stuff. (Respondent CG5)

Compared to big corporate interests who can really pay to look into metadata and can pay to delve into targeting and understanding data about the people they want to reach, they can do a hell of a lot more with social media than we can because we are just like David and Goliath, we have tiny resources. (Respondent ENGO4)

Respondents, however, also indicated that it was possible to contain competition on new media and find space for their campaigns regardless of the limited resources available to them. As, for example, respondent CG11 commented:

We were running this campaign against a state government that had put millions of dollars into a PR campaign to the department to run … And we were running against that … They had that, and we still beat them.

It was thus important to find alternative ways to communicate environmental issues and campaign accordingly. For respondent NGO10, for example, it was useful to keep supporters updated about their work to protect the environment and try different strategies to keep them interested. In this regard, ENGO10 commented:
We must think how we do it differently, so we still get the message through. Even though people might be used to us and like the way we do things, which can be a bit stodgy, we are not trying to do anything spectacular. We are just trying to keep on working. And even then you still have to keep on thinking what’s on people’s minds, and maybe doing something a little bit different is good. I try to use colours, for example, and they are very helpful for me.

**Summary of results for Theme 3: Overwhelming**

As shown in Table 17, respondent engagement with Theme 3 was very high, with 29 (or 85%) of the 34 respondents engaging with it. In relation to the subthemes informing this theme, the engagement of respondents was variable from very high to medium.

<table>
<thead>
<tr>
<th>Table 17: Summary of results for Theme 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subthemes</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>1. Time consuming</td>
</tr>
<tr>
<td>2. A competitive space</td>
</tr>
</tbody>
</table>

*Some respondents mentioned more than one subtheme. These percentages indicate the frequency of their responses.

On **time consuming**, respondent engagement was very high (24 respondents or 80% of the total). The key narratives that emerged within this subtheme were:

a) For some respondents, new media were overwhelming due to the large amount of information circulating online (both ENGOs and community groups regarding both forest logging and fracking across all states except the ACT)

b) Creating engaging digital content was time consuming (both ENGOs and community groups regarding both forest logging and fracking across all states except SA and QLD)

c) Regarding (b) smaller groups were usually short of resources needed to produce (including time) engaging digital content (only community groups regarding both forest logging and fracking across all states except QLD, SA, and the ACT).

On **a competitive space**, respondent engagement was medium (20 respondents or 71% of the total). These were the key narratives emerged within this subtheme:
a) Environmental activists had to compete to cut through the information circulating digitally with other groups (both ENGOs and community groups mostly regarding forest logging and a few regarding fracking, across all states except SA).

b) Better access to resources was an advantage to be more competitive on new media (community groups and only one ENGO regarding both forest logging and fracking across all states except NSW, SA, and the ACT).

**Theme 4: Non-inclusiveness**

The fourth theme on new media being non-inclusive was highly engaging for respondents, with 29 (85%) of the 34 respondents discussing it. This theme saw two subthemes detected: ‘echo-chambers’, mentioned by 22 respondents, and ‘not everyone is digital’, mentioned by 17 respondents.

**Subtheme 1: Echo-chambers (22 respondents)**

The expression ‘echo-chamber’ describes a phenomenon occurring on new media where individuals are more likely to be exposed to content that matches their tastes and interests, while underrepresenting opposing or different views (Quattrociocchi et al. 2016; Wojcieszak and Mutz 2009; Yardi and Boyd 2010). This match is produced on new media platforms by machine-learning technology (Das et al 2007; Flaxman et al. 2017). It works through algorithms that ‘inadvertently amplify ideological segregation by automatically recommending content an individual is likely to agree with’ (Flaxman et al. 2016: 299; also, Quattrociocchi et al. 2016). Here, the ‘echo’ represents the repetition and amplification of opinions and information believed to be already true of an individual. In turn, the ‘chamber’ is the space where the echo occurs, which, in this case, are social media platforms (Flaxman et al. 2016; Quattrociocchi et al. 2016; Williams et al. 2015). In a similar way, respondents also described social media as ‘filter bubbles’ where like-minded people were increasingly ‘isolated in echo-chambers’ that reinforced their views of the world (Flaxman et al. 2016; Pariser 2011). Of the 29 respondents commenting on the theme of non-inclusiveness, 22 expressed their concerns in relation to echo-chambers or filter bubbles. Almost half of them indicated concerns about the adverse impact that echo-chambers and filter bubbles could have on environmental activism. Seven were concerned about only
communicating environmental campaigns to the subsection of the population already within the echo-chamber, while excluding (or not reaching) the rest of the population, as the following respondent comments indicated:

Social media, as they are now, can create bubbles. So, you interact with likeminded people and you exclude everybody else. So, it is meant to give the impression of personal freedom and choice all the time, when in fact it could just immunise you from other ideas. (Respondent ENGO08)

[Campaigning on social media] becomes dangerous if you convince yourself that everybody agrees with you. Social media tends to be just the commentary of who said what rather than an accurate presentation of the facts. Those people who agree with me would assume I am saying the truth, and those who disagree would assume the minister is telling the truth … but that won’t change anyone’s mind. We are just making our own sides angry or cheering. (Respondent CG7)

Facebook was the social network where echo-chambers and filter bubbles occurred the most, according to 11 of these respondents. This was typically illustrated by the following comments:

If I look at my Facebook feed, it’s full of environmental things. And the things that I see are very slanted to certain social justice issues. But if I look at my partner’s phone on his news feed, he sees completely different stuff. And so, it can be difficult to break through to people who don’t already prioritise that kind of content. I think the filter bubble is very strong. (Respondent ENGO4)

Everyone is in a Facebook bubble: “I don’t like what this one is saying so I am going to unfriend him”. (Respondent ENGO2)

However, according to these respondents, the negative impact of echo-chambers on digital environmental activism could be contained or reduced. Seven respondents suggested boosting posts to reach individuals beyond the echo-chamber, as respondent ENGO5 opined:

We have been doing a lot of work by paid boosting social media … you can target people who have media consumption profiles, knowing that there’s some people with their
values aligned but disengaged in the environment, and write content that appeals to them. That’s how we are trying to break outside of our bubble of social media.

In addition, and according to eight respondents, another way to contain the limitations of echo-chambers to digital activism was to also use traditional media through radio and/or local newspaper advertising campaigns. As such, respondent NGO16 argued that readers ‘might not have an interest in the issue, or knowledge of it, but because they stumble across the article they become aware of the issue’.

**Subtheme 2: Not everyone is digital (17 respondents)**

Seventeen respondents (58% of the 29) engaged with this subtheme. These respondents observed that it was important for environmental activists to reach out in their communication strategies also to individuals who were new media users. If they failed to communicate to the non-digital sector of the population, environmental activists risked getting a false sense of empowerment in relation to the composition of their support base. This false sense of empowerment was explained as such:

I guess you also must be aware that when you are using social media you are not talking to everyone. Probably, over time, it will be a bit more all-encompassing, but now there are a lot of people that are not using it, especially older people. So, you must be mindful of who are the audiences are that you are trying to reach and choose social media and the appropriate channel to get to those audiences. (Respondent ENGO14)

Different reasons existed for some people not to engage digitally. Respondent CG1, for example, asserted that in her community group there were ‘anti-digital’ members who did not use emails or the Internet at all and ‘didn’t want to have a bar of it’. Other reasons were related to age, as, for example, highlighted by respondent CG17:

There’s a certain generation of people, people who are older than me, for example. Many of them … still rely on TV: are we still getting to them? I don’t know, I would question it. The population is aging, and you can’t write off people just because they are over 60, it’s a large portion of the population. Some people over 60 are very technologically savvy and very connected. But there are also a lot of people who are not, and they might be left out.
As such, eight respondents indicated that ways to communicate to non-digital users included complementing new media communication strategies with more traditional communication ones, as suggested in the following comments:

We must consciously do a little bit in the old media just to make sure we don’t leave people behind, because we still have some supporters that don’t have an email address. They’re older people who are very committed and have been involved in the movement for a very long time … We don’t want to leave them behind just because they don’t have a Twitter account or Facebook. (Respondent ENGO1)

We have our e-board and those people who aren’t on email we just print out those updates as a little hard copy and send them to maybe 40 people who are not on email. (Respondent CG5)

At the same time, four respondents also were of the idea of encouraging supporters to use emails, as the latter were an essential tool to keep their audiences informed on campaigns. Respondent CG12, for example, reported that the board of his group decided it was compulsory for members to provide the organisation with their email addresses. He commented:

[Without emails] it would be hard to keep up with them. They sort of get left out. But still they miss a lot, because they don’t get the little videos and things that we send out [on social media].

Another respondent (ENGO10) commented that emails were also used to keep supporters who were not on social media up-to-date with campaigning activities they run on Facebook; as such:

Sometimes I take my Facebook posts and put them in email newsletters, because the people who are not going to look at Facebook can’t see that stuff.
Summary of results for Theme 4: Non-inclusiveness

As shown in Table 18, 29 (85%) of the 34 respondents engaged with Theme 4 on non-inclusiveness of new media. However, the weighting given to the two subthemes informing the theme was variable, from high to medium.

Table 18: Summary of results for Theme 4

<table>
<thead>
<tr>
<th>Subthemes</th>
<th>No. of respondents (total: 29)</th>
<th>% (n=29)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Echo-chambers</td>
<td>22</td>
<td>76</td>
</tr>
<tr>
<td>2. Not everyone is digital</td>
<td>17</td>
<td>58</td>
</tr>
</tbody>
</table>

*Some respondents mentioned more than one subtheme. These percentages indicate the frequency of their responses.

Echo-chambers registered high respondent engagement (22 respondents or 76% of the total). Key narratives that were identified within this subtheme were:

a) Echo-chambers were mostly developed on Facebook (mostly ENGOs regarding forest logging and fracking, and a few small ones regarding forest logging, across all states)

b) Isolation from different views on new media was detrimental to the environmental movement because it gave activists false expectations on campaign outcomes and extent of support (convergence between all groups)

c) Activists deployed both traditional and digital strategies to communicate beyond echo-chambers (community groups regarding forest logging in WA, large groups regarding both fracking and forest logging in VIC and SA).

On not everyone is digital, respondent engagement was medium (17 respondents or 58% of the total). These were the key narratives that emerged within this subtheme:

a) Some environmental activists did not use new media (convergence between all groups);

b) Environmental activists should choose appropriate communication tools to communicate with different audiences effectively (convergence between all groups).

Theme 5: Misinformation and disinformation
The fifth theme was on misinformation and disinformation on new media as a potential limitation to digital environmental activism. This theme was discussed by 21 (62%) of the 34 respondents. The subthemes that emerged within this theme were ‘fake news’ and decline of quality journalism’.

