#digitalactivism: networks, new media and political action

A thesis submitted to Charles Sturt University for the degree of Doctor of Philosophy

February 2014

Jake Wallis

MA (HONS), PG Dip, MSc
# Table of Contents

Certificate of authorship .................................................................................................................. 7  
Acknowledgements .......................................................................................................................... 8  
Abstract ........................................................................................................................................... 9  
Chapter 1: Introduction ...................................................................................................................... 10  
1.1 Introduction ................................................................................................................................ 10  
1.2 Digital communications and the Australian democratic project ..................................................... 17  
1.3 The Information Society as economic context ................................................................................ 26  
1.4 The role of theory .......................................................................................................................... 30  
1.5 The Public Sphere .......................................................................................................................... 35  
1.6 The Digital Divide .......................................................................................................................... 36  
1.7 The commercialization of information .......................................................................................... 42  
1.8 Technological determinism ............................................................................................................ 45  
1.9 Forest protection in Tasmania - conflict as democratic politics ...................................................... 48  
1.10 Significance of the research ......................................................................................................... 52  
1.11 The significance of research design ............................................................................................ 53  
1.12 Thesis overview .......................................................................................................................... 55  
Chapter 2: Literature Review ........................................................................................................... 57  
2.1 Introduction .................................................................................................................................. 57  
2.2 From Post-Industrial Society to Informational Society ...................................................................... 58  
2.3 Informationalism and democracy .................................................................................................... 63  
2.4 Informationalism and the Public Sphere ......................................................................................... 70  
2.5 Global village – the Globalisation of the Public Sphere ................................................................... 82  
2.6 The Infrastructure of Informationalism: Web 2.0 and New Media .................................................. 83  
2.7 Informationalism and Australian Politics ....................................................................................... 86  
2.8 Informationalism and Political Engagement .................................................................................. 92  
2.9 Informationalism, social movements and political action ............................................................... 93  
2.10 Informationalism and information science ................................................................................... 99  
Chapter 3 - Methodology ............................................................................................................... 110  
3.1 Introduction ................................................................................................................................... 110  
3.1 Qualitative research ....................................................................................................................... 112
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.2 Methodology</td>
<td>115</td>
</tr>
<tr>
<td>3.2.1 Constructivist grounded theory</td>
<td>115</td>
</tr>
<tr>
<td>3.2.1.1 Data analysis in constructivist grounded theory</td>
<td>119</td>
</tr>
<tr>
<td>3.2.1.2 Rigour in constructivist grounded theory</td>
<td>123</td>
</tr>
<tr>
<td>3.2.2 Network analysis</td>
<td>125</td>
</tr>
<tr>
<td>3.2.2.1 Using network analysis to explore online democratic practice</td>
<td>130</td>
</tr>
<tr>
<td>3.2.3 Content analysis</td>
<td>135</td>
</tr>
<tr>
<td>3.2.3.1 Using qualitative content analysis to explore online democratic practice</td>
<td>140</td>
</tr>
<tr>
<td>3.3 Data Collection</td>
<td>148</td>
</tr>
<tr>
<td>3.3.1 Web crawling</td>
<td>148</td>
</tr>
<tr>
<td>3.3.1.1 Web crawling using the Issue Crawler</td>
<td>150</td>
</tr>
<tr>
<td>3.3.1.2 Pilot crawls</td>
<td>154</td>
</tr>
<tr>
<td>3.3.1.3 Issue selection and network identification</td>
<td>155</td>
</tr>
<tr>
<td>3.3.1.4 Sampling</td>
<td>156</td>
</tr>
<tr>
<td>3.4 Data analysis</td>
<td>160</td>
</tr>
<tr>
<td>3.4.1 Visualisation</td>
<td>161</td>
</tr>
<tr>
<td>3.4.2 Coding of Content</td>
<td>164</td>
</tr>
<tr>
<td>3.4.3 From network analysis and coding to thematic analysis</td>
<td>173</td>
</tr>
<tr>
<td>Chapter Four: Findings and discussion</td>
<td>176</td>
</tr>
<tr>
<td>4.1 Introduction</td>
<td>176</td>
</tr>
<tr>
<td>4.2 Public Sphere 2.0</td>
<td>177</td>
</tr>
<tr>
<td>4.2.1 Hyperlinks as symbols</td>
<td>188</td>
</tr>
<tr>
<td>4.2.2 Collective identity and index authority</td>
<td>201</td>
</tr>
<tr>
<td>4.2.3 New media and digital activism</td>
<td>210</td>
</tr>
<tr>
<td>4.2.3.1 The limits of digital activism</td>
<td>219</td>
</tr>
<tr>
<td>4.2.4 Entrance to the debating chamber: search engines</td>
<td>226</td>
</tr>
<tr>
<td>4.2.5 A universal medium?</td>
<td>231</td>
</tr>
<tr>
<td>4.3 Global civil society</td>
<td>236</td>
</tr>
<tr>
<td>4.3.1 The ‘glocalization’ of Tasmanian environmental protest</td>
<td>236</td>
</tr>
<tr>
<td>4.3.2 The unintended consequences of globalised digital media</td>
<td>240</td>
</tr>
<tr>
<td>4.3.3 Global social movements, local issues</td>
<td>246</td>
</tr>
</tbody>
</table>
4.3.4 Political literacy and global civil society ............................................................. 253
4.4 Changing democratic practice ............................................................................. 257
  4.4.1 International Cases of Digital Activism ............................................................ 257
  4.4.2 Digital activism and devolved protest movements ........................................... 260
  4.4.3 The medium as message: contesting the web 2.0 discourse ......................... 264
  4.4.4 Which democracy? Whose public sphere? ...................................................... 269
4.5 Network citizenship ............................................................................................. 272
  4.5.1 Social media as spaces for political discourse ................................................. 273
  4.5.2 Personalising political engagement .................................................................. 284
    4.5.2.1 The power of micromobilisation ............................................................... 286
  4.5.3 Emerging citizenship models .......................................................................... 293
Chapter 5: Conclusion ............................................................................................... 299
  5.1 Introduction ......................................................................................................... 299
  5.2 Mapping political participation across network space ........................................ 300
    5.2.1 Links as political statements .......................................................................... 301
  5.3 The mobilisation of political movements in network space .................................. 307
  5.4 The facilitation of wider public participation by political actors ....................... 315
  5.5 Impacts on the practices of political engagement and participation by the 
      structures of digital networks ............................................................................. 318
  5.6 Summary of major findings ................................................................................ 323
    5.6.1 The emergence of network citizenship ............................................................ 323
    5.6.2 The Development of Public Sphere 2.0 .......................................................... 326
    5.6.3 Changes in democratic practice ...................................................................... 328
    5.6.4 Global civil society ........................................................................................ 331
  5.7 Significant conclusions ...................................................................................... 334
    5.7.1 Challenges for Democracy ............................................................................ 334
    5.7.2 Internet research and digital methods ............................................................ 336
  5.8 Theoretical contribution ..................................................................................... 338
  5.9 Implications for practice ..................................................................................... 341
  5.10 Future research directions ................................................................................ 346
  5.11 Conclusion ........................................................................................................ 351
References .................................................................................................................. 355
Appendices .................................................................................................................. 386
Appendix A: Content analysis codes ........................................................................... 386
Appendix B: primary and secondary codes ................................................................. 390
Appendix C: Tasmanian forest protection issue network .............................................. 391
Appendix D: Organisations on the issue network and their respective node URLs ......... 392
Appendix E: Organisation types featured within the issue network............................. 397
Appendix F: Issue network nodes categorized by organisation type ......................... 398
Appendix G: Social networking sites available via the AddThis content sharing widget ............................................................................................................................................ 404

List of Figures

Figure 1.1. The disciplinary overlap in theories of digital communication .................. 32
Figure 3.1. Central network positioning of The Wilderness Society and Australian Conservation Foundation .................................................................................................................................................................................. 162
Figure 3.2. Cluster of Australian Greens sites ............................................................. 163
Figure 3.3. Coding the site of Save Our Marine Life ................................................. 169
Figure 3.4. Themes emerging from memo word cloud ............................................. 174
Figure 4.1. Subscribe by email to the Australian Marine Conservation Society e-action list .................................................................................................................................................................................. 180
Figure 4.2. Cairns and Far North Environment Centre’s Google calender ................. 185
Figure 4.3. Clustered Australian Greens sites ............................................................. 193
Figure 4.4. Peripheral global civil society actors ....................................................... 194
Figure 4.5. Peripheral placing and non-reciprocal linking of Tasmanian Government sites.................................................................................................................................................................................. 197
Figure 4.6. Link listing on the site of the Tasmanian Greens .................................... 202
Figure 4.7. Central positioning of The Wilderness Society and Australian Conservation Foundation .................................................................................................................................................................................. 203
Figure 4.8. Signatures of Australian Conservation Foundation and The Wilderness Society on the Interim Agreement on Tasmanian Forests Wood Supply and Conservation .................................................................................................................................................................................. 205
Figure 4.9. Australian Conservation Foundation linking through to its YouTube channel .................................................................................................................................................................................................. 212
Figure 4.10. Kony2012 meme graffiti ........................................................................ 223
Figure 4.11. Findability on Friends of the Earth Australia ........................................ 230
Figure 4.12. Global civil society actors as peripheral network nodes ....................... 251
Figure 4.13. Casserole street protest in Montreal 2012 ........................................... 258
Figure 4.14. CLASSE campaign poster .................................................................. 263
Figure 4.15. Social networking icons on The Wilderness Society web site illustrating the integration of AddThis social bookmarking functionality .......................... 277
Figure 4.16. Social media integration on the Tasmanian Greens web site ............... 279
Figure 4.17. The incorporation of Twitter and Facebook icons on the site of Save Our Marine Life .................................................................................................................. 281
Figure 4.18. Twitter incorporated into the site of Australian Conservation Foundation ............................................................................................................................ 282
Figure 4.19. Facebook on the site of the Australian Marine Conservation Society .. 283
Figure 4.20. Use of MySpace by Trees for Life ....................................................... 283
Figure 4.21. Log-in options on Australian Conservation Foundation’s web site ...... 284
Figure 5.1. Peripheral positioning and non-reciprocal linking of Tasmanian Government web sites ......................................................................................................................... 309