**Subtheme 1: Fake news (14 respondents)**

Fake news is a phenomenon that has long occurred on new media. It involves news articles that contain false or incorrect information, which are disseminated online with the purpose of misleading readers while persuading them of the authenticity of the news source (Allcott and Gentzkow 2017; Dorf and Tarrow 2017; Shu et al 2017). Fake news is disseminated on new media through sensationalised headlines and ‘click baiting’, which refers to a practice of digital content publishers to encourage readers to click on ‘catchy’ and sensationalistic headlines (Potthast et al. 2016). Seven of these 14 respondents referred to fake news as a limitation of digital environmental activism especially in relation to two issues. First, the visibility of campaigning actions competed with fake news, for example:

The other thing that is increasingly a concern is our ability to actually compete with the fake news epidemic. For us it’s a big problem because, in terms of what gets seen on social media and what’s popular, we’re never going to follow fake news. We think it’s unethical, undemocratic, it’s completely fucked up! But that means it’s harder for us to compete. (Respondent NGO3)

Second, activists could be tempted to use fake news to increase the visibility of their campaigns online, even though this use might put in danger the credibility of the campaign, if detected. This was the case of Respondent CG8, for example, who commented that a campaigner in the same area of protest where her group was operating shared fake news with journalists. When she questioned that campaigner about the news source reliability, the campaigner responded that it was irrelevant if the information was true as long as it was reported. Respondent CG8 then commented further:

I said to him, “you can’t ruin our credibility like that”. But one of the reporters told us “if we want something factual we are coming to your group, but if we want headlines we go to this other bloke”.
Finally, as opined by three of these respondents, new media owners should take responsibility to create filters to contain the phenomenon of fake news, for example:

They [owners of social media platforms] are allowing completely bogus opinions to go unchallenged. Fake news, I guess, is now the catch phrase for all that, and it’s really hard to shut down. Facebook isn’t interested in that [shutting them down]. It’s a completely and utterly unregulated freedom of speech where hate speech and fake news go unchallenged. (Respondent ENGO1)

The lack of regulation with all the fake stuff that is going out of control on Google is crazy. It’s terribly hard to fight. (Respondent ENGO 12)

Subtheme 2: Decline of quality journalism (13 respondents)
Thirteen respondents discussed that traditional media outlets had steadily been losing their influence as the main news outlets, while new media were increasingly replacing it. As such, there was an associated decline in ‘quality journalism’, as respondent CG9 opined:

There are now very few investigative journalists and environmental reporters that can really dig into a story and print it in a national paper in a lot of detail, with a lot of thought, and a lot of background.

One of the factors related to the erosion of traditional media journalism was financial support for reporting and investigative journalism being increasingly cut over the last two decades (Barthel 2017; Perry 2015). This was a key reason affecting a lower quality of coverage circulating about environmental issues and campaigns, as opined by nine (67%) of these 13 respondents, and highlighted by the following comments:

I would like to be able to ring Channel 2 and say, “can I have someone to talk to?” But they don’t have anyone I could talk to. They cut down on all these areas of the media, so they have excuses they can’t do the stories. (Respondent CG18)

Journalists are expected, at least the people I know, to work six times as hard. They lost over two thirds of the workforce that put together the same paper. And you are still
expected to do six articles a day. So, you are expected to get that paper out, but how about quality? (Respondent CG4)

Accordingly, lack of quality journalism increasingly enabled news stories produced by not so reliable sources or by adversaries with the aim to discredit environmental campaigns and activists. For example:

I do think that what we are up against climate denial and the fossil fuel industries and all the rest of it. It’s full of lies and misrepresentation … Of course, you have got much more room on different channels, but some of these channels are full of shit; how do people know what’s right? That’s a real question, the question of the age: what do you think it’s true? (Respondent CG9)

It’s sort of building on the fact that well, if it is on the newspaper it must be true so if it is written on the Internet it must be true. No matter if it is absolute rubbish or that there is another article in the Internet that says the complete opposite to what you have just read and believed to be true … People would not check or double check … So, the negative thing is that everybody can put up anything there. And if it is done often enough, or if they have enough money to do it, people would believe it. (Respondent CG8)

On the circulation of misleading and false information, these respondents again referred to the emergence of fake news.

Another consequence highlighted by respondents in relation to financial cuts to paid journalism was the emergence of ‘lazy journalism’, a term that seven (54%) of these respondents used in relation to journalists willing to report on environmental campaigns and issues only if activists provided them with ‘pre-packaged’ content, as discussed by respondent CG7:

The ability of new media for us to develop our own content and get it out through our own means in some ways entitles traditional media to do some easy journalism. When they take and publish things that we have done all the work on … but it sort of allows us to get to that space.

However, according to four of these respondents, the main reason for lazy journalism was a lack of resources to reach sometimes remote locations where protests were being conducted; as illustrated by the following comment:
We had a drone in the sky with a TV camera. We had a solar powered bus with technicians that were working on the drone footage, cutting it into little bites and then sending it off to the television and the media. And the media were loving it! Because the mainstream media starve to funds these days, they are collapsing. They didn’t have the funds to send out helicopters. But if you can send a bit of aerial drone footage of the protest that makes it look like they were there, they will put it on. (Respondent CG13)

Summary of results for Theme 5: Misinformation and disinformation
As shown in Table 19, 21 (62%) of the 34 respondents engaged with Theme 5 on misinformation and disinformation on new media. Regarding the two subthemes that emerged within this theme, both had medium respondent engagement.

Table 19: Summary of results for Theme 5

<table>
<thead>
<tr>
<th>Subthemes</th>
<th>No. of respondents (total: 21)</th>
<th>% (n=21)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Fake news</td>
<td>14</td>
<td>66</td>
</tr>
<tr>
<td>2. Decline of quality journalism</td>
<td>13</td>
<td>62</td>
</tr>
</tbody>
</table>

* Some respondents mentioned more than one subtheme. These percentages indicate the frequency of their responses.

Fake news attracted medium respondent engagement (14 respondents, or 66% of the total). Within this subtheme, the following narratives were detected:

a) Fake news could be detrimental to the reputation of environmental groups (both ENGOs and community groups converged on this narrative regarding both forest logging and fracking across all states except the ACT, SA, and VIC)
b) More control was needed by owners of new media platforms to prevent the circulation of fake news (both ENGOs and community groups converged on this narrative regarding both forest logging and fracking in NSW, WA, and VIC).

On decline of quality journalism, respondent engagement was also medium (13 respondents, or 62% of the total). The narratives that emerged within this subtheme were:
a) Traditional investigative journalism on environmental issues was in decline (mostly mentioned by small groups and only one large group regarding fracking and forest logging across all states except the ACT, QLD, and VIC);

b) Alternative news outlets were not always reliable sources of information (community groups only, regarding both fracking and forest logging in NSW, TAS, and WA);

c) Collaboration of environmental activists with journalists could sometimes become ‘lazy journalism’ (both ENGOs and community groups mostly regarding forest logging and only two regarding fracking across all states except SA).

**Theme 6: A vulnerable space**

For 20 (59%) of the 34 respondents, new media were a vulnerable space. Of these 20 respondents, 15 mentioned ‘security flaws’ and nine mentioned ‘technical difficulties’, as the subthemes.

**Subtheme 1: Security flaws (15 respondents)**

This subtheme related to respondents concerned about the security of digital systems. In the experience of environmental groups, for example, security flaws might occur in relation to digital databases containing personal information of supporters, which might be accessed by third parties and hacked. For example:

> You are relying on a digital platform that can be hacked and cut off at any time by wealthy people or the government. (Respondent CG8)

For three respondents, security issues were more worrying than digital surveillance, as illustrated by the following comments:

> I am more worried about Google or Microsoft giving access to our internal files that are up in a cloud somewhere, as it probably happens, than some kind of data surveillance on social media. (Respondent ENGO13)
I am less worried about social media surveillance, but I often think that we do all our work on Google Drive, and I think that’s incredibly vulnerable. We don’t have the sophistication to monitor how vulnerable we are to hacking. (Respondent ENGO5)

However, ten of these respondents advanced solutions to increase security for their platforms in the attempt to nullify this limitation to digital environmental activism. In addition to using caution in relation to what information was shared by way of new media, three respondents suggested using encryption technology. This technology could, for example, reduce the risk that confidential information was disclosed publicly. However, the same use of encryption technology was also referred to as ‘being vulnerable’ by one respondent, who opined:

If you have 100 people on an encrypted channel or messaging app like I have, of the 100 people who are there it’s easy for one person to just copy and paste the text and do whatever they want with it. So, I don’t think it’s a perfect solution. (Respondent ENGO6)

**Subtheme 2: Technical difficulties (9 respondents)**

In addition to security issues, nine respondents mentioned ‘technical difficulties’ that limited digital environmental activism. The difficulties referred to included access to electricity, telephone lines, and the Internet. For example, respondent ENGO16 observed that digital activism was:

obviously highly dependent on the Internet, being functional, electricity, and these things. That’s what people rely on.

The occurrence of technical difficulties was particularly relevant for protest activities occurring in remote areas with limited access to broadband, which made it harder for activists to communicate their actions digitally:

Having good coverage in the bush is a real issue. It’s not easy if you’re running a campaign and you need to, say, get a video from down south to Sydney, get it uploaded, and send it to the media. It’s quite a difficult thing to do … Having good coverage and ability of the Internet to work is an issue I came up across. (Respondent CG16)
No internet out here as a problem. When we were doing our protest, we had real struggles getting Internet. So, it’s great for activism in a city centre, but as soon as you go out into rural areas it becomes harder. (Respondent CG2)

We missed the first big meetings because there was a storm and we had no electricity and no computer … We missed it because of these difficulties. (Respondent CG8)

Finally, and as an overall reflection on the use of new media and social media by social movements and on the vulnerability of these platforms, a couple of respondents expressed concerns in relation to government potentially sabotaging the Internet to create obstacles to communication between activists. In this regard, respondent CG18 commented:

I think the way they are going to cut us out, it is not going to be through social media. It will be through sabotage of the networks, like we won’t be able to get on the Internet very often, and all of that.

Summary of results for Theme 6: A vulnerable space
As illustrated in Table 20, respondent engagement with this last theme was medium, with 20 (59%) of the 34 respondents commenting on it. It was notable that the weighting given to the subthemes was significantly variable from high to low.
Table 20: Summary of results for Theme 6

<table>
<thead>
<tr>
<th>Subthemes</th>
<th>No. of respondents (total: 20)</th>
<th>% (n=20)*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Security flaws</td>
<td>15</td>
<td>75</td>
</tr>
<tr>
<td>2. Technical issues</td>
<td>9</td>
<td>45</td>
</tr>
</tbody>
</table>

*Some respondents mentioned more than one subtheme. These percentages indicate the frequency of their responses.

On security flaws, respondent engagement was **high** (15 respondents, 75% of the total). Key narratives that emerged within this subtheme were:

a) It was possible for third parties to infiltrate or hack online databases of environmental groups unless strong security measures were in place (both ENGOs and community groups regarding both fracking and forest logging across all states except the ACT and SA);

b) The risk of disclosure of confidential information remained high even if using encryption technology (mostly community groups and only two ENGOs regarding both forest logging and fracking in WA, NSW, and QLD).

**Technical issues**, in turn, registered **low** respondent engagement (9 respondents, 45% of the total). These were the narratives that emerged within this subtheme:

a) Activists in rural or remote areas in Australia as well as forested areas struggled to get electricity and internet coverage, which limited their ability to use new media for their campaigns (mostly community groups, and only three ENGOs, regarding both fracking and forest logging across all states except VIC and WA).

Next is the cross-comparison discussion of themes 1-6 of the limitations meta-theme, which analyses the significance of the themes and subthemes as potential limitations to digital environmental activism, and then compares the results to those of the benefits, as analysed in Chapter 6.
Conclusions

The purpose of this chapter was aimed at presenting the results on Meta-theme 2 on the limitations of new media to challenge or cause significant constraints to the potential of new media for environmental activism in Australia, and to what extent, according to the perspectives of the interview respondents. Several limitations were found to challenge the potential of new media for enhancing environmental activism in Australia, as informed by six themes.

I now turn to Chapter 9 where I discuss the key findings of this chapter as well as the findings of chapters 6 and 7, before turning to the conclusive and last chapter of this thesis (Chapter 10). As such, in the next chapter I discuss the findings on this study on the potential of new media to enhance environmental activism in Australia to attain better protection of the environment to relevant aspects on my research topic as found in the international and Australian literature. This exercise then enables me to draw my conclusions and on the implication of my study, consideration on the research design, ideas for future research, and make some concluding remarks.

Notes

1 Antecedent to the Australian case, metadata regimes were also adopted in other jurisdictions including France, the UK, and Taiwan and several other countries since the 2010s with the scope of containing and fighting crime and terrorism (Cate 2008; Lachmayer and Witzleb 2014; Posner 2008; Taipale 2006).
9. Discussion of the findings

Introduction
This chapter discusses the key findings identified through two areas of investigation: web content analysis and interview data analysis (Chapter 6-8). To recall, the first area was web content analysis (Chapter 6). It explored new media practices usage by 15 environmental activist community groups and ENGOs campaigning in Australia on (i) old-growth forest logging and (ii) coal seam gas. Both campaign areas were investigated as case studies in the broader context of exploring the relationship between new media and environmental activism in Australia.

The second area of investigation was interview data analysis (Chapters 7 and 8). The data analysis was based on 34 semi-structured, face-to-face interviews with environmental activists operating across Australia. Following the campaign focus of the two case studies, the interview respondents were representatives of single-issue community groups and multiple-issue ENGOs contesting either old-growth forest logging or fracking.

The key findings from these two areas are then discussed in addressing Research Questions 2 to 6 by way of comparative analysis. This comparison shows how the findings converge, diverge, and extend current knowledge on the potentialities and challenges of new media to enhance environmental activism in its aim of better protecting the environment. The international comparison was conducted to gain insights on aspects that allow us to better understand the significance of the findings at the local level (here, Australia), and thus identify new contributions from this local study in global context, as well as report the Australian case regarding new media potentialities, either beneficial or limited regarding environmental activism. Following the discussion, Chapter 10 presents the conclusions, the implications of the key findings, the research method and its limitations, and suggested pathways for future research.

Discussion
The discussion begins with Research Question 2, with the other research questions following in turn.
RQ2. What successes can be discerned in Australia in the case studies regarding the use of new media in aiming to protect the environment more effectively?

The interview data analysis highlighted that new media allowed respondents to network and communicate with other activists and supporters, collaborate with other groups, and organise and grow networks in unprecedented ways, as informed by both vertical and horizontal communication. This beneficial aspect of new media was referred to by the respondents as enhanced ‘visibility’ of their actions, which increased their ‘reach’ or ‘outreach’. These terms all relate to the concept of ‘mediated visibility’ essential to the effectiveness and often success of environmental campaigns, that in this study relates to the campaign arenas of old-growth forest logging and fracking (see Lester and Hutchins 2012; Thompson 2005). In relation to these two campaign arenas, several examples were found in the interview data analysis of positive campaign outcomes or successes obtained through the deployment of new media.

In relation to fracking, a notable example reported by respondent CG13 was the 2014 Bentley Blockade on potential CSG development in Northern NSW. As mentioned by the respondent, new media were used during the blockade to manage communication and quickly spread information across individuals and groups in that region. This successful protest well demonstrated the effective impact of the non-hierarchical organisational structure of the protest through digital environmental activism. Another successful illustration was provided by respondent CG2 in relation to the campaign of his group to stop fracking to occur in South East QLD. In this case, new media were critical to gather support and deliver mobilising messages to help bring the community together in contesting coal seam gas development, and to alert the mass media about the protest actions.

In turn, in relation to old-growth forest logging, several examples were also found in the interview data analysis of new media being successful in drawing public attention to protests and contributing to beneficial campaign outcomes. A notable one was provided by respondent CG7 who – in underlining the importance of new media to attain more coverage for campaigns – mentioned his participation in a protest camp to protect Tasmanian forests from being logged. Through new media, the respondent highlighted his group organised media releases, harvested support, conducted interviews broadcasted via social media, presented protest photos, and other activities. He added that if they had relied on traditional media to report their protest, which went
on for weeks, no one would have known about it due to the relatively remote area hardly reachable by traditional media journalists.

Successful campaign outcomes thus derived from using new media for communication in relation to mobilisation. In yet another illustration, respondent ENGO10 reported that his organisation managed to organise, mostly by means of new media, the 2015 Climate March in Canberra. It saw thousands of people taking to the streets of the Australian capital city. Successes were also discerned in relation to new media helping to promote new ideas and finding financial sources to implement them. This was the case, for example, of ENGO15 that won a competition set up by Google (the Google Impact Challenge) in only two weeks by promoting their idea and competition entry on new media.

Other examples included the case of the Wilderness Society and Greenpeace setting up a Global Rescue Station on a giant Eucalyptus tree in Tasmania to oppose old-growth forest logging in the Styx Valley, which attracted high interest from community, media, and policy makers (Hindmarsh and Calibeo 2017; Lester and Hutchins 2009). Similarly, in the case of old-growth forest logging, successes included the case of Miranda Gibson, whose tree sitting started in 2011 and being broadcasted online contributed to listing Tasmanian forests as world heritage, thus saving it from logging (Williams 2018; Hutchins and Lester 2013).

Successes related to using new media for activism were also well illustrated internationally (Anderson 2014; Kera et al. 2013; Muralidharan et al. 2011; van Laer and van Aelst 2010; Van Aelst and Walgrave 2002; Lester and Hutchins 2009; Pickerill 2003). Examples included the 2016 protest at the Dakota Access Pipeline that – although not successful in stopping the pipeline to be built – gained social media momentum worldwide through the hashtag #NoDAPL to attract support and monetary donations worldwide (Johnson 2017; Hopke 2016; Levin 2016; Ward 2018). Additionally, the 2014 Climate March, where new media mobilised hundreds of thousands of people in over 160 countries. Sharing provocative video and photo content through web-casts is also highlighted in contributing to public outrage that translates into such positive outcomes for environmental protection. For example the successful online campaign on the BP oil spill disaster in the Gulf of Mexico (Muralidharan et al. 2011).

These examples of successful campaign outcomes achieved through using new media show that there is a convergence between the potential of new media to enhance
environmental activism in Australia and the claims made in the literature both in Australia and internationally on such potential. As such, in the next research question, I discuss in more detail to what extent environmental activists in Australia employ digital devices and practices to achieve campaign outcomes in comparison with the international literature.

**RQ3. What new media devices and practices are employed to enhance environmental activism, and why and how are these devices and practices deployed strategically, and how do they compare internationally?**

The use of new media for environmental activism in Australia was found to be extensive and incorporated into the everyday activities of community groups and ENGOs, as both the analysis of web content and interview data analysis revealed. New media devices and practices deployed by respondents are many and are used to meet specific campaign or activist goals.

Overall, the most important function of new media for respondents was to disseminate information to reach and engage with as many people as possible. This function served diverse purposes, which included informing the public about environmental issues occurring locally. For example, letting the community know about a company being granted exploration license for fracking in a local area; and about transnational issues such as climate change. It was also of paramount importance for the Australian respondents that the information they provided the public with was reliable and scientifically researched. If information they disseminated through their digital channels was not reliable, they were worried they would lose credibility in the eyes of both supporters and opponents, thus also potentially losing support and weakening campaign effectiveness.

Not only does information shared online need to be reliable; it also needs to be *understandable* by the public, which also means that information needs to be ‘user-friendly’. This requirement, as suggested by the respondents, was due to the need for environmental activists to attract public attention on environmental issues by cutting through the enormous amount of information circulating online, which can be overwhelming for users, in producing content that resonates with audiences more effectively. As such, respondents tried diverse strategies to achieve ‘user-friendliness’ by sharing powerful videos or photographs that told the audience what had been lost (or was about to be) and what to do about it. This type of content was also typically
accompanied by links with more detailed information on the issue or campaign, for example, through web-casts on forest logging in the Styx Valley of Tasmania.

The use of powerful imagery for enhancing public engagement with environmental issues and campaigns was also extensively found in the literature (Cox 2013; De Luca 2005; van Vuuren and Lester 2008; Lester 2011). A powerful early example was the use of the iconic photo of Rock Island Bend of the Tasmania’s Franklin River, which was taken by Peter Dombrovskis in 1979 in a pre-new media mediated visibility action (van Vuuren and Lester 2008). It provided an important illustration of the use of imagery for new media to follow. This was because the photo proved highly influential in the Australian 1983 federal elections that helped Labor win through the influence of mobilising green electoral value. Turning to new media in international arena, the deployment of images and videos of cracking glaciers in the Arctic and Antarctic has been successful in raising public awareness on climate change (Hindmarsh and Calibeo 2017; Doyle 2007).

An associated strategic way of sharing powerful imagery, as deployed by the respondents, to reach and mobilise audiences on new media was digital storytelling, aimed at engaging the public at a more personal and emotional level. Storytelling is valued highly by Australian community groups and ENGOs to the point that some ENGOs (those who can afford it) appoint dedicated staff to curate it on new media. This point also relates partly to the finding mentioned above on the user-friendliness of content shared on new media, in relation to providing audiences with information that appeals to them more easily. The importance of digital storytelling was reflected in the literature as a communication technique able to elicit powerful responses more effectively than ‘logical-scientific’ communication (Canella 2017; Dahlstrom 2014; De Fina 2016; Gambarato and Medvedev 2017; Lundby 2008; Papacharissi and Blasiola 2016; Pezzullo 2001).

As found in the analysis, new media devices most used by environmental activists in Australia were Facebook, the website, and emails/newsletters. Facebook is an encompassing platform for activists that enables multiple functionalities, from sharing information on events and campaign updates to fundraising and, most importantly, to directly engaging with their support base. The website, in turn, was mostly used as a digital archive containing information on past and present campaigns of environmental community groups and ENGOs. It was a referral point especially for those not yet familiar with the activities of community groups and ENGOs. The
findings over the use of Facebook and the website were similar in the web content analysis and the interview data analysis.

A communication device, however, that could not be explored through web content analysis was the role of emails. They were perceived as very important by environmental activists in Australia, as emerged through the interview data analysis. However, there was uncertainty on how effective emails were for mobilisation purposes as they often tended to be ignored by those who received them, as found through the analysis of community groups and ENGOs email opening rates.

A way to overcome this issue was to use more traditional communication systems, such as phone calls and particularly, text messages (SMS). The latter especially were considered a very efficient way to elicit more immediate responses or set mobilisation alerts regarding campaigns. SMS communication, however, could be expensive. The use of texts was very popular among both community groups and ENGOs due to its high opening rates, reported to be 90% by respondents, compared to email ones. However, this communication tool could sometimes be too expensive for community groups respondents, especially if text messaging was managed through paid software to send texts ‘in bulk’, as mentioned by respondent CG10.