List of Tables

Table 3.1. Democratic attributes enabled by the technological functionality of UK voluntary organisation web sites .......................................................................................................................... 145
Table 3.2. Democratic engagement enabled by the technological functionality of UK youth civic organisation web sites ................................................................................................................. 147
Table 3.3. Codes used in the analysis of the study’s web site data with definition and examples of relevant web site content ........................................................................................................ 166
Certificate of authorship

I hereby declare that this submission is my own work and that, to the best of my knowledge and belief, it contains no material previously published or written by another person nor material which to a substantial extent has been accepted for the award of any other degree or diploma at Charles Sturt University or any other educational institution, except where due acknowledgment is made in the thesis. Any contribution made to the research by colleagues with whom I have worked at Charles Sturt University or elsewhere during my candidature is fully acknowledged. I agree that this thesis be accessible for the purpose of study and research in accordance with the normal conditions established by the Executive Director, Library Services or nominee, for the care, loan and reproduction of theses.
Acknowledgements
I would like to acknowledge the intellectual input of those involved in
discussing early phases of the study; Dr Stuart Ferguson, Dr Tony Dean, Dr
John Mills and Dr Anne Lloyd. In particular I would like to thank my principal
supervisor Professor Lisa Given and co-supervisor Dr Mary Anne Kennan for
helping me to see the wood from the trees.
Abstract

This study explores the use of digital networks and new media by environmental groups in campaigning for the protection of native forests on the Australian island state of Tasmania. Network analysis and content analysis of web sites are used to explore how digital networks and new media are being used to extend the public sphere of political engagement. Web crawling is used to delineate a network of fifty interconnected web sites which represent organisations involved in campaigning around the protection of native forest in Tasmania. Content analysis is used to investigate how new media are being used to extend public engagement and facilitate participation in the campaign.

This research identifies how networked new media are being appropriated by civil society organisations (such as those that make up the environmental movement) to extend their campaigning strategies. The study highlights how environmental groups use the structures of digital communications networks to mobilise and channel a campaign of political action into the sphere of public policy and legislation. The study identifies emergent forms of digital activism that exploit the emotive possibilities of new media to communicate campaign aims and to shape the public perception of issues. The findings demonstrate how personal networks of campaign supporters are exploited as channels for soliciting wider public engagement and participation. Results suggest that digital activism is an increasingly integral component of strategies of political action. The data also suggest that a new paradigm of citizenship is emerging, which is issues-based and revolves around digitally-mediated interaction with competing political narratives in a networked public sphere. The study concludes by noting that the networked public sphere and citizenship paradigm present challenges for representative democracy and its political institutions. These challenges to existing modes of democratic practice are forcing innovation in how governments, civil society and the public interact in the development of public policy.
Chapter 1: Introduction

1.1 Introduction

Across a range of international contexts, collective political action is supported by the networked infrastructure of digital communications and the increasingly social online spaces that this infrastructure provides. As high-speed networks increase their penetration of the global population and mobile devices move towards ubiquity, digital communications technologies have become as important to social movements undertaking political action as placards, posters, banners and megaphones have been in the past.

From countries experiencing significant periods of social and political change (for example, Egypt), to well-established liberal democracies (such as Australia), mobile phones and social media have become part of the fabric through which the everyday practice of politics is woven. This study focuses on the emergence of a reflexive relationship between digital networks and political engagement in an Australian context.

Australia has 12.2 million internet subscribers, with over 5 million of these subscriptions from mobile devices (not including mobile phones). The rate of growth in internet access is substantial (6.3% from 2010-2011; 5% from 2011-2012) (Australian Bureau of Statistics, 2012). Almost three-quarters (6.2 million) of Australian households have a broadband internet connection (Australian Bureau of Statistics, 2009). The uptake of broadband is becoming
increasingly significant in the social policy of a nation geographically dominated by distance with a relatively modest population of just over 23 million (Australian Bureau of Statistics, 2013b). The potential benefits to Australian society of networked information and communications technologies have become a significant strand in both the development of public policy and the adversarial atmosphere of political debate. Massive public investment ($43 billion) in rolling out a National Broadband Network (NBN) is currently underway and designed to boost Australia’s digital economy. The project is promoted as a key platform for the development and delivery of government services, education, healthcare and commercial opportunities (Department of Broadband Communications and the Digital Economy, 2010). This bold infrastructure investment is designed to generate economic opportunity for Australians, enabling work over the internet from locations other than the nation’s urban centres. From a political perspective the degree of connectivity envisaged through the project – i.e., to 93% of all Australians (Department of Broadband Communications and the Digital Economy, 2013) - combined with the uptake of internet-enabled mobile devices means that Australians’ engagement with all spheres of life (from education and work, recreation and entertainment, family and relationships, public services and government, politics and the political system) will become increasingly digitally-mediated.

Australian politics has developed an increasingly reflexive relationship with digital technology. Social media and the internet are increasingly
elements of the practice of political engagement between Australian politicians, political parties, civil society organisations, protest groups, the media and the Australian public (Australian Centre for Public Communication, 2008; Petray, 2011; Vromen, 2011; Wilson, 2011). The evolving format of Australia’s flagship television current affairs discussion programs, Q and A, illustrates this trend. The standard debating format of the show is now supplemented with an on-screen stream of brief posts to the micro-blogging service, Twitter. These posts are identified as relating to the debate through the use of a specific hashtag, #qanda, which identifies the contributor’s statement as relevant to the show. Amongst users of the Twitter microblogging service a hashtag is a descriptive word or phrase immediately preceded with the hash character – “#” – that acts as a simple user-defined conveyer of metadata as to the nature, topic or subject-matter of the post. The hashtag can be used within the post as a keyword or simply included at the end of the statement as a descriptor. Hashtags have emerged as a standard practice from the Twitter user community itself (Twitter Developers, 2013). For those users of Twitter who also happen to watch Q and A the hashtag #qanda (derived from the show’s title) has evolved into the mechanism by which they publicly (both on Twitter and now also on television) engage with the debate as it happens, in real-time, on live television and afterwards in follow-up discussion around the debate each week. The Australian viewing public can thus engage in the debate as they
watch the programs by making a comment on Twitter and using the hashtag #qanda. This level of public engagement with political debate on Q and A has developed as a result of increased access to the internet, increasing participation by Australians on social media platforms such as Twitter and from the community practices that emerge within online social spaces (such as hashtagging). The Australian Broadcasting Corporation (ABC) has recognised these factors as potentially beneficial to the programs in terms of public engagement with Q and A specifically and Australian political debate in general. The ABC therefore amplifies this engagement by broadcasting the live stream of tweets (as the Twitter postings of 140 characters or less are described) during the show. Without internet access, without the social behaviours and practices that have emerged from the uptake of this access within online social spaces, this change in the format of the program could not have taken place.

As networked computing becomes increasingly pervasive, digital content circulates across these connections, extending the media sphere available to the various stakeholders in Australian society and beyond. Social technology applications have created digital spaces where people can interact; for instance, more than half of the Australian population (12 million people) are users of the online social networking platform Facebook (Socialbakers, 2013). Facebook (www.facebook.com) is a social networking environment within which users can set up a profile of themselves, establish networked
relationships ("friends" with other users of the platform, regardless of geographical boundaries), post comments and messages, and publish and share digital content. Online social spaces such as this have become channels of political communication, supplementing traditional print and broadcast media as spheres of both political discussion and campaigning. Political groups and parties can have a presence within online social environments such as Facebook (for example The Australian Greens at https://www.facebook.com/Australian.Greens), enabling Australian (and international) supporters to establish networked relationships with them. Given the audiences that they garner, their networked social dynamics and the functionality for distributing digital content, these online social environments become powerful campaigning channels. Political groups can create digital content (such as video or graphical poster-style images) and exploit the functionality of social network environments to share this content and disseminate their political message. The networks of relationships within an environment such as Facebook become a channel for the dissemination of political campaigning. The interactive nature of these online social spaces enables the audiences within these spaces to engage with the political content; audiences can comment on it, engage in discussion around the message the content conveys, and re-distribute it across their own online networks of relationships. This study explores the ways in which the proliferation of access to networked digital communications technologies
shapes modes of political engagement and action by focusing on the environmental movement’s use of these technologies in relation to a specific conflict around forestry and forest protection in Australia’s island state, Tasmania.

The architecture and structures of networked technologies (for instance the capacity to share digital content across personal digital networks) shape the dynamics of interaction in digital space (boyd, 2010). These structures create affordances for both political participation (Shirky, 2011) and state repression (Morozov, 2011). Social media have played significant roles in the mobilisation of protest movements across a number of high-profile international contexts, such as the Arab Spring, the Occupy movement, the London riots, the Syrian uprising. Studies in the United Kingdom (Gerodimos, 2008, 2011) and Australia (Vromen, 2011) note the potential of digital participation as a means of enabling democratic engagement by younger people.

Digital communication networks have the potential to enable democratic participation by broadening the media sphere in which political engagement and debate can take place; and by facilitating the expression of political views from a broader segment of the public (Shirky, 2011). At the same time, however, access to, manipulation of, and control over digital networks can strengthen the position of more authoritative regimes. Such
Regimes can simply switch off access to the internet at a national level, censor the digital content to which the public has access, and engage in sophisticated programs of surveillance (Morozov, 2011). Evgeny Morozov goes further, suggesting that even where digital communications do facilitate political engagement, it is a political engagement of minimal effort and conviction, which he dubs “slactivism” (Morozov, 2009). Given the contested nature of the democratic potential of networked communications technologies, there is a need to explore how forms of political participation emerge within the confines and affordances of networked environments. A number of factors indicate that it is important to explore these issues within an Australian context: the proliferation of broadband internet access; popular engagement with social networking; the scale of public investment in high-speed broadband through the National Broadband Network; the rate of uptake of broadband-enabled mobile devices; the government policy discourse around the benefits of a broadband-enabled Australia; and, the campaigning across social media by groups within the Australian political spectrum. These developments in infrastructure and online engagement are already changing the format of Australian political participation. How does politics happen in digital space? Three research questions emerge:

1. How can we map political participation across networked space?
2. How do political movements use the structures of networked space, such as hyperlinking, to develop a collective identity and mobilise participation?
3. How do political actors within these movements solicit, encourage and facilitate wider public participation through the affordances of web and social media tools?

4.