While activists in Australia were highly engaged in using Facebook, emails, and websites for their campaigns, the same could not be said about Twitter. The latter was perceived by environmental activists as a tool to communicate with journalists more than an interactive tool to reach and mobilise their support base. This finding, which also emerged from the web content analysis, somewhat departs from international studies on the importance of Twitter as highly ‘strategic’ for campaigning (Boynton, 2010; Grossman 2009; Penney and Dadas 2014 Segerberg and Bennett 2011).

Overall, and aside from Twitter, the functionality appeal of new media is of interaction and engagement with supporters to better communicate on environmental issues and ongoing campaign updates. That aligns with broader positive claims made about the uses of new media for civic engagement in campaigning settings (Graf 2016; Hindmarsh and Calibeo 2017; Lester and Hutchins 2009; Pickerill 2003).

RQ4. What connection is made between activist uses of new media and traditional mass media, and why, and to what extent?
There was a strong connection between activist usage of new media and traditional mass media, as well as between digital campaigning strategies and traditional (offline) ones. These communication convergences were perceived by respondents as different tools than before be better empower their efforts to protect the environment. Nevertheless, new media was seen to hold some considerable advantages over traditional mass media. For example, new media enabled activists to create and develop their own communication channels, through which activists interacted with, and mobilised, their supporters.

In addition, on new media, activists experienced enhanced control over what was covered in terms of information on environmental issues, news, and campaigns in ways that did not exist for them with traditional media. A typical example of such enhanced control was evident with the use of drones in environmental campaigns or in the case of environmental disasters (see also Goldberg et al. 2013; Hodgson and Koh 2016; Potter 2014; Radjawali and Pye 2017). Drone footage allowed environmental activists to capture footage of, for example, illegal or unauthorised activities causing environmental damage, to disseminate online. Also, using new media was cheaper than using traditional media, especially in relation to advertising, thus providing financial efficiencies for better campaigning.

These findings indicate that for environmental activists in Australia, new media enables a more democratic and far-reaching way to communicate with their audiences than traditional mass media. The perception that new media are accessible by (ideally) anyone was found to be one of the biggest strengths of new media for environmental activism; even voluntary novices could quickly learn how to use it at the community group level, thus enabling campaigns to be set up faster. In sum, new media was seen by respondents as empowering tools for activists that allowed them to take more control over how their campaigns were communicated and more efficiently.

In relation to environmental activists developing their own digital channels and having control over the information available to the public, the findings converged with the literature on alternative forms of media developed by activists, especially via the Internet (Atton 2002; Downing 2011; Harlow and Salaverría 2016; Mattoni et al. 2012; Haunss 2015; Fuchs 2010; Pickerill 2007; Poell and Van Dijk 2015). This practice thus enabled effective self-representation that could only be achieved through new media (Cox 2013; Lester and Hutchins 2012).
However, despite these advantages, environmental activists, as also mentioned above, were not detached from using traditional mass media to help communicate their campaigns as set up through new media, and second, from using traditional campaign practices. Having their efforts and campaigns reported on TV, radio, or newspapers was still considered very important by environmental activists in Australia.

As such, while new media enabled activists to network with large audiences, at the same time, it also facilitated the creation of echo-chambers or filter bubbles that limited communication to a ‘like-minded’ audience. So, if the intent of activists was to expand and strengthen their support base, they also needed to find ways to communicate to wider and more mainstream audiences, and new media significantly helped endeavour. In turn, traditional campaign practices for Australian activists remained the most effective basis for environmental activism as a social movement. It was, thus, based on a movement created through face-to-face communication that the potential of new media to enhance environmental activism can also be realised; as also highlighted in the literature (Bennett et al. 2014; Diani 2000, 2015; Virnoche and Marx 1997; Wellman 1996).

In sum, new media is a powerful tool that is part of the ‘complex media ecology’ available to environmental activists (Cottle 2008: 859) for their communication and campaigns. Although new media are a powerful tool available to environmental activists, they are more effective if used in combination with, or complemented by, offline strategies ‘in the real world’ (De Donk 2004; Diani 2000, 2015; Foxwell-Norton and Lester 2017; Virnoche and Marx 1997). As such, in answering this research question, it can be said that the connection between the use of new media and traditional mass media by environmental activists in Australia, as well as that between digital activism and traditional activism, is of a potentially effective complementary nature.

RQ5. How are activist practices and perceptions of new media tempered by activist organisational structures (group types), issues (campaigns), and campaign location?

Some variation also existed between the perceptions of community groups and ENGOs in relation to how they considered the potentialities and limitations of new media to
enhance environmental activism. Some of these variations were identified in the Chapter 6 web content analysis. The web analysis showed that while Facebook and the website were both heavily used as new media platforms for environmental activism in Australia, for some small groups the group website is replaced by a Facebook page.

Preference for Facebook could also be understood in terms of the interactivity enabled by the social platform in comparison to the website. This suggests there is a connection between the choice of new media tools and how and why community groups form. Typically, community groups form to respond to a threat to the environment in the immediate surroundings of a local area (Kempton et al. 2001). As such, setting up a website (through Wordpress, for example) requires some IT skills and time availability, as was explained through the interview data analysis. In contrast, setting up a Facebook page is easier and quicker and might serve better the needs of community groups especially at the early stages of their formation.

In addition, while one of the most common website’s functionalities, as found from the analysis, was typically archives of past and ongoing campaigns and relevant publications, such functionality did not appear to be as central or immediately needed by community groups. As such, although websites were deployed by most community groups and ENGOs, it was mainly small community groups that preferred Facebook pages. A similar pattern in relation to Facebook being preferred to more traditional new media platforms was also found in relation to video content. Web-casts are also very popular among environmental activist community groups and ENGOs to raise public awareness on campaigns and issues.

As such, while most community groups and ENGOs used YouTube to share their videos, a few community groups only used Facebook to do so, because the latter allowed them to create and share content instantly with their audience. This again suggests a preference, for small community groups, for the immediacy of interaction that Facebook enables, also by means of video content.

Of note also was that the new media used by one community group focused on old-growth forest logging in Victoria was mainly the website, while its social media presence was kept to a minimum. This type of new media use, which contrasts with the above-mentioned preference of activists for interactive uses of social platforms, was found more typical of community groups that conducted campaigning over a long time to better protect forests from logging. This finding also linked to the idea that Facebook was used to attain quick contact with the public about immediate threats to
the environment. By contrast, this finding also referred to websites being deployed as archival and resource gathering spaces as more suited to long-running campaigns.

Some of these findings were also confirmed and enriched with several nuances characterising the findings of the interview data analysis. In relation to mediated visibility of campaign activities on new media, for example, community groups found new media advantageous to reach like-minded audiences regarding fracking campaigns. At the same time, however, ENGOs were of the idea that engaging only with like-minded audiences was insufficient to enable campaign victories. As such, these ENGOs stressed that new media should be used to extend their communication target in connecting to mainstream audiences.

A way to bridge the gap between like-minded audiences, or as the respondents called them, the ‘converted’ ones, was to counter the negative stereotyping of activists evident sometimes of traditional media outlets. For example, as ‘extremists’, ‘violent’, or ‘too radical’. New media were perceived of as crucial to achieve such purpose, because they enabled activist self-representation. In other words, new media allowed activists to report in first person about their campaigns and issues, who they were, and who was participating to protest activities, and how protests were conducted.

The issue of negative stereotyping of environmental activists and the beneficial use of new media to counter it, was mainly brought up by small groups across all states except the ACT and SA. This highlights that not only was negative stereotyping of environmental activists a common problem for small activist groups in Australia, but also that new media were a way to counter this problem, thus representing their legitimacy and ‘caring’ profiles to more effectively run their campaigns in the public eye. For example, activists highlighted that sharing footage of elderly people and/or families with children who peacefully attended demonstrations or blockades was a very powerful way to counter negative stereotyping of environmental activists. These examples were mentioned both in relation to campaigns against fracking, as CG3 and CG2, as well as in relation to old-growth forest logging, as mentioned by ENGO13.

Self-representation on new media was also beneficial to respondents because it also helped lower costs for organising and communicating campaigns, and was time effective, in contrast to trying to profile themselves through traditional communication. Nevertheless, and especially for community groups focused on old-growth forest logging, the costs associated with campaigning were still high in terms
of monetary and time resources. As such, larger ENGOs can take better advantage of the lowered cost of digital environmental campaigning.

Turning to the perceived limitations of new media for enhancing environmental activism, respondent variations also existed. All respondents were familiar with digital surveillance issues to some extent but did not perceive it as a significant constraint for their operations and more generally for the environmental movement. However, respondent opinions differed according to the campaign with which respondents were concerned. For instance, a recurrent comment by activists in the arena of old-growth forest logging was that surveillance was not a new phenomenon and that they were familiar through past landline phone tapping. Accordingly, for them digital surveillance was like old surveillance, but conducted by digital means. As such, they were more accustomed to this issue than campaigners in the fracking arena. However, both respondents in both the area of fracking and old-growth forest logging, and regardless of group size and location, recognised the possibility that digital surveillance could have a ‘chilling effect’ on protest.

Variations also were found in relation to respondent opinions on corporate media ownership, for example, in relation to the algorithms in place that regulated post visibility on Facebook. While a common strategy to influence such visibility of posts on Facebook was paid advertising and boosting, this strategy was mostly mentioned as common practice by ENGOs. In contrast, community groups used these strategies more sporadically because of the expense. Again, this finding suggests that some new media functionalities are highly beneficial to larger, better resourced ENGOs and that, although these functionalities are beneficial to community groups too, they are so to a lesser extent simply because of less resources. Nonetheless, all respondents agreed that the cost of boosting posts was very reasonable in comparison to advertising on traditional mass media. Such agreement between respondent opinions suggests that in terms of managing the visibility and dissemination of content on new media, respondents felt they were in control to a much greater extent than prior to the rise in popularity and use of new media.

A similar pattern was also identified in relation to new media being perceived as a ‘crowded space’ that became too overwhelming and time consuming to compete with. Both community groups and ENGOs found these issues as limitations of new media to enhance environmental activism. However, ENGOs were better resourced
than community groups in their ability to contain or overcome these issues, due to their greater access to funds to do so.

In turn, respondent perceptions on echo-chambers and their potentially detrimental effects on environmental activism converged across all respondents. Convergence was also found on respondent opinions in relation to fake news and, subsequently, in relation to the idea that corporations owning new media platforms had a responsibility to better regulate their platforms to limit misinformation and disinformation that derived from fake news disseminated online.

Finally, new media were perceived as vulnerable due to technical issues and security flaws, as noted mostly by community groups and a minor way by ENGOs. This finding suggests that these issues, which included, for example, lack of electricity and Internet coverage, were encountered more often by community groups operating in rural areas than ENGOs based in metropolitan settings; again, due to resource accessibility (but also Internet accessibility) in some rural areas of campaigning across Australia.

**RQ6. On the limitations of new media for environmental activism, are they being addressed, and if so, how, and to what extent?**

Respondents adopted several strategies to address the identified limitations of new media to enhance environmental activism. In the following, the key limitations and the strategies adopted by the respondents to address them are discussed in turn.