1.2 Digital communications and the Australian democratic project

Discussion of the nature of democracy has evolved since its inception in sixth century BC Athens. In many social contexts achieving the universal principle of the right to vote, for example, has been a hard fought battle against prevailing norms of privilege and oppression such as class, gender and race discrimination (Cunningham, 2001, p. 68). With distinctive historical characteristics of colonisation, convict settlement and immigration, Australian democracy has evolved at a comparatively rapid rate. The universal right to vote for men was introduced in 1856 in South Australia (1858 in New South Wales; 1857 in Victoria; 1859 in Queensland; 1907 in Western Australia; 1901 in Tasmania), although suffrage was not universal in the United Kingdom until 1918 (Galligan, McAllister, & Ravenhill, 1997, pp. 7-8). Australia followed the example of its neighbour, New Zealand (who introduced the right for women to vote in 1893), by extending the franchise to women (1902 in New South Wales; 1909 in Victoria; 1905 in Queensland; 1894 in South Australia; 1899 in Western Australia; 1903 in Tasmania) almost thirty years before the United Kingdom (1928). A political culture of egalitarianism (often described as ‘mateship’ in Australian culture and colloquial language) emerged from distinctive aspects of Australian society and history: the frontier spirit of
geographic isolation in a harsh climate and, the legacy of freed convicts and immigrant settlers in search of a better life (Galligan, et al., 1997, p. 6; Singleton, Aitkin, Jinks, & Warhurst, 2003, p. 12). As Chandran Kukathas (1997, p. 168) suggests, in Australia, “politics and policy...have been driven less by philosophy than by history and circumstances”.

The model of parliamentary democracy was adapted by the Australian Commonwealth from its former historical colonial regime, Great Britain. Voting is compulsory, however Ian Ward and Randal Stewart (2009, p. 2) suggest that beyond this, “the great majority of Australians now take little or no active part in organized politics”. In part this may reflect that the political, at a personal level for many Australians, has become less concerned with class divisions and material inequalities that once dominated political debate and increasingly pre-occupied with specific issues related to lifestyle and identity. For Ward and Stewart (2009, p. 270) this is a new, “postmaterial” politics. Australia is not alone in displaying this trend. Both Chantal Mouffe (2002b) and Leah Lievrouw (2011) note the theoretical shift in the study of collective political action, from structural to identity politics; and at an empirical level, this shift is documented across developed and developing nations in The Power of Identity and Networks of Outrage and Hope: Social Movements in the Internet Age by Manuel Castells (2004, 2012). The rapid formation during the period 2011-2013 of mass public protest movements initiated in response to corruption (Tunisia and Mexico), urban development (Turkey), impingement of
civil liberty (Egypt), decline in public services (education in Canada’s Quebec province and transport in Brazil), inadequate government responses to the global financial crisis (United Kingdom and United States) illustrate the articulation of political concerns through protest around specific, yet shared social issues. Gwynneth Singleton, Don Aitkin, Brian Jinks and John Warhurst (2003, p. 352) identify loosely aligned and organised groups who campaign collectively for political change around specific issues as social movements as “groups of citizens who to change the values and culture of society”. For the Australian public these collectives are now the primary channels of participation in political activity, rather than through involvement with specific political parties (I. Ward & Stewart, 2009, p. 258).

For Singleton et al. (2003, p. 352) three broad groups are clearly identifiable within modern Australian society as continuing to lobby prominently for political change: groups seeking the expansion of rights and opportunity for Australia’s indigenous population; groups campaigning for the rights of women; and, groups promoting a sustainable relationship with the environment. The level of citizen engagement with issues-based movements has overtaken that of active participation with political parties. Ward and Stewart (2009, p. 258) note, for example, that “by the early 1990s organised environmental groups such as the Australian Conservation Foundation and Greenpeace together boasted around 500,000 members and far outstripped the combined memberships of the major Australian parties”.

The proliferation of digital networks of wired and mobile internet connectivity extends the communicative sphere available to social movements for campaigning. These communications channels and devices enable opportunities for interest groups and social movements to bypass mainstream media in order to campaign more directly with the internet-connected Australian public. This is a significant development. Given the mass audiences of mainstream media – in Australia comprising television, newspapers and radio (I. Ward & Stewart, 2009, p. 239) – these channels have had a powerful position in shaping the public perception of social and political issues. New media delivered via digital networks are often not filtered through these traditional media gateways. Groups campaigning on social and political issues can communicate across digital networks, gaining opportunities to shape the issues that the voting public might consider, as well as to frame the way in which these issues are presented. Influencing the public agenda in this way is more than a marketing exercise; public perceptions and opinion are strong influencers of politicians, civil servants and organisational policy makers, or those who drive the resources allocated to public policy (Bekkers, Beunders, Edwards, & Moody, 2011, p. 210; Wallsten, 2007, p. 567).

Systems and mechanisms of democracy vary in shape and structure with degrees of transparency and accountability. The study of democracy might examine these systemic and mechanistic approaches, exploring the nature of the voting system (for example, first past the post, proportional
representation) or the extent of the separation between the governing executive and the legal judiciary, the nature of press freedom. However, debate around the theory of democracy has shifted focus to the quality of democracy, moving beyond representation (as measured by voting systems) to processes of and spaces for democratic accountability (the justification of and argument for policy) (Chambers, 2003).

For deliberative democratic theorists, such as Jurgen Habermas (1989), public debate, discussion and deliberation are crucial in the maintenance of democratic sovereignty. It is through this process of public discussion that effective scrutiny and democratic accountability are ensured. Habermas (1989, p. 1) and others building on his legacy (Castells, 2008; Papacharissi, 2002, 2004) describe the space in which this deliberation takes place as a “public sphere”. The growth of access to the internet and enthusiastic participation of social networking sites such as Facebook has created what danah boyd (2010, p. 1) describes as “networked publics”. The extension of the public sphere by the spaces of digital networks has created possibilities for enhancing public participation in democratic politics (for example tweeting into the live broadcast of political debate on the ABC Q and A programs, as discussed previously). Brian Loader and Dan Mercea (2011, p. 764) suggest that “social media may be at the forefront of the shift towards a more participatory political culture”. Social media can be appropriated for participation, not only by individual citizens but also by social movements, to
shape the public narrative around specific issues of concern, to influence public opinion and, ultimately, to drive the formulation of public policy.

Deliberative democratic theory is challenged by those (Foucault, 1972; Mouffe, 2002a, 2002b; Žižek, 2011a, 2013c) who consider the drive towards consensus (through deliberation) as suppressing ever-present tension and contestation that are inherent in the political narratives and power dynamics emerging from existing social structures. Mouffe (2002b, p. 58) in particular has proposed a theory of “agonistic pluralism”; a democratic politics that acknowledges “hostile group identities” (Cunningham, 2001, p. 197). Mouffe (2002b, p. 59) suggests that without a political process within which this tension can emerge, a “dangerous trend of disaffection with democratic institutions” arises. Slavoj Žižek (2011b para. 5) sees this disaffection in the violence of the riots that disrupted London in 2011:

The fact that the rioters have no programme is therefore itself a fact to be interpreted: it tells us a great deal about our ideological-political predicament and about the kind of society we inhabit, a society which celebrates choice but in which the only available alternative to enforced democratic consensus is a blind acting out. Opposition to the system can no longer articulate itself in the form of a realistic alternative, or even as a utopian project, but can only take the shape of a meaningless outburst.

A discourse of concern over a lack of democratic participation and civic engagement has been prominent in the literature on the political process in Australia (see for instance McAllister, 1997; Singleton, et al., 2003; I. Ward & Stewart, 2009), particularly in relation to younger adults (Vromen, 2011).
Ariadne Vromen however also notes a “more generalized political disengagement when attitudes towards the formal political sphere are taken into account” (2011, p. 960). Research from the Lowy Institute (2013, p. 14) suggests that the Australian public has a surprisingly ambivalent attitude to democracy as a political system, with 59% of those polled agreeing with the statement that “democracy is preferable to any other kind of government” and 13% expressing the view that for them personally “it doesn’t matter what kind of government we have”. The Lowy Institute’s study confirms the position taken by Vromen, finding that less than half (48%) of Australians aged between 18-29 express the view that democracy is preferable over any other form of government.

The participative possibilities of the internet and the diffusion of social media are sufficient to lead Loader and Mercea (Loader, 2007; Loader & Mercea, 2011) towards an optimistic assessment of their potential within a democratic framework. In exploring the impact of the use of Facebook by social movement organisations on their organisational structures, Mercea (2013) finds possibilities for participation in the generation of conflicting narratives around political issues and the emergence of political identities. Mercea (2013, p. 1322) notes that the social networking environment Facebook acts “as a medium for deliberation and the circulation of information, both of which may ultimately have a purchase on mobilisation in collective action” and that this creates space for “robust democratic
engagement that foregrounds voice over consensus”. Castells (2008, 2012) too is optimistic as to the democratic potential of the digital environment in that it provides a civic space beyond state-based institutions for engaged global digital citizens.

The limitations of networked forms of democracy on a global scale are apparent to Theresa Petray, who notes “the democratic aspects of Web 2.0 only apply to those with access to the related infrastructure – about 1.6 billion people worldwide, or 25 percent of the global population” (2011, p. 924). The repercussions of the technological enhancement of the democratic sphere are a common feature in the discussion of the internet and democracy. Vromen (2011, p. 960) sees the debate around young people and democratic engagement in Australia as hindered by a thinly veiled fear of technological change within Australian culture, whilst Ned Rossiter (2006) sees the transnational reach of the digital environment as incompatible with the democratic institutions of the geographically situated state in their current form. Castells does in fact acknowledge Rossiter’s concerns; he notes that “without a flourishing international public sphere, the global sociopolitical order becomes defined by the realpolitik of nation-states that cling to the illusion of sovereignty despite the realities wrought by globalisation” (Castells, 2008, p. 80). Conceptions of democratic engagement may be forced to change in a networked world, from a focus on electoral representation to a democratic marketplace of ideas, connections and communicative
possibilities. Vromen (2011, p. 963) notes the potential arrival of the “self-
actualizing citizen” who has “a weaker allegiance to government, focuses on
lifestyle politics, mistrusts media and politicians, joins loose networks for social
and political action, and uses digital media for communication”.