On corporate media ownership, the analysis showed that there was a generic concern among the respondents about the possibility that new media owners could influence freedom of expression online to some extent (for example, by obfuscating or blocking certain content). However, respondents were not concerned that these issues threatened free speech in Australia. Concomitantly, regarding the influence that new media corporate owners had on platform content, respondents raised a visibility issue. They mentioned that new media platforms usually prioritised some posts over others due to the algorithms regulating them (particularly Facebook, although references were made also in relation to Google web search). To address this issue, respondents often boosted their posts or created paid advertisements, as discussed above in RQ 5.

This position highlighted by the respondents diverges somewhat markedly from the findings of international studies that robustly raised issues of expression and
transparency (Dahlberg 2004; Noam 2009; Taylor 2104). This divergence shows that the possible consequences of corporate ownership for digital activism were perceived less seriously in Australia; and suggests that Australian activists could better deploy digital strategies to avert the risk of these issues to constrain their ability to campaign than international activists.

On digital surveillance, in turn, the position of the respondents was that it was not a constraint to their business as it was considered ineffective to deter individuals from participating in environmental campaigns. This Australian position was also supported by respondent arguments that campaigns actions were within the law which, implicitly, was a way to address the risks related to governmental digital surveillance.

Digital surveillance was not seen as so much of a constraint to environmental activism also because the disclosure of personal information had become ‘normalised’ on social networks to the point that setting up privacy settings on digital platforms was in most cases a practice disregarded by users; but perhaps a naïve position to hold in dismissing this issue too easily. This position also diverged with that of international studies that signalled that such normalisation of personal data being online could weaken the effectiveness of digital surveillance (Fuchs et al. 2012; Trottier 2014).

Some precautions, however, were taken by the respondents to reduce the risk that their campaigns could be disrupted. A common precaution was not to discuss fine details related to protests on publicly accessible social media pages nor via emails and Facebook messaging services. This precaution was taken because online communication was perceived as potentially traceable and surveillance-prone. Another precaution to avoid surveillance was to use encrypted communication technologies, as some respondents suggested. However, some respondents distrusted these technologies as vulnerable and not reliable to avoid surveillance. The use of encrypted communication to avoid surveillance was also found in the literature (Penney and Dadas 2014; see also, Pickerill 2003; Van Laer and Van Aeist 2010).

Overall, digital surveillance was considered ineffective by the respondents because it could be countered through new media. For example, respondents CG12 and CG15 mentioned that activists could document and share publicly cases of police brutality on social media. Similarly, in the case of forest logging, respondent ENGO5 mentioned that activists could take videos of forests being bulldozed and loggers removing activists from the scene and share the related material on social platforms. This finding converged with the literature on activists using surveillance methods and
strategies to counter police surveillance as extensively discussed in the literature (Albrechtslund 2012; Calibeo and Hindmarsh 2017; Fuchs 2010; Krueger 2005).

In contrast to digital surveillance and corporate media ownership, which did not worry Australian respondents as much, the perceived limited efficiency of new media to reach out to large and diversified audiences was, for the respondents, a very important limitation of digital campaigning. This limitation was related to different issues.

First, new media were perceived as an extremely competitive space where not only environmental activists were struggling to get audience attention; but also new media were used by adversaries (portrayed as ‘the enemy’ or ‘the other side’ by the respondents). However, although online competition for attention was a challenging issue for the respondents, they adopted strategies to address it. In the main, respondents referred to using both new media and traditional media combination strategically. For example, some respondents mentioned the importance of developing a dialogue with their supporters to keep them up-to-date with campaign achievements and initiatives. Overall, the findings on new media as a competitive space converged with the literature on new media users competing for audience attention on environmental activism or otherwise (Anderson 2014; Cox 2013; Helberger 2016; Lester and Hutchins 2012; Poel et al. 2007).

Second, politicians and decision makers were perceived by the respondents as more dismissive of digital campaigns than of traditional ones. Respondents thus needed to find ways to reach out to them effectively. This issue was, again, addressed through combining the use of traditional campaign with new media strategies. For example, respondents would send hard copy letters to politicians along with online petitions; or they would develop innovative new media strategies to target the social media pages of politicians, which are normally accessible by citizens.

Third, issues of echo-chambers on social media were also raised. Not only echo-chambers limited the range of communication to like-minded audiences, but they could mislead activists about the believed extent of support, which could lead them into some complacency about, and thus, undermine, the effectiveness of their campaigns. Although international studies explored the influence of echo-chambers on the formation of public opinion (Bruns 2017; Fredheim and Moore 2015; Papacharissi 2002; Schäfer 2016), this is the first study that detected this issue regarding environmental activism in Australia.
Fourth, new media carried potential for misinformation and disinformation. A key issue that the respondents raised regarding this potential was fake news, and the ease with which it could spread online. However, although respondents were concerned about fake news, they did not consider it as a serious threat to their campaigns. This was because through new media, activists could ‘dismantle’ fake news through addressing it with scientifically informed material with the aim of neutralising the fake news arguments. In relation to this finding, international studies exploring the phenomenon of fake news regarding environmental activism in Australia were not detected. However, fake news has, of course, been investigated internationally (Dorf and Tarrow 2017; Newman et al. 2017; Shu et al 2017), also in relation to environmental activism (Anderson 2014).

Another interesting finding was in relation to issues of abusive behaviour and trolling as affecting the potential of new media to enhance civic participation in environmental campaigns, although in a minor way. It was found an issue by respondents as abusive behaviour of individuals online and trolls could pose as a disincentive to individuals to participate in online debates on environmental issues. However, the respondents responded with various tactics to disempower them, which usually included ignoring them or making fun of them; or deleting and blocking abusive users. This phenomenon has not been raised before in the Australian literature on environmental activism and I believe also not overall in the international literature to date as a limitation to new media for enhancing environmental activism.

In conclusion, and in answering this research question, the analysis shows that respondents have available a large array of options to address the issues perceived as limiting the potentialities of digital environmental activism. These options, as identified from the analysis, can be summarised as two main strategy areas. The first one combines digital environmental activist strategies with offline and traditional ones. As mentioned by the respondents, these strategies include making phone calls or sending hard copy letters; door knocking and holding stalls; mainstream media outlets reporting; buying advertisements on newspapers for those who could afford it (usually ENGOs).

The second strategy area was to ‘work within’ the digital system. This means that respondents used digital devices and practices to strategically engage with audiences and mobilise them. For example, boosting posts on social media to increase the visibility of their posts; producing content that was appealing as well as easily
understandable by audiences; and disseminating provocative imagery and videos to attract audience attention, for example, through digital storytelling, as well disseminating scientifically researched information regarding issues of environmental degradation.

**Summary and conclusion**

The purpose of this chapter was to discuss the key findings of the study in addressing Research Questions 2 to 6. In this exercise, common patterns as well as some divergences were identified between the findings drawn from the respondent interview analysis and web content analysis. These findings were then compared to relevant aspects in the international and Australian literature on the potentialities and limitations of new media for enhancing environmental activism in the aim to protect the environment. The key findings are as follows:

- New media for environmental campaigns were helpful to achieve successful outcomes. These included campaign victories as well as more modest achievements that drew respondents closer to their campaign goals.
- In complementing the use of new media, traditional mass media were still considered by respondents as very important communication channels to reach out to mainstream audiences to enhance environmental activism.
- New media practices and devices deployed by the respondents to reach out to audiences include sharing user-friendly content capable to attract audience attention, and also inform audiences of ways to take action.
- User-friendly content included powerful imagery and provocative content, storytelling, videos and footage obtained in innovative ways such as through drones.
- On new media devices, web features analysis showed that among new media platforms, Australian community groups and ENGOs found Facebook and the website as the most useful digital tools for disseminating information, interact with the public, and mobilise supporters.
- Results from the web content analysis converged with ones of the interview data analysis on new media devices and practices used by the activists. However, more devices were identified through interview data analysis: for
example, the importance of emails for communication on campaigns and the use of text messages (SMS) for mobilisation purposes.

- New media improved communication between respondents in terms of time and cost efficiencies, outreach capacity, pressure politics, and civic engagement and mobilisation.
- Activist digital practices and perceptions of new media varied in relation to the organisational structure of activist groups (here, community groups or ENGOs) and by the campaign issue (here, fracking or old-growth forest logging), and not so much by the location of community groups and ENGOs.
- Although new media were perceived as democratising tools that could make communication and campaigning more accessible to the public, ENGOs were often more advantaged in using new media for their campaigns due to having access to greater financial and human resources in comparison to community groups.
- Nonetheless, new media were perceived by community groups – especially those contesting fracking – as essential tools to their campaign activities as they allowed them to interconnect with other locals and communities usually difficult to reach otherwise, especially in rural and isolated areas (that were sufficiently connected to the Internet, which was sometimes a limitation).
- On limitations, corporate ownership of new media and digital surveillance were not perceived as huge constraints to environmental activism, although there is awareness among respondents of these issues as potentially limiting the potentialities of new media.
- The biggest limitation to using new media for environmental activism was to attract attention of audiences to campaigns and subsequently mobilise audiences to action. Contributing to such limitations was new media being crowded spaces where users competed to get audience attention; development of echo-chambers especially on social media; proliferation of fake news; and time consumption in dealing with abusive behaviours online and trolls.
- A new media cautionary strategic approach emerged that enabled several activist strategies to counter limitations or contain them, including combining digital and offline communication practices; being careful in what information was disclosed online; using creativity to develop engaging content in novel
ways; and creating video or photo content that resonated with the emotional side of audiences through digital storytelling; all with the aim to attract audience attention and engage them to action.

In sum, this study finds positive potential for new media to enhance environmental activism in Australia in the aim to better protect the environment, despite the posed limitations. This potential is supported by several beneficial aspects found through literature review, web feature analysis, and interviews. I now turn to Chapter 10, which again, presents the conclusions to the thesis, the implications of the key findings, the research method and its limitations, and suggested pathways for future research.
10. Conclusions and reflections

Introduction
The focus of this study was on discerning more clearly the posited beneficial potential of new media in Australia to enhance environmental activism, as also contextualised by the posited limitations to that potential. As such, the aim of the study was to investigate the potential benefits and limitations of new media for Australian environmental activism regarding environmental protection, as particularly informed by campaigner perceptions of such potentiality.

The investigation was conducted through two case studies on environmental activism regarding old-growth forest logging and fracking. The investigative fieldwork was driven by an analytical methodology comprised of (i) a web features analysis of new media devices and practices adopted by 15 activist groups and organisations; and, (ii) interview data analysis of 34 semi-structured interviews with environmental activists across Australia. Six research questions informed the research aim:

RQ1. How can theories of media studies, STS studies, and environmental politics be applied to the study of the potential of new media to enhance environmental activism with an emphasis on better protecting the environment?
RQ2. What successes can be discerned in Australia and internationally regarding the use of new media in protecting the environment?
RQ3. What new media devices and practices are employed to enhance environmental activism, and why and how are these devices and practices deployed strategically, and how do they compare internationally?
RQ4. What connection is made between activist uses of new media and traditional mass media, and why, and to what extent?
RQ5. How are activist practices and perceptions of new media tempered by activist organisational structures (group types), issues (campaigns), and campaign location?
RQ6. On the limitations of new media for environmental activism, are they being addressed, and if so, how, and to what extent?
Research Question 1 was addressed through the development of the conceptual framework, as presented in Chapter 4. The remaining research questions (2 to 6) were then used to discuss the key findings of the study addressed in Chapter 9.