Debate around the theoretical underpinnings of deliberative
democracy becomes increasingly relevant in an era of globalisation with
transnational policy bodies (such as the United Nations, World Trade
Organisation, European Union or the Group of Eight Industrialised Nations
(G8) comprising France, Germany, Italy, United Kingdom, United States,
Canada and Russia) exerting substantial influence on local events. Public and
private media and communications spheres progressively reflect the
expansion of globalisation with the proliferation of satellite and digital
television, and more prominently, the internet. Civil society – the range of
organisations of voluntary civic association through which citizens campaign
across a variety of social issues within democratic societies (Castells, 2008;
Putnam, 2000) - has expanded beyond the local context in order to respond to
these trends. Castells (2008, p. 83) suggests that “the decreased ability of
nationally based political systems to manage the world’s problems on a global
scale has induced the rise of a global civil society”.

25
Luke Tredinnick emphasizes the importance of scrutiny in analyzing the role of information and communication technologies (ICT) in this deliberative democratic position:

The point to recognize is that the utopian ideals that are often attributed to new technologies, such as their ability to bring about a virtual public sphere and their democratizing benefits, need a more complex analysis than that to which they are frequently subjected (Tredinnick, 2006, p. 229).

This study offers this type of “more complex analysis” of the digital spaces of democratic participation in two ways: by employing a methodology of grounded theory in order to allow the formulation of theoretical analysis to be driven by empirical data; and, by striving for an analysis of the phenomenon described by Tredinnick that is both trustworthy and credible (Lincoln & Guba, 1985, pp. 294-307). These aspects of the study are detailed more fully in Chapter 3.

1.3 The Information Society as economic context

The impacts of global interconnections and flows of information and communications have been theorized in a number of guises. Broadly, these interconnections and flows are described as the literature on the information society with a range of overlapping terms employed by different theorists to capture alternative nuances of conceptualization. Nicholas Garnham (2002, para. 2) sees two strong strands within the literature:

The first type of explanation is socio-economic and structural. It sees ICTs as tools of social interaction. It argues that developments in ICTs
change the relations between social actors and thus structures of power. The second type of explanation is epistemological. It sees ICTs as tools for thinking, as tools for representing the world. Each type of explanation uses a different sense of the word media. In the first the mediation is between people. In the second between people and their worlds.

The analysis in this study will make use of both strands of the literature to inform its position. In Garnham’s first strand we might situate Daniel Bell’s post-industrial society and Castells’ network society, both theories of structural economic and social change driven by information and communications technologies, as modes of production. Both authors suggest that there are significant impacts on society from the intensive use of ICTs. Bell emphasises a shift in economic model in the United States, from an industrial to a post-industrial society: “A post-industrial society is based on services. Hence, it is a game between persons. What counts is not raw muscle power, or energy, but information” (Daniel Bell, 1973b, p. 87). Landmark studies of the US economy from Fritz Machlup (1962) and Marc Porat (1977) demonstrated the increasing role of the service sector, alongside information and knowledge work in economic output; it is this trend that has been theorized by Bell as the post-industrial society.

The work of Castells is in the tradition of that of Bell, yet Castells (2000) notes the increasingly intensive and globalised nature of information and communication flows in what he describes as the network society. The significant feature of Castells’ network society is the compression of time and
space and a resultant state of immediacy, which permeates modern life.

Castells morphs Bell’s post-industrial society into the informational economy, the supporting structure of the network society:

> It is an economy in which sources of productivity and competitiveness for firms, regions, countries depend more than ever, on knowledge, information, and the technology of their processing, including the technology of management, and the management of technology. (Castells, 1997, p. 140)

The second strand within the information society literature, as noted in Garnham’s work previously, is one that explores how the pervasive use of technology, particularly ICTs over recent decades, shapes the way we understand the world around us. Here we see strands of thought that explore human interaction with the information society; how the structural changes observed by Bell and Castells mould social interactions and practices. The relevant literature of this strand is discussed in more depth in chapter two as it is extensive and diverse in its perspectives. Worth mentioning at this point, however, are groundbreaking ideas within this strand such as: Vannevar Bush’s *As We May Think* (Bush, 1945), which defined the potential of the computer for representing non-linear thought; McLuhan’s speculations on the effects of mass media and the global village (M. McLuhan & Fiore, 1968; M. McLuhan, Fiore, & Agel, 1967); Soshana Zuboff’s (1988) comments on the Smart Machine transforming how we live and work; Paul Virilio’s (1995) analysis of the modern technological obsession with speed; and, the panoptic surveillance society by David Lyon (2001) and Michel Foucault (1979). Zuboff
captures the essence of what this second strand of the information society
literature observes:

History reveals the power of certain technological innovations to transform the mental life of an era – the feelings, sensibilities, perceptions, expectations, assumptions, and, above all, possibilities that define a community...An important technological innovation is not usefully thought of as a unitary cause eliciting a series of discrete effects. Instead, it can be seen as an alteration of the material horizon of our world, with transformative implications for both the contours and the interior texture of our lives. (Zuboff, 1988, p. 386)

Since its inception the web has grown in the extent to which it affects aspects of our lives, and is increasingly embedded into many areas of our living. As a communications medium the web has become an environment in which many are able to express aspects of themselves, to share and exchange views, thoughts and opinions. With the evolution of the medium from a static, one-way publishing environment into one that is interactive, more users of this digital space have been able to find a voice within it. This growing level of interactivity across the web, combined with the development of a range of online software applications to support multiple strands of communication, has been seen as an evolutionary phase in the web’s expansion. This is often described as web 2.0 (O'Reilly, 2005) or alternatively as the read/write web by its inventor Tim Berners-Lee (BBC News, 2005).

With the increasingly intensive usage of networked technology in daily life many commentators have speculated as to the growing relationship between technology and democracy (prominently, Rheingold, 2002). Ease of
online publication offers the opportunity for the expression of a range of views in online spaces, with increasingly affordable technology and the relatively user-friendly functionality of social media environments enabling large numbers of people to communicate with others. It is in the fostering of a pluralism of expression, the free flow of ideas, the open exchange of views that the internet may enhance the nature of democratic engagement in line with the views of Mouffe (as discussed in Knops, 2007) or Žižek (2011a) who suggest that progress in relation to the democratic project requires overt acknowledgement of conflict. However the concomitant cultural ambiguity of such a transnational communications medium provides substantial complexity around questions of power (Papacharissi, 2002; Segev, 2010). It is these issues that are explored in this thesis, through an examination of the ways in which transglobal digital networks are appropriated by activist groups (in this case, the environmental movement) as campaign tools, in organizing strategies and as catalysts for mobilisation within the context of local political conflicts.

1.4 The role of theory

The transdisciplinary nature of the literature discussed previously and referred to throughout this research is valued in this study as an enriching mix of “digital communication theoretical conversations” (Scolari, 2009, p. 960) with which to inform the process of analysis. In their study of online participation (or “eParticipation”) and its relationship with emerging forms of digital governance, Clive Sanford and Jeremy Rose identify seven overlapping
disciplines in “an emerging research area [in which] there is little commonality of theory or method”:

1. Communications: The study of participation in societal communication processes.
2. Computer science: The study of underlying participation technologies.
3. Information systems: The study of the role of participation in computer systems in their social context.
4. Social and political philosophy: The branches of philosophy dedicated to discussing the social and political organisation of society.
5. Political science: The study of the nature of participation in political processes.
6. Public administration: The study of the role of participation in the provision of public services and the professional management of government.
7. Sociology: The study of the nature and constitution of societies, including descriptive models of societal participation at the macro and micro levels and normative models of ideal forms of social participation. (Sanford & Rose, 2007, p. 411)

Carlos Alberto Scolari (2009, p. 960) maps the field somewhat differently but presents a similar picture of a range of overlapping disciplines whose edges intersect and combine to form a loosely defined and fluid theoretical space (see Figure 1.1)
Figure 1.1. The disciplinary overlap in theories of digital communication

Figure 1.1 is reproduced from *New Media and Society* volume 11 number 6 p. 960 with permission of SAGE Publications

Each disciplinary field appropriates the work of overlapping disciplines in order to stake its ontological claims; many of the theorists informing this study sit comfortably in several of the disciplinary areas represented in Figure 1.1.

Indeed, as a thesis within the discipline of Information Science this project also sits amid this rich disciplinary landscape. This blurring of boundaries highlights the opportunity to develop theory that can provide both an ontology and epistemology for the nature of democratic practices in online spaces, not in isolation but in correlation with existing and historical modes of
understanding. Furthermore the overlapping nature of these disciplinary fields offers scope to explore theory as offering a variety of metaphors for understanding the nature of democracy in the network society. These distinctions over ontological terrain are explored in more depth in Chapter 2.

Jeanine Finn (2011, p. 410) notes the importance of this holistic approach to the study of information phenomena, particularly in the context of networked information distribution and knowledge creation communities:

> If information scholars don’t incorporate a broader, more critical view of concepts of social capital and community participation, particularly when they turn their attentions to creating and supporting digital environments, traditional information studies theories of information behavior will fall short in explaining the networked knowledge work of humans in deliberative spaces.

Drawing from his own work on the relationship between ICT and social inclusion, Mark Warshauer (2003) is in agreement with Finn. He suggests that in situating ICT within social phenomena we need to be conscious of the need for an expanded research agenda, which draws particularly on cross-disciplinary approaches and methodologies:

> This proposed research agenda is broad and ambitious but not impossible. It will require strong disciplinary research methods (e.g., in sociology, anthropology, economics) together with equally strong interdisciplinary content knowledge of the wide variety of scholarly fields that issues of ICT access and use encompass. By bringing together teams of scholars from different disciplines, backgrounds, and cultures – and encouraging individual scholars to cross disciplinary boundaries – research on ICT in society can help bring about a new scholarly paradigm that is more in line with the imperatives of a postindustrial society in which knowledge and disciplines cannot be tightly bound. If flexibility, creativity, and many-to-many multimodal
interaction are hallmarks of the information era, they will also be the hallmarks of the scholarship that the era demands. (Warschauer, 2003, p. 215)

Sociologist Theodore Schatzki (2003) attempts to find a more neutral context for the discussion of social activity in terms of the material constraints, interactions and practices that shape the activity that takes place. Schatzki offers the concept of site ontology as the defining context:

Site ontologies proceed differently. Addressing the nature of the social involves identifying the type of site where social life exists and develops. Since a site, as noted, is a kind of context, the focus is on a special type of context...site accounts acknowledge individuals as constituents of such formations...composed of a nexus of people’s actions taking place in specific contexts.” (Schatzki, 2003, p. 178)

Schatzki compares the site ontology to Pierre Bourdieu’s ‘fields’ of social activity:

A field is a domain of activity marked by particular objective conditions, certain overall goods to be pursued (stakes), a range of capitals that are drawn on when pursuing them, the layouts of the settings where the field’s activities transpire, and a space of actual and possible activities and meanings.....For Bourdieu, the social is a compound of practice fields that embraces an array of action-meaning spaces. (Schatzki, 2003, p. 191)

This study explores the notions of democracy, civic engagement and the public sphere – the ‘fields’ of study in Bourdieu’s sense. However, the study also draws on Schatzki’s site ontology in exploring a specific context of deliberative democratic exchange – i.e., of actions and interactions, of practices and material constraints. The study identifies emergent practices in democratic participation and notes the constraints on participation (in
particular in relation to the digital divide). These points are elaborated later in this chapter, in discussing the research problem in more detail.