**Summary of the findings**

The beneficial deployment of new media as perceived by the respondents was identified through three themes, as informed by their subthemes. As such, environmental activists perceived beneficial aspects of new media as: (i) *platforms for delivery and civic engagement*, which related to the achievement of campaign mediated visibility, development of networks between groups and individuals, enablement of self-representation, and use of digital strategies; (ii) *practical advantages*, including time and cost effectiveness, and ease of use; and, (iii) *platforms for taking action*, in relation to exerting pressure on politicians, and recruiting and mobilising supporters.

In relation to the benefits, several convergences existed between the findings on this study concerning the Australian context and the international literature. The most mentioned beneficial convergence of using new media was substantially increased campaign visibility and coverage. Overall, outreach to large and diverse audiences on environmental issues and campaigns. These benefits reflected the ability of activists to produce and share information regarding the media option without depending on traditional ‘gatekeepers’, for example, newspaper editors. In other words, new media enabled activist self-representation on media, which was of high importance to environmental activists.

First, because activists had to ensure that reports of their activities were publicly accessible through media. Second, because they needed to ensure they were in control of how media information was delivered, and through which media devices. Third, because new media was easy to use for campaign purposes even by those without a technical background. In short, self-representation through new media was a great benefit for environmental activists. It was clear that prior to new media, gaining attention of traditional news media outlets was difficult; and cost-prohibitive in the case of buying newspaper and/or TV advertisement spaces.

These findings echoed earlier positive claims that new media held potential to enhance the visibility of environmental struggles more effectively than traditional
media (Doyle 2007; Lester and Hutchins 2012; Milan and Hintz 2013; Pickerill 2003). Additionally, these findings also aligned to the literature regarding the difficulties encountered by environmental activists to be reported on traditional mass media outlets, typically due to the need for newsworthiness media coverage that thrives on dramatic events (Blanco 1997; Cox 2013; McCurdy 2012; Donson et al. 2004; Hansen 2010; Rosie and Gorringe 2009; Lester and Hutchins 2009).

The benefits of new media for enhancing outreach and increased visibility, and activist self-representation also had positive influences on audience mobilisation, thus contributing to more successful campaign outcomes. Such outcomes included audience significant mobilisation to big events, such as rallies and demonstrations, as well as effective coordination/communication between activists and groups at these events. An example of a big rally successfully organised through new media was the 2015 Climate March in Canberra, which gathered thousands of people on the streets. An example of successful coordination between activists attending events was the 2014 Bentley Blockade (NSW), where the horizontal nature of new media communication was aligned to the decentralised and horizontal structure of the protest.

The beneficial aspect of new media enhancing audience mobilisation was also nuanced by a practical advantage for Australian activists operating in rural areas. For these activists, especially for farmers involved in campaign alliances contesting fracking, traditional campaigning strategies like letterboxing were not efficient as rural residents usually lived far apart from each other. Using new media for such purpose thus enabled effective communication, apart from where internet connectiveness was sometimes weak.

Overall, in relation to the benefits of new media for visibility and mobilisation, the findings of this study converged in many ways with the international literature on effective new media mobilisation to create networks of interconnected individuals with shared environmental concerns to form, and organise, campaign horizontally (Bimber 1998; Bennett and Segerberg 2012; Castells 2009; Cox 2013; Hindmarsh and Calibeo 2017; Lester and Hutchins 2009; Pickerill 2004; Penney and Dadas 2014). It also contributes to the international literature as it broadens it in this area to include positive findings on the Australian case.

In turn, limitations that seemingly challenged the potentialities of new media were found in the analysis by way of six themes, as informed by their subthemes: (i) issues of media ownership and digital surveillance, in relation to the role played by
corporations and governments regarding new media activist use; (ii) issues with digital communication, which included visibility issues, abusive behaviour and trolling, and digital campaigns easily dismissed by politicians; (iii) new media being overwhelming, in relation to being a crowded and competitive space; (iv) new media being non-inclusive, due to echo-chambers and marginalising for individuals not using them; (v) potential for misinformation and disinformation, due to fake news and decline of quality journalism; and, (vi) new media being a vulnerable space, characterised by technical and security issues.

In relation to these limitations, there were also divergences between the international literature and the Australian position. The most marked ones were found in relation to issues of digital surveillance and corporate media ownership which, for the Australian respondents, did not significantly constrain or threaten the potential of new media for enhanced environmental activism. By contrast, the international literature signals these issues as potentially affecting the ability of citizens to protest, and express dissent online, in tempering the democratic potential of new media for activist use. This divergence between the Australian position and the international literature suggests a perhaps naïve position of the Australian respondents on these issues, especially in the larger context of advocacy for increased transparency in relation to digital surveillance laws and regulations (Crain 2016; Fuchs and Trottier 2016; Gangadharan 2007; Obar and Oeldorf-Hirsch 2017 (Dahlgren 2006; Noam 2009; Fuchs 2012; Taylor 2014; Vaidhyanathan 2011).

Instead, the biggest challenge perceived by activists in Australia to fully realise the potential of new media for more effective campaigns was in having to operate in a crowded and very competitive new media space, where attracting audience attention was difficult due to competition from other environmental groups as well as adversaries, and dominant Internet business like entertainment. However, several ways and strategies were adopted to counter, contain, and/or address such limitation. Most commonly, a combined deployment of digital practices and traditional strategies was used to appeal to diverse publics.

Digital strategies were also often found more effective by activists if used in concert with traditional ones. This was because traditional face-to-face strategies – from market stalls to flyers, and door knocking – formed the basis for the potential of new media to enhance environmental activism more effectively, regarding the Australian context. A combined use of strategies thus enabled activists to reach out to
a more comprehensive and diverse pool of supporters, which also included individuals who not engaged with environmental campaigns, or those who did not use new media. To this aim, activists sought support online through boosting social media posts and ads, while conducting on-the-ground activities and events such as market stalls or fundraising events – which were also often advertised via Facebook. This finding on the combination of traditional and digital strategies for more powerful impact aligns with the literature (De Donk 2004; Diani 2000, 2015; Foxwell-Norton and Lester 2017; Virnoche and Marx 1997).

In addition, three insights emerged that add to the existing knowledge regarding the intersection of environmental activism in Australia and digital communication related issues of echo-chambers, fake news, and online trolling. First, that by using new media, environmental activists often operated in echo-chambers. This meant that environmental issues and the campaigns to solve them were communicated only to an audience that was already engaged with those issues and campaigns. Although reaching out to already engaged audiences was important for activists, failing to reach out to wider and diversified audiences could negatively impact campaign outcomes.

The phenomenon of echo-chambers is explored in the literature mostly regarding its effects on the formation of public opinion (Bruns 2017; Fredheim and Moore 2015; Papacharissi 2002; Schäfer 2016). However, more research is needed in relation to the influence that echo-chambers have on digital environmental activism. This influence is little explored in the literature, especially in relation to the perceptions that Australian activists have about it in relation to their campaigns.

Second, that dissemination of fake news posed a real problem for environmental activists in Australia in that it could affect their capacity to communicate about environmental issues and campaigns. This was due to the ease with which fake news spread online regardless of their false or misleading content. Fake news could, for example, negatively impact on the reputation of environmental groups if contained discrediting information about them; as well as dissuading citizens from engaging with environmental campaigns. In response to this phenomenon, the most common strategy deployed by environmental activists to contrast fake news was to counter it with scientifically researched information. While the international literature investigated the phenomenon of fake news extensively, also in relation to environmental activism (Anderson 2014; Dorf and Tarrow 2017; Newman et al. 2017;
Shu et al 2017), it was less so in the Australian context where fake news potentially limits the ability of environmental activists to campaign effectively through new media.

Third, that the online activity of both trolls and abusive individuals was detrimental to digital environmental activism. In the Australian context, issues of abusive individuals and trolls were recurrent and problematic. Just like fake news, trolls and abusive individuals disseminated false and discrediting information about environmental issues. They did so by targeting Facebook pages of environmental groups and/or organisations, or directly individuals involved in these environmental groups, with the aim of disrupting their conversations.

Abusive individuals and trolls were problematic because they would disrupt conversations and discourage people to engage in digital debates on environmental issues. They were also problematic because environmental activists had to spend their time dealing with these issues and trying to contain it, for example, by blocking abusive individuals or trolls, or deleting abusive comments. The impact of abusive individuals and trolls on digital environmental activism in the Australian context remains, however, under-researched, although the phenomenon was emergent in the literature (Tagg 2015; O’Sullivan and Flanagin 2003; Thacker and Griffiths 2012).

In sum, based on the analysis of the benefits and limitations of new media to enhance environmental activism in the aim to better protecting the environment, it can be argued that in the Australian context, new media is enhancing many ways of how activists conduct their campaigns organisationally to actions. The benefits derived from using new media are seen both in relation to enabled outreach to audiences beyond the usual (locally immediate) influence range of activists, but also in the capacity of activists to mobilise audiences to action in ways not realisable otherwise.

This potential is, however, tempered by some limitations, particularly in relation to the activist need to recruit diversified audiences through a digital space where competition for audience attention is extremely high. However, practices and strategies were initiated to potentially reduce the impact of these limitations on the ability of activists to use new media more effectively. The applicability of such strategies, which often required a monetary component, however, were less obvious for community groups as typically under-resourced and not always able to afford them; although much more affordable, in comparison with pre-new media strategies.
Implications of the findings

The findings of this study appear to have four key implications for environmental activists and their utilisation of new media, which not only contribute to fundamental knowledge on the topic but may also contribute to the endeavour of the topic in its aim to better protect the environment, which is a fundamental virtue in these times of continuing environmental decay.

1) The perception that environmental activists in Australia have is not only of a promising use of new media for environmental activism, but as a requirement for more effective campaign outcomes. However, activists should not limit their communication strategies to digital ones but instead refine and adapt a range of communication strategies to target diverse audiences.

2) A key finding of this study was also that environmental activists in Australia seem to perceive issues of new media corporate ownership and digital surveillance as not affecting their ability to campaign effectively. However, caution is needed especially if future regulation is not developed to adequately protect the democratic thrust of the Internet as a risk for freedom of speech to be unduly eroded either through censorship or less spaces being available for civic debate, expression of dissent, and social (and environmental) interests.

3) Enhanced collaboration between Australian ENGOs and community groups in relation to the deployment of digital strategies for communication and campaign could improve civic engagement in environmental campaigns and lead to more positive outcomes for environmental protection. Such collaboration might strengthen the resource base of community groups in terms of human, technical, and financial resources to attain better outcomes for their campaigns and activities. At the same time, this collaboration would also enrich ENGOs with local knowledge and expertise of community groups, including their deployment of strategies and practices to reach out to local residents through new media.
4) A better balance between openness and regulation of new media platforms is needed. This is because the benefits of using new media for environmental activism rely on an open, horizontal, and democratic new media structure that favours information pluralism and freedom of expression. By association, issues of platforms owners (or regulators) are raised regarding responsibility to implement more effective policies that regulate the quality and reliability of content that flows on their platforms. These issues arise especially in relation to fake news, which impacts on the quality of information accessed by individuals online; development of echo-chambers and filter bubbles on social platforms that tend to isolate groups from each other on the basis of their preferences; and abusive behaviours and trolls, which can have disruptive effects on communication.