1.5 The Public Sphere

The cultural environment in which engagement with social and political issues takes place has been described by Habermas (1974) as the public sphere, incorporating spaces and environments within which discussion about issues of the day take place and opinions are formed. How we define the public sphere depends on cultural circumstances. In Australia we might acknowledge discussions that take place at work or views that are expressed in the local coffee shop or the pub over the newspaper. We would include the pervasive role of the media (newspapers and magazines, radio and television broadcasting) in transferring interpretations of international, national and regional events. Increasingly we would also consider the role of online spaces in this context (as the Australian Centre for Public Communication, 2008 has done), as they create environments where views are expressed across social networking sites, where the commercial media are present as producers and disseminators of information, and where a wide-range of political actors are able to reach out directly to present their case.

Critiques of the expansion of the public sphere in the information society come from three perspectives, those focusing on: the digital divide; the commercialization of digital networks and digital information; and,
technological determinism. This three are explored in depth in the sections that follow.

1.6 The Digital Divide

The digital divide may be conceptualized in a number of ways. A divide in terms of access to computer equipment and the telecommunications infrastructure required to connect to the internet may be easily identified (e.g., a lack of computers in homes or schools). However, the digital divide also relates to skills required for digital literacy, or economic empowerment, or regional and national legal and legislative frameworks concerning access to the internet (Partridge, 2004; Potter, 2006; Pyati, 2006; Warschauer, 2002, 2003). This section articulates the digital communications environment in Australia before exploring the nature of digital divides that might impact upon political participation. In any research exploring democracy in the network society, it is important to foreground that work in the context of digital access.

The view that a digital communications infrastructure overlaid with services delivered by a highly educated workforce has increasingly become a driver of government policies designed to boost economic productivity. In Australia, during his first period as Prime Minister, Kevin Rudd’s¹ Australian Labor Party-led² government rebranded the Department of Communications,

¹ Kevin Rudd has had two periods leading the Australian Labor Party as Prime Minister of Australia: 3 December 2007 to 24 June 2010; and 27 June 2013 to 7 September 2013
² Australia has two electoral parties that dominate the broad split between progressive and conservative positions within the political spectrum: the Australian Labor Party (http://www.alp.org.au/, associated with a more progressive political agenda) and the Liberal
Information Technology and the Arts (http://www.archive.dcita.gov.au/) as the Department for Broadband, Communications and the Digital Economy (http://www.dbcde.gov.au/). In the following 2010 federal election the Julia Gillard\(^3\)-led Australian Labor Party (ALP) campaigned with access to broadband (high-speed internet connectivity) as a key strand of its policy portfolio. This strand of policy has become the National Broadband Network (NBN, http://www.nbn.gov.au/), an investment of $43 billion (Australian) of public funds in the broadband infrastructure across Australia. This is the largest infrastructure project ever undertaken by an Australian government. The 2013 Federal election was won by the Liberal Party of Australia, who are committed to continuing the NBN project in some form, although at lower public cost (Liberal Party of Australia, 2013). Whilst the government notes potential benefits in relation to education, healthcare and community development, the rationale presented for an infrastructure investment of this size is undisputedly economic:

> Australia is moving into a new era where an ever-increasing number of goods and services are provided over the internet. Supporting Australian businesses and service providers to transition to this new way of doing business is critical to Australia’s future economic prosperity and global competitive standing (Department of Broadband Communications and the Digital Economy, 2010)

---

\(^3\) Julia Gillard led the Australian Labor Party as Prime Minister from 24 June 2010 until 26 June 2013
Different nations have taken different approaches to broadband as a key area for social policy development. As the Australian government began its NBN initiative in 2010 the Finnish government enshrined the right to broadband internet access in law, compelling telecommunications services to provide high-speed broadband (of at least 1 megabit per second) to all of the nation’s 5.3 million citizens (Ministry of Transport and Communications, 2010). Despite the obvious cultural and geographical differences between Australia and Finland, both suffer harsh climatic conditions and have significant rural populations, factors which unite both national governments in undertaking initiatives which place broadband as central to social and economic policy. At the supra-national level, international policy agencies such as the United Nations Educational Scientific and Cultural Organisation (Bindé, 2005; Dutton, 2004; Gurstein & Taylor, 2007; Stukel, Venkatraman, Deloumeaux, Lucas, & Smuga, 2003) and the Organisation for Economic Cooperation and Development (OECD) (2013) present significant socio-economic benefit as arising from the development of internet infrastructure and digital economy initiatives.

The freedom to seek for, engage with, and communicate information is enshrined as a fundamental human by the United Nations in its Declaration of Human Rights (United Nations, 1948). Access to the internet as a human right seems justifiable and potentially fundamental to democratic politics as digital communications networks become increasingly intertwined with these
processes around information and communication. The relationship between access to the internet and human rights around free speech and freedom of expression become significant in a political context given the nature of Article 19 of the United Nations Declaration of Human Rights: “Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers” (United Nations, 1948, para. 28). This juxtaposition has become more pronounced with the publication of a 2011 report from the United Nations that “underscores the unique and transformative nature of the Internet not only to enable individuals to express their right to freedom of opinion and expression but also a range of other human rights, and to promote the progress of society as a whole” (La Rue, 2011, p. 1).

As social media channels the up-swell of social and political unrest across North Africa and the Middle East, notably in the events leading to the stepping-down of President Mubarak in Egypt in February 2011, proponents of the alignment between democratic freedom and access to the internet (particularly the use of social media platforms) highlight the importance of freedom of expression in digital space. Following the events in Egypt, United States Secretary of State Hillary Clinton described the internet as “the public space of the twenty-first century...the world’s town square”, herself echoing the language of Habermas (Ghattas, 2011).
The United Nations Educational, Scientific and Cultural Organisation (UNESCO) views the information society as a model for development (outlined in Bindé, 2005). UNESCO takes a holistic view of the digital divide, outlining a range of complex factors influencing the shape of the divide in different local contexts:

- Economic resources
- Geography
- Age
- Gender
- Language
- Education
- Employment
- Disabilities (Bindé, 2005, p. 30)

Tony Vinson notes that many of these factors are determinants of social exclusion in Australia and that social policy to promote inclusion “can be seen as enhancing structural competitiveness through socio-economic innovation in open economies” (Vinson, 2009, p. 11) – that is, the key to social engagement is economic participation. It is notable that the Australian Government’s rationale for the NBN is primarily on an economic basis rather than aligned to the universality of human rights. Projects such as One Laptop per Child in Australia (http://www.laptop.org.au/) acknowledge the complex nature of the digital divide and its relationship to infrastructure, to education
and skills, and to social inequalities. The project provides laptops to children in remote communities that were specifically designed for the project, which can be robust in harsh conditions, provide learning opportunities and connect to one-another and the world beyond.

The digital divide represents a specific challenge to “digital democracy”. Tredinnick (2007, p. 121) asserts that the global inequalities in information infrastructure mirror imbalances in political and economic power between developed and developing regions: “On a global basis some cultures, traditions and values have a greater voice in digital culture than others. Through its dominance over the new apparatus of participation the developed world asserts its values and traditions in the digital sphere”. Warschauer (2003, p. 12) too asserts that the digital divide is really about social inclusion and marginalization:

The shift from a focus on a digital divide to social inclusion rests on three main premises: (1) that a new information economy and network society have emerged; (2) that ICT plays a critical role in all aspects of this new economy and society; and (3) that access to ICT, broadly defined, can help determine the difference between marginalization and inclusion in this new socioeconomic era.

Dahlberg notes that there are “explicit political and economic constraints on digital democracy...due to state and capitalist surveillance and control over digital media technology, as well as due to structural inequalities that lead to digital participation inequalities” (2011, p. 13) – how can those marginalized from the information society’s networks of commerce,
communication and deliberation be effectively democratically enfranchised?
Warschauer concurs “As more forms of communication, social networking, community organisation, and political debate and decision making gravitate to online media, those without access to the technology will be shut out of opportunities to practice their full citizenship” (2003, p. 28).

These analyses highlight networks (social and digital) as significant potential enablers of economic and political participation. There is a need to develop further this research agenda in an Australian context due to: the scale of public investment in the NBN; the political debate around the value of public investment in the NBN; and the potential for social innovation, economic participation and political engagement that is emerging from widespread access to networks and new media. This study develops this agenda by exploring how digital networks (as facilitated by the web) and new forms of media contribute to political participation in an Australian context, and how these channels shape, facilitate and reflect emerging practices of political participation. Research of this nature can make a valuable contribution to the debate around how digital technologies can enhance the development of social capital and public policy.

1.7 The commercialization of information

Theorists of the information society such as Bell (1973b), Castells (2000) and Frank Webster (2002) acknowledge the historical continuum from industrial capitalism through to the information society. Herbert Schiller
(2001; and in Webster, 2002) and Vincent Mosco (2004) place more emphasis in their analysis of global information and communications developments on the influence of corporate commercialization as it relates to technology, the media and information flows. Their arguments may be summarized as a critique of the values inherent in ICT, media and information-related developments as those of the transnational corporate elite, predominantly reflecting the power inequalities of global capital.

Tredinnick (2006, 2007) explicitly links this power-based critique of the information society to the work of Michel Foucault (1972) on discourse: the complex patterns by which prevailing power relations are asserted through the concepts and ideology that frame knowledge and ways of knowing as legitimate or otherwise. These ideas are discussed more fully in Chapter 2. Foucault’s discussion of discourse as legitimization of structural power dynamics reflects the much earlier work of Harold Innis (1986, although originally published in 1950) on the relationship between empire and communications structures, which create what Innis describes as “monopolies of knowledge” (1986, p. 1). Again we see the theoretical overlaps between disciplinary boundaries, which will be discussed further in Chapter 2. The work of Innis informed that of his fellow Canadian, Marshall McLuhan, in terms of his identification of the inter-relationship between technology as medium, as message carrier and as way of knowing, stated (famously) as “the medium is the message” (M. McLuhan, 2001, p. 7). Postman continues this theme in his
critique of technocratic capitalism, *Technopoly: the surrender of culture to technology*:

What is clear is that, to date, computer technology has served to strengthen Technopoly’s hold, to make people believe that technological innovation is synonymous with human progress....It has [...] amplified beyond all reason the metaphor of machines as humans and humans as machines...Among these beliefs is a loss of confidence in human judgment and subjectivity...we have replaced this with faith in the powers of technical calculation. Because of what computers commonly do, they place an inordinate emphasis on the technical processes of communication and offer very little in the way of substance...there never has been a technology that better exemplifies Marshall McLuhan’s aphorism “The medium is the message”. The computer is almost all process. (Postman, 1993, pp. 117-118)

Here Postman reflects the concern of Theodore Roszak as to the loss of semantic and cultural context from disintermediated information and communications processes. In *The cult of information* Roszak notes stingingly “even gibberish might be ‘information’ if somebody cared to transmit it” (Roszak, 1986, p. 58).

There are intertwining critiques of the nature of power as it is embodied within information and communications technologies, which arise from overlapping traditions. Foucault’s discourse as analysis of power has much in common with Innis’ monopolies of knowledge when applied to exploring the relationship between bureaucratic empires and their communications structures. Similarly we might see McLuhan’s medium as message, Roszak’s *Cult of Information* and Postman’s *Technopoly* as specific
critiques of the discourse of technology, and therefore of relevance in this study of the relationship between digital communications and democracy.

1.8 Technological determinism

Technological determinism describes a view of technology as producing particular social outcomes independent of human action and intention. Critics of a deterministic discourse around technology (for example Lanier, 2006; Webster, 2002) suggest that such a narrative obscures analysis of the social values and power structures that underlie how and why technology is implemented within social and economic practice. Acknowledging the potential for deterministic discourse to emerge around technology enables a critical positioning in assessing the benefits and costs of integrating digital technologies within societal structures and practices.

This critical positioning is important in assessing the role of digital communications technologies within the democratic political process, becoming significant in analysing questions of causality around the role of digital communications in processes of political change. The debate in Foreign Affairs between Malcolm Gladwell and Clay Shirky over the role of new media in political unrest (Gladwell & Shirky, 2011) provides an illustration of arguments around determinism in assessing how technology impacts on political systems and processes. Gladwell (2010) and Shirky (2011) express opposing points of view in articles for The New Yorker and Foreign Affairs respectively. Gladwell suggests that the networks of loose relationships that
the internet and social media facilitate are more suited to information diffusion than to coordinated and strongly motivated political action: “weak ties seldom lead to high-risk activism” (Gladwell, 2010, para. 10). Responding specifically to Gladwell’s piece in *The New Yorker*, Shirky argues that political engagement of minimal effort does not have to be the focus of the discussion around the role that digital networks and new media might play within political structures:

> the fact that barely committed actors cannot click their way to a better world does not mean that committed actors cannot use social media effectively......In fact the adoption of these tools (especially cell phones) as a way to coordinate and document real-world action is so ubiquitous that it will probably be a part of all future political movements (Shirky, 2011, p. 9).

Shirky suggests that we might think of social media in a political context; “as long-term tools that can strengthen civil society and the public sphere” (Shirky, 2011, p. 4).

Both Gladwell and Shirky reasserted their respective positions in the subsequent issue of *Foreign Affairs*, with neither giving much ground to the other. Gladwell (Gladwell & Shirky, 2011, para. 2) takes the position that, to be convinced of the revolutionary capacity of social media within political systems he would need evidence that the examples of public dissent presented by Shirky (in political contexts as diverse as the Philippines, Thailand, Moldova, China, South Korea, India and Chile) would not have taken place without their use. For his part, Shirky (Gladwell & Shirky, 2011 para. 5-6)
emphasizes what he sees as the two key elements of social media usage that have the potential to radically alter the dynamics of political systems: (1) the expansion of access by citizens to the public sphere; and, (2) the potential speed and scale of political mobilisation.

The United Nations’ Special Rapporteur on the promotion and protection of the right to freedom of opinion and expression, Frank La Rue, published a report in 2011 drawing strong correlation between access to the internet and not only the fundamental human rights around freedom “to seek, receive and impart information and ideas through any media and regardless of frontiers” as enshrined in the Universal Declaration of Human Rights (United Nations, 1948), but also its “unique and transformative nature....to promote the progress of society as a whole” (La Rue, 2011, p. 1). A critical positioning around this narrative might suggest that the association of the internet with human rights and social progress, whilst laudable on one level, does not acknowledge the positioning of power relations within the distribution of digital networks. Such a position allows for a critique of the notion of ‘progress,’ enabling a more nuanced analysis of the dynamics of power relations as they are embodied in digital technologies and networks. The value in this is more than critique for its own sake. A critical stance in relation to deterministic statements around the possibilities afforded by technology offers researchers, policy makers, commentators and theorists a holistic view
of the discourse of technology that acknowledges the reflexive relationship between technology and society.

This analytic position is helpful in exploring questions of causality relating to technology and society, so it informs the development of this thesis. In relation to this research, an awareness of the importance of critical positioning in connection with the attribution of deterministic characteristics to technology enables an exploration of the impact of digital communications on the practice of democratic politics with more depth. Questions of power and the nature of social structures are, therefore, incorporated into the analysis, discussed in Chapter 4.

1.9 Forest protection in Tasmania - conflict as democratic politics

In order to explore the research questions in an authentic context of political conflict within the democratic process, issues of divergence and diverse opinion across the Australian political spectrum were identified. The patterns of digitally-mediated political conflict around several issues were explored early on in the study. In Chapter 3 I articulate how issues were selected as well as the methodological rationale for the ultimate focus of the study, i.e., political action around the protection of native forest on Australia’s island state of Tasmania. A focus for this action has been a campaign by a coalition of environmental and community groups against the proposal to build a large-scale pulp mill on the island’s Bell Bay.
As an exploration of the potential of the web to afford a space for deliberative democracy to take place this issue was selected as a prism through which to examine these ideas; it offered an issue that is current yet has had a consistent presence within Australian public debate since its inception. Furthermore, the nature of the issue involves a valuable cross-section of civil society in Australia, providing a context in which we may observe the interactions of a range of political actors across the democratic spectrum. This includes government and the corporate sector, lobby groups, and those involved in more direct forms of political action. It also provides an opportunity to explore the quality and texture of Australian democracy in its deliberative sense, in terms of: political accountability and reasoned argument; the participation of those in the mainstream of the Australian political spectrum and those excluded; the scope for political action afforded by digital space as public sphere; and, the practices that constitute the site ontology of deliberative democracy. Schatzki (2005, p. 470) notes that “social reality is practices.....the actions, mental states, and language that have previously composed a given practice articulate and hand down a ‘semantic space’ that establishes the meaningfulness of whatever currently transpires in the practice.”

The Australian Government’s planning approval of a pulp mill to be located in Tasmania’s Tamar Valley (Department of Sustainability, Environment, Water, Population and Communities, 2011) has a lengthy history
of political opposition from a range of political, environmental and community
groups. The project was planned by the Tasmanian forestry company Gunns
Limited and, prior to the commencement of this study, had on a number of
occasions been rejected from approval by the government as a result of
environmental concerns. The creation of the pulp mill operation was
projected to bring more than $6.7 billion into the Tasmanian economy (The
Allen Consulting Group, 2006, p. 2); however, significant concerns relating to
the impact of the mill on the natural environment in the region have been
voiced loudly by a range of stakeholders from the Australian Greens (political
party) to The Wilderness Society (environmental lobby group) to TAP into a
better Tasmania (community group).

The lobbying and protest campaigning around this issue, running since
2006, coincides with a significant increase in the use of the internet for
political action. The Australian Centre for Public Communication (2008)
describes emerging patterns of internet and new media campaigning by
individual politicians, political parties and activist groups across the Australian
political spectrum. The study suggests that new media have made space for “a
diversity of views expressed...in a range of formats including youth Web sites,
citizen journalist sites and small independent political party sites, most of
which would not have seen the light of day in traditional mainstream media or
elite political discourse” (Australian Centre for Public Communication, 2008, p.
47). The internet has been used as a campaign platform, public forum,
mobilising and dissemination tool by the various stakeholders in the pulp mill
debate, including:

- Australian Government Department for Sustainability, Environment, 
  Water, Population and Communities -
- The Tasmanian Greens - http://tas.greens.org.au/story/australian-
  greens-reject-tamar-valley-pulp-mill
- The Wilderness Society -

The increasingly interactive nature of online technologies offers the
potential for the formation of online relationships and communities of actors
(organisations and/or individuals) aligned by shared interest. The issue thus
offers a rich seam to mine in investigating the relationships between the use
of communications technologies for political action and digital space as public
sphere, as an enabler of deliberative democracy. The study makes use of
digital research methods to examine the nature of the debate around the pulp
mill as it takes place online, including analysis of the network of relationships
created by linkages between those organisations active on the issue. The
methodology used in the study involves a process of web crawling, hyperlink
analysis, visualisation and content analysis in order to collect and analyse the
relevant data (a process articulated in greater depth in Chapter 3).
1.10 Significance of the research

Substantive studies of the relationship between the internet and Australian politics are limited to those of the Australian Centre for Public Communication (2008) and the Australian National Institute for Public Policy (2011). Data from the Australian Bureau of Statistics (2009, 2010) indicate that household computer usage and broadband penetration continue to increase. With massive public investment into the National Broadband Network, exponential growth in internet usage in Australia is likely to continue, with the potential for significant impacts on how Australians interact with their political culture. In its study of internet usage and civil society the Australian National Institute for Public Policy found a positive relationship between online and offline political activity, with one complementing, even enhancing the other:

Those who use the Internet more frequently are also more likely to be involved in offline political activity such as contacting a local politician, signing a petition or buying products for a political reason. These findings show that Internet use is linked with promoting offline and online political engagement. The general conclusion is that online political activity is complementing, rather than replacing traditional forms of political activity. (Australian National Institute for Public Policy, 2011, p. 12)

The growth of broadband infrastructure, increasing computer usage, and a positive correlation between online and offline political activity, all point to an expansion of the public sphere available to Australian civil society. These developments create fresh digital spaces for democratic participation and civic engagement. How can technology shape the nature of this participation?
What technological functionality enables us to maximize the democratic potential of this digital expansion of the public sphere? This study addresses these questions by exploring how those currently active in Australian digital space are leveraging the potential of technology for political action. The study is of relevance in exploring the creation and design of digital spaces and sites for political participation, in examining the use of social media to create engaging digital environments, and in analysing the use of technology to enhance the practice of deliberative democracy.