**Contribution to knowledge**

This study contributes to knowledge in at least two ways. First, it contributes to strengthening existing knowledge on the use of new media in the Australian literature and then the international literature, as found at the intersection of environmental politics, media studies, social movements studies, and STS studies. Second, the study contributes new insights and findings in relation to the Australian landscape on the use of new media for environmental activism.

Although similar studies have been conducted internationally regarding the relationship between digital technologies and environmental activism (for example, Anderson 2014; Graf 2016; Pezzullo and Cox 2017), much less attention has been paid to this topic in Australia. This is especially the case in representing the position of environmental activists regarding the potential of new media for their campaigns; although some important studies have contributed to the topic (Lester 2010; Pickerill 2003, 2007; Tranter 2008; Vromen 2015).

Turning to the first contribution to knowledge, this study strengthens existing understandings in the international literature with Australian activist perspective that converged with the existing knowledge in relation to several areas. First, on there was convergence of the Australian findings with international studies on new media enabling mediated visibility of environmental issues and campaigns, improved
audience outreach, and enhanced opportunities for audience mobilisation and pressure politics (for example, Cox 2013; Doyle and Kellow 1995; Lester and Hutchins 2012; Penney and Dadas 2014; Pickerill 2004; Taylor 2014). The study also strengthened the existing literature with Australian activist perspectives regarding the complementarity between digital and offline strategies and communication (De Donk 2004; Diani 2000, 2015; Foxwell-Norton and Lester 2017). Third, the study reinforces the existing literature through contributing convergences between Australian understandings and international studies on new media being a crowded and competitive space where it can be difficult for activists operating on new media to have their voice heard (Anderson 2014; Cox 2013; Helberger 2016; Taylor 2014; Poel et al. 2007).

In regard to new perspectives and insights, the contribution of this study lies in to further informing the literature on the topic under investigation with new aspects identified in the analysis that are specific to the Australian arena. First, new insights emerged on the Australian activist position about issues of corporate media ownership and digital surveillance, as not considered by activists as a significant threat for activism and freedom of speech online. Again, this position departs from the international literature on the dangers to new media communication and activism (for example, Dahlgren 2006; Fuchs 2012; Noam 2009; Taylor 2014; Vaidhyanathan 2011).

Second, new insights emerged in relation to impacts on digital communication between activists and digital campaign outcomes due to the increasingly occurring phenomena of fake news, echo chambers, and abusive behaviour and trolling. Although these aspects were not considered as significantly constraining the potential of new media to enhance environmental activism, they were raised as potentially discouraging civic participation in environmental campaigns and, subsequently, threatening to weaken the engagement of citizens and activists with online debate on environmental issues. In sum, this study contributes and adds to the international and Australian literature in its thrust, scope, and findings, and thus, fundamental knowledge on the topic.

Reflection on method
The research design was informed by qualitative methodology, which investigated and interpreted the literature through a thematic historical, social, technological, and politically informed approach. The resulting conceptual framework of the study (Chapter 4) guided the research in each stage, from the review of the literature to identification and exploration of two case studies, to the analysis and interpretation of the field work data.

The conceptual framework not only guided the investigation of practices and understandings on new media use by environmental activists in Australia, but also was of assistance in the identification of connections between different areas in the literature that applied to the research and especially in the Australian context. For example, in the identification of the connection between the structure and composition of the environmental movement and the communicative horizontal nature of new media being compatible, and how this compatibility became more meaningful through empirical findings in the case of Australian activism.

However, it would have also been interesting to compare the activist perceptions to those of policy makers and developers about environmental activists and their impact, also through their new media use. This comparison might have potentially further informed the analysis of potentialities of new media to enhance environmental activism and identify other limitations to such potentialities. However, this aspect seemed less relevant to the conceptual framework and was thus not pursued, also given time and space constraints of the study.

Overall, the research design was found useful, also in relation to the qualitative method selected to collect the data through semi-structured, face-to-face interviews. The latter method provided me with informed opinions from stakeholders ‘on-the-ground’, which proved to be informative and insightful in relation to my topic. The semi-structure method of interview was especially advantageous to my study also due to its flexibility, which allowed for modification to how questions were ordered in the interview guide, and include additional areas to explore and follow up with other respondents (Adler and Clarke 2015; Beck et al 2004).

This flexibility enabled opportunities for future investigation as new aspects and themes also emerged during the analysis. For example, my interview guide included a question that allowed respondents to talk about further issues in relation to the limitations (Question 12, Appendix C). However, this question was too broad; and because I did not prepare any prompts to facilitate the respondents in answering the
question, the latter remained sometimes unanswered. However, after the first interview, prompts were added, and that question accordingly provided new avenues for investigation, for example, in relation to the phenomenon of trolling, or fake news.

Of course, there were normal time constraints as I understand it of interviewing in Australia, such as the huge distances between the different locations that I had to cover to conduct the interviews, and then efficiently scheduling the interviews. Nevertheless, respondents were particularly appreciative of this method, which aligned to my findings about face-to-face interaction being highly regarded by activists in Australia as a fundamental way to build relationships and develop their campaigns.

This point also emerged in relation my first contact with the respondents in their preference for the immediacy and direct interaction of phone conversations and Facebook messaging over emails (see Chapter 5). In sum, I believe the research design worked well in its structure and coherency and the ‘lived’ experience of developing and doing it, with everything basically cohering to the processes outlined in the literature as also explained in Chapter 5. Although the interview travel and logistics was somewhat tiring, I enjoyed every part of it.
Opportunities for future research

The findings of this study certainly provide a platform for future research on the potential of new media to enhance environmental activism in Australian context. First, new aspects emerged in my study that had not been explored in the literature before, which I submit would be useful to explore more regarding the topic of the potential of new media to enhance environmental activism. These include the impact of fake news, echo-chambers, and abusive behaviours and trolling on civic participation and activism; as well as the divergences between Australian and international activist perspectives in relation to digital surveillance and issues of corporate media ownership and the international landscape.

These findings thus invite extended and further research avenues that might also include a broader range of variables and actors whose perspectives were unable, or unwilling, to be investigated in this study, but which would obviously provide additional understandings to the focus the research, and more case studies. For example, this study could be extended and enriched by a broader array of communities, both indigenous and non-indigenous, in Australia. Such research avenues could also, in a broader perspective, contribute to future regional and international studies on this topic.

Concluding remarks

The focus of this study was on discerning the potentialities and the challenges to the potential of new media to enhance environmental activism. In following this focus, the research aim was to investigate such potential in the Australian environmental activism arena, as informed by the perspectives of stakeholders, regarding more effective environmental protection. This aim was notable with continuing environmental degradation an increasing global problem for the state of the environment, made worse by the current neglect of governments and big business to act on the largest problem, anthropocentric climate change, as well as most other important environmental issues.

By investigating the potentialities and limitations of new media and their implications for their utilisation by environmental activists, this Australian study posited a robust potential of new media in the environmental activist realm. This
potential was best realised through the combination of new media strategies and more conventional forms of activism enabling enhanced pressure on governments, organisations and institutions to a better protected environment.

At the same time, there were potential challenges or limitations to the potentialities of using new media for activism, as signalled both in Australia and internationally by increasing concentration of corporate media ownership and corporate digital surveillance. Associated new issues highlighted in this Australian study included ones of fake news, echo-chambers, and abusive behaviours and trolling, as well as the limitation most held by Australian activists of new media being an increasingly crowded and competitive space for environmental and social issues to be raised.

The identified potentialities of new media for environmental activism showed that, despite the limitations, new media are being successfully deployed by environmental activists in Australia as a fundamental component for campaigns and communication practices. The extent to which these potentialities are realised in the future will depend on the combination of several tools, technologies, and strategies to encourage civic engagement with environmental issues for more effective environmental protection, toward a greener and more sustainable future in Australia and, arguably, globally.
References


Beattie, A. 2011. “What is the difference between social media and Web 2.0?”
Bec, A., Moyle, B. D. and McLennan, C.-L. J. 2016. “Drilling into community perceptions of
coal seam gas in Roma, Australia.” The Extractive Industries and Society 3(3): 716–726.
Beder, S. 1998. “Challenging the Corporate Agenda.” In Renewing Australian Planning?
Bennett A. F. 2003. Linkages in the Landscape: The Roles of Corridors and Connectivity in
Wildlife Conservation. Cambridge: IUCN.
Littlefield.
networked politics, in Cyberprotest: New Media, Citizens and Social Movements,
Routledge: London, edited by van De Donk, W., Loader, B., Nixon, P., and Rucht, D.,
Australian Department of Parliamentary Services. 1–28.
Bennett, L. and Segerberg, A. 2009. “Collective action dilemmas with individual
Bennett, L. and Segerberg, A. 2012. “The logic of connective action.” Information,
Magazine, 18 March.


Bodenmann, J., Cameron, O’Hare, K. and Solomon, E. 2012. “A comparative study into the rights of landholders to prevent access to land by mining companies.” Research note produced for the Queensland Council for Civil Liberties, Beirne School of Law, University of Queensland.


by J. Dargavel. Centre for Resource and Environmental Studies, Australian National University, Canberra.


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QSR International Pty Ltd. 2016. “NVivo qualitative data analysis software; Version 11, 2016.”


Salter, C. 2011. “Activism as terrorism: the green scare, radical environmentalism and
Ambio, 44(1): 636-647.
Telematics and Informatics 27(1): 141–150.
use of social media and other information technologies for political activism and
Saunders, C. 2013. Environmental Networks and Social Movement Theory. London:
Bloomsbury Academic.
49(1): 103–12.
44.
Copenhagen: Museum Tusculanum Press.
Forest Sector: Changes, Practices, and Prospects, edited by E. Hansen, R. Panwar
Schulz,W., 2004. “Reconstructing Mediatization as an Analytical Concept”, European
Searson, M., Hancock, M., Soheil, N. and Shepherd, G. 2105. “Digital citizenship within
Segerberg, A., and Bennett, L. 2011. “Social Media and the organization of collective action:
Using Twitter to explore the ecologies of two climate change protests.” The

Seidman, I. 2013. Interviewing as Qualitative Research: A Guide for Researchers in
Education. New York: Teachers College Press.


Shanahan, J. and Morgan, M. 1999. Television and Its Viewers: Cultivation Theory and
Research. Cambridge: Cambridge University Press.

Hershey, PA: Idea Group Publishing.

Anderson: Parlor.

Sherman, A., Arriagada, A. and Valenzuela, S. 2014. “Student and environmental protests in
Chile: The role of social media.” Politics 35(2): 151–171.

emissions methodologies for the oil and natural gas industry.” American Petroleum
Institute, Washington DC.

media: A data mining perspective.” ACM SIGKDD Explorations Newsletter 19(1):
22–36.


Slezak, M. 2017. “Greater gliders: Fears of ‘catastrophic’ consequences from logging in


Smith, A. 2017. “Record shares of Americans now own smartphones, have home
http://pewrsr.ch/2iQ4HwP.