The study provides qualitative textual data on the nature of digital participation in Australian democracy. The research provides illustrative data on the nature of engagement with a digitally-mediated public sphere by civic society through the identification of the actors involved in online political action and debate around forestry and forest protection the protection of native forest in Tasmania, prominent and ongoing issues of social, economic and environmental significance for the island state. Within the context of a multi-faceted understanding of the digital divide, and an appreciation of the complex relationship between technology and power, this study provides significant results illustrating how the affordances of digital technology might be leveraged to enhance the quality of democratic participation in Australia.

1.11 The significance of research design

The study also offers a significant contribution to the methodology of qualitative internet-based research by exploring innovative approaches to the
investigation of digital spaces and online interaction, in addition to using an Australian context for this analysis. Online political engagement has been explored in a number of studies, internationally (see for example Bekkers, et al., 2011; Burt & Taylor, 2008; Gerodimos, 2008; Kavanaugh, Kim, Pérez-Quiñones, Schmitz, & Isenhour, 2008; Van Laer & Van Aelst, 2010), however investigation of the phenomenon in Australia is limited. There is originality in the two-phased approach the study takes (i.e., hyperlink analysis followed by content analysis). These phases of data collection produce greater depth in the process of analysis, enriching the development of theory around digital democratic participation in Australia (an approach strongly aligned with the grounded theory approach taken by the study). In this sense the contribution of the study is not just to the emerging theory of digital democracy and evolving democratic practices but also one of digital research methods and an understanding of appropriate methodologies and tools for undertaking research in complex digital environments.

The study assists in defining the possibilities of digital research methods, including their advantages and limitations. The disruptive paradigm that is often attributed to the impact of the internet on existing practices can also be applied to research methods. Innovation in the use of an evolving suite of techniques for exploring digital data confronts the ‘newness’ of social interactions across digital networks.
Despite a palpable sense of euphoria over the ‘Big Data’ that reside across the networks and servers of digital communications, there are specific complexities to research undertaken in this environment (boyd & Crawford, 2012). The volatility of digital information and interactions creates data sets that may be present one day but that may have evaporated by the next. The ambiguity over the heritage value of digital cultural artifacts and their preservation means that researchers need to consider the long-term archiving of their own data sets. This study contributes to the innovation in research methods for exploring Australia as an increasingly digitally-mediated society. The study draws on data sets from the Australian Bureau of Statistics (2009, 2010, 2012) on growing household computer usage and broadband internet penetration as the underlying infrastructure for the emergence of increasingly digitally-mediated social practices. Chapter 3 elaborates on the ways in which the study has confronted problematic methodological issues around the volatility of internet data.

1.12 Thesis overview

Where Chapter 1 sets out some of the background and broad context for the study, Chapter 2 contextualises the research questions by discussing the transdisciplinary literature (i.e., information science, media and communications, political science) that overlaps around them. Here the concept of the public sphere is explored in relation to Habermas’ original definition of the term and in the sense in which it has been applied to new
media environments. The chapter also includes a discussion of the structures that constitute online spaces. Drawing the chapter to a close is a discussion of research methods as they apply to collection of data within digital environments. This discussion touches on the approaches and instruments that can be leveraged within this context and the positioning of these approaches and instruments in relation to the epistemic paradigms of the study.

Chapter 3 articulates the study’s methodology and methods in greater detail. The two methods of data collection that are incorporated into the overall methodological approach – hyperlink analysis and content analysis – are described in greater depth, specifically outlining their relationship with the study’s research questions. The chapter also sets out how these methods fit within an interpretivist research philosophy aligned with grounded theory. Chapter 4 presents an analysis of the data, situating the significance of the findings in relation to comparative international studies and the broader literature around digitally-mediated democratic politics. The concluding chapter (5) discusses the contribution of the study to the development of theory and its potential application in contributing to digitally-mediated practices of democratic engagement, and provides insight into potential for future research in this area.
2.1 Introduction

This chapter explores the bodies of literature that intersect in discussing the impact of digital communications networks on the process and practice of democratic politics. An important starting place is the overarching framework for the socio-political change attributed to the rise of networks. The identification of post-industrial forms of social organisation is significant here; in particular, the work of Bell (1973a) in articulating the rise of the post-industrial society and Castells (1997, 2000, 2008, 2009, 2010) in exploring its evolution and relationship with globalisation, have been influential. This perspective is enhanced with analysis of the impact of digital networks and new media in generating a social and political reality augmented by digital interaction, as well as an analysis of the nature of democracy, the public sphere and political engagement in the context of digitally-mediated social practices. A wave of civil unrest across several North African states (notably Tunisia, Egypt, Libya and Syria) in 2011 (often described in the collective as the Arab Spring) has become a particular focus for discussion around the roles of digital communication networks and social media within political structures. For this study, analyses of the use of new media to organise and mobilise public dissent (Bennett & Segerberg, 2012; Howard et al., 2011; Wolfsfeld, Segev, & Sheafer, 2013; Zuckerman, 2011) and highlight significant events such as human rights abuses to global audiences (Lotan et al., 2011) during the
Arab Spring, provide valuable comparisons. Given this study’s focus on the environmental movement, alongside the development of international patterns of social unrest mediated by digital communications (such as the Arab Spring and the Occupy movement), an exploration of the notion of the social movement, identifying significant theory around structure and the relationship with political action, is warranted.

2.2 From Post-Industrial Society to Informational Society

The overarching context for shifting dynamics around political participation is a shift from industrial to post-industrial forms of economic organisation in the many regions and nations that employ democratic forms of governance. The foundations for this strand of social and economic theory were laid by landmark studies (Machlup, 1962; Porat, 1977) of the changing nature of the economy in the United States (US), which identified a trend away from manufacturing (the industrial society) and towards service industries fuelled by information processing and knowledge production (post-industrial society). Research in this area evolved from the study of labour patterns (such as those of Machlup and Porat) as studies began to chart the social impacts of shifting economic patterns and the increasing prevalence of information and communications technologies in not only the economic but also the social and political spheres of life. A significant body of sociological literature emerged on what became known as the “information society”, charting the theoretical
discussion around the impact for capitalist democracies of this shift in the
mode of production. An exemplar, and perhaps a high-point, in the
intellectual development of this area of research is Manuel Castells’ *The
Information Age: Economy, Society and Culture* Volumes 1-3: comprising: *The
Rise of the Network Society* (2000); *The Power of Identity* (2004); and, *End of
Millennium* (2010). Across three volumes Castells explores the socio-political
impacts of increasingly intense networks of communication and flows of
information on a global scale.

Webster (2002), however, highlights the looseness of definitions
relating to the impact that information processing technologies have had on
capitalist democratic societies through the late twentieth and early twenty-
first centuries. The terminology describing the extent to which information
and communications technologies have embedded themselves into our lives,
and the social consequences of this process, has evolved from Daniel Bell’s
“post-industrial” (Daniel Bell, 1973a) (i.e., information and knowledge as the
raw materials of advanced economies) to “informational” (Castells, 2000) to
“information” (Dutton, 2004) to “knowledge” (Bindé, 2005) societies. Other
commentators use terms that attempt to capture something of the intangible
nature of this “creative”, even “weightless” economy (see for example
Leadbeater, 2003 who writes of "Living on Thin Air"). The Australian
Government prefers to use the term “digital economy” (Australian
Government, 2009, 2013). This foregrounding of things ‘digital’ in the policy
language of the Australian Government points to the emerging economic
significance of information and communications infrastructure and the service
economy that it supports. As Australia’s manufacturing sector declines
(Mazzarol, 2012), Australia’s digital economy is viewed by the government as a
key driver of productivity and economic growth (Australian Government,
2008b; Department of Communications, 2013).

To provide a conceptual foundation on which to build, this study draws
from Castells’ (2000) use of the term “informational society”, as this captures
the paradigm shift in how concepts important to this study, such as society,
economy and culture, are described. Given the abstract and often aspirational
tone of terms such as the ‘information society’ or the ‘digital economy’ as they
are expressed in policy statements (including those of the Australian
government), the work of Castells provides definitions grounded in extensive
research into lived experience, which he does over three volumes in The
Information Age: Economy, Society and Culture. So, for instance, in Australia’s
strategic framework for the information economy 2004-2006 the Department
of Communications, Information Technology and the Arts articulates an
abstract “vision” for an Australian information society and economy:
“Australia’s vision for the information economy is where government, business
and society are all connected, can participate with confidence, are open to
innovation and can collaborate to maximize the social and economic benefits”
(2004, p. 5). Following its Australia2020 summit on productivity the Australian
Government suggested that improved network infrastructure and digital literacy provide the gateway to a new, creative economy:

In the digital economy, our broadband penetration is ahead of the OECD average, but our download speeds are well below it. New, clean export industries and jobs beckon if we can increase connectivity, develop everyone’s ICT skills, boost confidence in our E-networks and rapidly expand our content creation industries (Australian Government, 2008a para.11).

The Department for Broadband, Communications and the Digital Economy developed a *National Digital Economy Strategy* designed “to increase national productivity, ensure Australia’s continued global competitiveness and improve social wellbeing” (2012 para.3). In each instance, the information society is identified as a model, a signpost towards social development.

Castells is clear in his identification of a post-industrial paradigm for social development, and of it being a clear break from industrialism:

In the industrial mode of development, the main source of productivity lies in the introduction of new energy sources, and in the ability to decentralize the use of energy throughout the production and circulation processes. In the new, informational mode of development the source of productivity lies in the technology of knowledge generation, information processing, and symbol communication.....