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Appendix A: Information sheet

PHD PROJECT TITLE:

On the potential of new and social media for protecting the environment: environmental activism in the digital era

Research Team:

Diletta Luna Calibeo  
PhD Candidate  
Griffith School of Environment  
Griffith University, Brisbane

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Dr Richard Hindmarsh  
Associate Professor  
Griffith School of Environment  
Griffith University, Brisbane

Why is the research being conducted?

Environmental degradation is escalating worldwide, and the problems related to it increasingly pressure the well-being of society and nature. A growing range of institutions, NGOs and environmentally concerned citizens thus pressure governments and corporations for environmental and social change, and for a more sustainable future. Global environmental issues, for example, of anthropogenic climate change, overpopulation, water and air pollution, and issues related to hydraulic fracturing, waste disposal, deforestation, and excessive consumption, in addition to local based issues, are awakening (but seemingly too slowly) the world’s ecological consciousness to act more urgently to resolve these problems. Concomitantly, awareness is growing in different degrees and places of the environmental issues the Earth is experiencing, and shifts to green consumerism and lifestyles are emergent activist trends, especially in western countries. In my research I investigate the role played by new and social media for such green awakening and activism. New and social media have become increasingly integrated into our everyday lives as a resource for information and communication, but also as a resource to voice dissent and organise protest; as such, I focus on the extent to which new media can be, or is, used as an alternative or ‘new’ communication and protest
conduit by environmental campaigners, activists, organisations, and environmentally conscious citizens to better protect the environment.

**What are you asked to do?**

With this interview, which will last approximately one hour, I wish to get your perspective and opinion on the utilisation of new and social media for environmental activism, and on the basis of your experience and work in the field. If you give me your consent, I will tape record the interview and take notes.

**How did I select my interviewees?**

The potential interviewees for this project belong to areas of environmental protest in the Australian context, at the local, regional, and national level including protests against logging of forested areas and protests against hydraulic fracturing to extract natural gas – particularly coal seam gas (CSG). As such, I would like to interview you on the basis of your apparent involvement in environmental campaigns that included the use new media, from informative activities to mobilisation of protest actions.

**What are the benefits of this research?**

Through the analysis of insights and perspectives of individuals who have been directly or indirectly involved in environmental campaigns, my research aims to better understand how using new and social media have been used for such activities, and to explore the potential of such media as alternative or ‘new’ conduits that build on established ones to better protect the environment.

**Are there any risk related to my participation in this project?**

No risks are involved in participating in the research as personal identities will not be disclosed in the outcomes of the research (research summary, doctoral thesis, journal publications, conference presentations, or workshops).

**Is it confidential?**

As stated above, the data collected will be confidential, and personal identities will not be disclosed. You will be de-identified and referred to as ‘code’. The interview will be transcribed as soon as possible once the fieldwork is completed. The transcript of the interview will be stored in a locked filing cabinet at Griffith University, only accessible by the research team; after a maximum of five years, the transcript will be destroyed. If you agreed to be tape recorded, the tape as well will be destroyed soon after transcription.

**Is participation voluntary?**

Your participation is voluntary. You can withdraw your participation any time, even after the interview has been conducted.

**Feedback**

The results of this research, and any publication that may follow it, will be communicated to you in due course per email.
The ethical conduct of this research

Griffith University conducts research in accordance with the National Statement on Ethical Conduct in Human Research. If you have any concerns or complaints about the ethical conduct of the research project, please contact the Manager, Research Ethics on (+61) (7) 3735 5585 or research-ethics@griffith.edu.au.

Privacy Statement

The conduct of this research involves the collection, access and/or use of your identified personal information. The information collected is confidential and will not be disclosed to third parties without your consent, except to meet government, legal or other regulatory authority requirements. A de-identified copy of this data may be used for other research purposes. However, your anonymity will at all times be safeguarded. For further information consult the University’s Privacy Plan at http://www.griffith.edu.au/about-griffith/plans-publications/griffith-university-privacy-plan or telephone (07) 3735 4375.

Questions / further information

If you have any questions about this project, please contact me or my principal supervisor Associate Professor Richard Hindmarsh using the contacts provided above.
Appendix B: Consent form

PHD PROJECT TITLE:

On the potential of new and social media for protecting the environment:
environmental activism in the digital era

Research Team:

Diletta Luna
Calibeo PhD
Candidate
Griffith School of
Environment Griffith
University, Brisbane

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Dr Richard
Hindmarsh
Associate Professor
Griffith School of
Environment Griffith
University, Brisbane

In signing below, I confirm that I have read and understood the information package
and in particular note that:

- I understand that my involvement in this research will include answering
  an interview which addresses certain aspects of the project;
- I have had any questions about the project answered to my satisfaction;
- I understand the risks involved;
- I understand that there will be no direct benefit to me from my participation
  in this research;
- I understand that my participation in this research is voluntary;
- I understand that any third party will not know my participatory status in
  this research;
• I agree to being tape-recorded (if not, please strike out this sentence);
• I understand that if I have any additional questions I can contact the research team;
• I understand that my personal information will be de-identified and kept confidential;
• I understand that I am free to withdraw at any time, without comment or penalty;
• I understand that I can contact the Manager, Research Ethics, at Griffith University Human Research Ethics Committee to (07) 3735 4375 (or research-ethics@griffith.edu.au), or the research team if I have any concern about the ethical conduct of the project.
• I agree to take part in the project.

Name                  Date

Signature
Interview Guide

- Give consent form
- Check tape recorder is working

*When giving out the consent form...*

‘Please remember that the information you provide me with today is strictly confidential and that your identity and privacy is protected as you will be de-identified and referred to as a code in the analysis and my thesis and any publications that will follow; and that the recordings and transcriptions of today’s interview will be stored in a locked cabinet and in due course be deleted’.

First of all, thank you very much for your time today. As you know, my research focuses on the potential of new and social media for environmental activism to better protect the environment. Though similar studies have been done overseas, this is the first study focused on this particular topic in Australia.

This interview is organised in three parts.
1. In the first part I am going to ask you something about your organisation, so I can better understand the situation you’re in, and the campaign you’re looking at.
2. In the second part we will talk about new and social media and how environmental activists use and value them for their campaigns, and the potential of new and social media to better protect the environment.
3. Finally, in the last part we will focus on some of the broader and potentially adverse issues that seem to challenge such potential.

- I may take notes
- There is no right or wrong answer
- Any questions before we start?

Okay, let’s get started with the interview!
Part I – Introduction: Say this section will take max 15 minutes

1) How would you describe yourself in relation to environmental activism?
   - What issues are you looking at?
   - Have you participated to other environmental campaigns before?
2) How would you describe the activities carried out by your organisation/group?
   - For example rallying, petitioning, raising awareness, fundraising, and/or direct actions?
3) Overall, how would you describe the membership of your organisation/group?
   I am asking this question to better understand and compare how members of different environmental groups and organisations use new media for their campaigns (which is also a topic in other overseas studies). So, for example:
   - Is this organisation big or small
   - Age, sex, variety in the composition

[Okay, that said let’s turn to the second part of the interview, where we discuss the potential of new and social media for environmental activism. But first, let me very quickly clarify the terms ‘new media’ and ‘social media’ so we can be sure we are talking about the same thing.

New and social media are part of the same system. **New media** refers to content in digital format (such as video, sound, image) that runs through digital devices (such as laptops or smartphones) and that relies on the Internet for distribution. **Social media** are like a subset of new media, and are used by individuals to interact through social platforms (such as Twitter or Facebook). (Immediacy, interactivity)
4) So that said, what do you think of the potential of new and social media for environmental activism?
   - For example, have you found new and social media helpful to increase visibility and exposure of your campaigns to the public and mass media, and pressure politicians?
   - Do new and social media highlight struggles that the public and mass media normally wouldn’t see?
   - Is it easier to mobilise more people? (interested vs show up)
   - Do new and social media, attract more donations?
   - How about the cost involved, is it more or less cheap compared to traditional campaigning? Is it more or less time consuming?

5) How experienced is your organisation/group in using new and social media for environmental activism?
   - What digital platforms are commonly used for campaigning? Website, newsletter, Facebook, Twitter, Flickr, other? Why do you choose this mix?

6) So to what extent do new and social media inform the activities of this group? And alongside traditional ways of campaigning?
   - Do traditional campaigning and new and social media campaigning complement each other?

7) So, to finish up with this section: whether in limited or strong way, how have new and social media been beneficial to your organisation/group/campaign?
   Prompts:
   - Useful for communicating other activists and campaigners?
   - Exchanging updates about how the protest is going?
   - Finding information?
   - Attracting more interest toward the campaign

[Turning now to the final part of the interview, we are looking at two broader issues (that are in some ways probably outside the control of your organisation/group) that seem to challenge, or limit, the potential of new and social]
media for environmental activism. The two issues that I am looking at are corporate ownership of the media, and digital surveillance

| Part III- New media: Issues/problems |

8) So let’s start with the first issue, increasing financial concentration of new and social media ownership by big corporations (although there are also lots of small ones competing too). The big ones include Google, Facebook, Microsoft, Apple, and a few others. So what are your thoughts on these corporations having ownership of online platforms?

- Do you think this might eventually affect freedom of speech online and if so, to what extent? (filter content/censorship issues)
- And now in relation to environmental activism, do you think that this situation of increasing corporate ownership of the media might limit the potential for environmental groups (and other social movements) to reach out to publics? And, if so, how?
- In turn, how do you think environmental groups might try and manage the situation to make sure their voices are heard?

9) The other broad concern is the increasing use of new and social media for surveillance. What is your view on companies and governments accessing and retaining personal data of citizens (also of environmental activists) for criminal or terrorist surveillance purposes?

- For example have you heard of metadata regimes?

Metadata regimes are data retention schemes adopted by governments, which require internet and telephone providers to store users’ data without a warrant

- What are your thoughts on this?
- What is your view on how privacy is protected on the Internet?

10) Do you think that this practice of digital surveillance might have any effect on environmental activism? As it is already happening that environmental activists have been put under police surveillance by companies and governments (case of Australia, Canada, and US)
• (In these cases, govt. agencies monitored the online activities of environmental groups on new and social media, as ‘open source material’)
• Do you have any concerns that digital surveillance might affect your organisation?

11) Ok, if your group considers digital surveillance an issue, how might it be responding or plans to? How do you think these issues can be addressed?
  • Being more careful on what you say online
  • Use of encrypted communication
  • Ad hoc legislation to regulate who sees what on the Internet

12) Okay, in addition to what we have discussed already, can you think of any other broader issue that may arise in relation to using new and social media for environmental activism, or in relation to your group?
  
  Ok thanks finally in summing up

Part IV - Summing up

13) Given all we have discussed today, what do you think are the key strengths and weaknesses of new and social media for environmental activism?
  • What is your overall view on the potential of new media for environmental activism?

Okay, one last thing: although I won’t be profiling your organisation specifically; do you have any documentary information that you would like to include about your organisation and its focus for a general overview of the areas my participants are involved in?

Thank you very much for your time today. As indicated in the information sheet, you will be informed of the results of my research in due course, typically in the form of a publication.