Although technology and technical relationships of production are organized in paradigms originating in the dominant spheres of society (for example, the production process, the military-industrial complex) they diffuse throughout the whole set of social relationships and social structures, so penetrating and modifying power and experience. Because informationalism is based on the technology of knowledge and information, there is an especially close linkage between culture and productive forces, between spirit and matter, in the informational mode of development. It follows that we should expect the emergence
of historically new forms of social interaction, social control, and social change. (2000 pp.16-18)

Here, Castells captures the extent to which the informational society permeates not just work but our daily lives and relationships, or informationalism as lived experience, embedded into the fabric of our social existence. The implications that Castells (2000, p. 18) alludes to in relation to “new forms of social interaction, social control, and social change” are highly significant for this study. These new forms of social interaction are becoming increasingly visible within the political process (within multiple contexts, which are explored in chapter 4). These emergent forms of political participation build on the practices of social interaction that evolve from digitally-mediated relationships across networks of information and communications technologies. It is these aspects of informationalism that this study explores in terms of the relationship between networks of digital communications and the practice of democratic politics.

Castells’ informational society has different flavours according to cultural context but the commonalities between the flavours are strong;

the core processes of knowledge generation, economic productivity, political/military power, and media communication are already deeply transformed by the informational paradigm, and are connected to global networks of wealth, power, and symbols working under such a logic. Thus, all societies are affected by capitalism and informationalism, and many societies (certainly all major societies) are already informational, although of different kinds, in different settings, and with specific cultural/institutional expressions. (2000 p.20)
Thus Castells would see Australia as an informational society, one with its own distinct character within broad and interconnected global structures of informationalism and capitalism. As such, the informational paradigm impacts on the Australian political process, influencing modes of democratic participation.

2.3 Informationalism and democracy

The literature on the internet, its impact on society and its relationship to democratic engagement is strongly interdisciplinary in nature. In more utopian visions of the potential of the networked environment, the capacity of the internet for facilitating online democracy is emphasised in terms of community formation and activism (Rheingold, 2000, 2002), identity politics (Haraway, 1985; Turkle, 1996), collective intelligence (Lévy, 1997; Wales, 2007) and global cultural understanding (M. McLuhan & Fiore, 1968).

Howard Rheingold is an active participant in, and researcher of, online communities. Drawing on the pioneer narrative of US history, Rheingold’s (2000) *The Virtual Community: Homesteading on the Electronic Frontier* emerges from his experiences of comparatively early (pre-social media) forms of internet-enabled group interaction. An overarching theme in Rheingold’s writing is the idea that social interaction and community formation in online spaces are authentic (in a relational sense), certainly as authentic as those that take place offline. Given the increasingly pervasive usage of social media, Gruzd, Wellman and Takhteyev (2011) explore this idea in the context of the
extended social networks enabled by the Twitter micro-blogging service. They find support for Rheingold’s conceptualisation of community. For Gruzd, Wellmand and Takhteyev, social interaction in online environments extends our sense of community by creating networks of interaction and solidarity beyond spatially-limited geographical boundaries (2011, p. 1296).

Rheingold (2000), Sherry Turkle (1996) and Donna Haraway (1991) note that the social spaces of the internet offer possibilities for identity exploration. Freed from physically embodied characteristics and constraints, online interactions allow for identity play in the alternate realities of virtual worlds or gaming environments. Both Rheingold and Turkle describe how virtual identity can enable the exploration of different gender roles, even of multiple identities. This spirit of identity extension and exploration was captured in a famous cartoon published in The New Yorker by illustrator Peter Steiner (Fleishman, 2000). The cartoon panel features two dogs exchanging conversation, with one sitting in front of a computer monitor. The caption reads; “On the internet nobody knows you’re a dog”. In her famous cyber-feminist essay A Manifesto for Cyborgs: Science, Technology, and Socialist Feminism in the Late Twentieth Century Haraway (1991 para. 5) is clear on the overlap of online and offline identity performance: “we are all chimeras, theorized and fabricated hybrids of machine and organism; in short, we are cyborgs.” This notion of online identity becomes less distinct from an embodied self as the digital economy proliferates. As networked computing
technologies increasingly embed themselves within our daily lives, social identity begins to incorporate an element of virtual presence (online profiles, connection within social media, sharing of personal narratives in digital form). These activities involve the performance of identity in new and important ways.

In online communities Rheingold sees the potential for a form of collective intelligence to emerge. In *The Virtual Community* he talks of “grassroots groupminds” (2002, p. 109). Groupminds become *Smart mobs* (2002). Rheingold suggests that smart mobs can be more than just collectively intelligent, they can mobilise this intelligence into action:

Smart mobs consist of people who are able to act in concert even if they don’t know each other. The people who act in smart mobs cooperate in ways never before possible because they carry devices that possess both communication and computing capabilities....These devices will help people coordinate actions with others around the world – and, perhaps more importantly, with people nearby. Groups of people using these tools will gain new forms of social power, new ways to organize their interactions (2002, pp. xii-xiii)

Pierre Lévy agrees with Rheingold on this potential for what Lévy terms “intelligent communities”. For Lévy, the capability for collective intelligence will be an essential form of social capital: “The more we are able to form intelligent communities, as open-minded, cognitive subjects capable of initiative, imagination, and rapid response, the more we will be able to ensure our success in a highly competitive environment” (1997, p. 1). Jimmy Wales (2007) suggests that the collective intelligence distributed across computer
networks can be harnessed in ways that radically alter paradigms of cultural production and knowledge creation. The Wikipedia project, of which Wales is a co-founder, provides a powerful illustration of this point. Wikipedia (http://en.wikipedia.org/wiki/Main_Page) is an online encyclopedia collaboratively developed and sustained by a distributed network of volunteer editors. Usage of Wikipedia as a global repository of knowledge has become commonplace - in November 2013 Wikipedia.org is ranked (Alexa, 2013) as the sixth most globally accessed web site (behind search engine Google.com, social networking environment Facebook.com, video hosting platform YouTube.com, web portal Yahoo.com and Chinese language search engine Baidu.com).

It is this potential for multiple perspectives, online communities of collaborators with shared goals and understanding, and identity politics that prominent proponents of online democracy such as Rheingold (2000, 2002) and Kotkin (2006) support.

Media theorist Marshall McLuhan was alert to the effects of media on society and many aspects of his work – his ideas around the global village, medium as message and direct interaction with the media environment on a massive scale – have been re-invigorated by attempts to theorise new media. In a letter to another lauded Canadian media theorist, Harold Innis, McLuhan describes the media effects of the printing press: “Its very technological form
was bound to be \textit{efficacious} far beyond any informative purpose” (E. McLuhan & Zingrone, 1997, p. 73). Here, McLuhan argues that the medium itself is more significant than the content it carries, that the medium itself has social impacts that are wider than the information conveyed. There has been a resurgence of interest in the ideas of McLuhan on media and communication as networked communications and new media have continued to assert their presence on society (David Bell & Kennedy, 2007; Rheingold, 2000; Webster & Blom, 2004). More than forty years after their publication McLuhan’s ideas relating to the effect of the media on society (M. McLuhan, et al., 1967) and the development of the “global village” (M. McLuhan & Fiore, 1968) continue to find resonance in analysis of the cultural and political struggles of the current decade. One example is the battle over social media that has become a strategic component of the Israel/Palestine conflict (Albright, 2012). The Israeli Defence Force (IDF) maintains a consistent campaign across new media networks, such as micro-blogging platform Twitter (https://twitter.com/IDFSpokesperson), social networking environment Facebook (https://www.facebook.com/idfonline) and video-hosting site YouTube (https://www.youtube.com/user/idfnadesk). Campaigns across these channels have become an integral component of IDF strategy, employing the features of new media (digital video and imagery, blogging, the promotion of content sharing, the use of specific self-generated descriptive terms – hashtags – to publicise content and engage others) to shape a positive
narrative around Israeli military action. Albright (2012) uses Operation Pillar of 
Defense as an illustration. A specific eight-day military mission, Operation

Pillar of Defense was publicised from the IDF Twitter account with its own

hashtag (#PillarofDefense). The outcomes of the operation, are detailed in a

blog post (Israeli Defense Forces, 2012) from the IDF, which features an

embedded YouTube video of surgical missile strikes (including that which

assassinated Ahmed Jabari, the head of Hamas’ military wing on the Gaza

Strip) and infographics of operational actions and results.

Critiques of the emancipatory potential of digital networks

problematis many elements of the more utopian strand of internet analysis. The

notion of online community itself has been dissected by Jones (1999) in the

sense that communities are defined as much by who they exclude as who they

represent. Critiques of online activity come from other quarters, with

Terranova’s (2000) analysis of the creative culture underpinning the digital

economy identifying the collaborative collectivity of knowledge work as the

labour (in its Marxist sense) of late capitalism and Lanier’s (2006) concern over

the stunting of critical individual thought by the ‘hive mind’ of the collective.

The relationships between privacy, online identity and the potential for

surveillance by both state and market actors has become an increasingly

important and complex issue for citizens of informational democracies

(Foucault, 1979; Lievrouw, 2012; Morozov, 2011; Schiller, 2001).
These modern critiques come from commentators who, themselves, are participants in the digital economy. Terranova’s published article is also available from her web site and Lanier (who coined the phrase *virtual reality*) published his essay on “Digital Maoism” at *The Edge* (http://www.edge.org/), an online forum by (and for) the digital intelligentsia, sparking heated debate amongst the *digerati*. Both Terranova and Lanier are informed by the tradition of European philosophy and in this legacy we find philosophical critiques born out of the societies shaped by industrialism. The social system as totalising ‘machine’ is a theme of Marx:

> Labor appears, rather, merely as a conscious organ, scattered among the individual living workers at numerous points of the mechanical system. Subsumed under the total process of the machinery itself, as itself only a link of the system, whose unity exists not only in the living workers, but rather in the living, (active) machinery, which confronts his individual, insignificant doings as a mighty organism. (Marx, 1939 p.639)

This theme is also evident in Nietzsche: “Once we possess that common economic management of the earth that will soon be inevitable, humankind will be able to find its best meaning as machine in the service of this economy” (Nietzsche, 1968 section 866). Terranova and Lanier are extending these strands of philosophical thought in exploring how the free labour that we might contribute to editing Wikipedia or the blog posts we might write, which are then indexed by Google, or the personal information that we provide on (and to) Facebook contribute to an economic system (a digital economy) of which we may not be entirely aware. As social relations morph into online
networks, human relationships too may be commercialised. Rheingold, the pioneer of online community, was sufficiently concerned by this strand of critique that he added a new chapter to the second edition of *The Virtual Community: Homesteading on the Electronic Frontier* entitled “Rethinking Virtual Communities” (2000, p. 323) to respond to it. Whilst acknowledging the powerful structural forces driving the digital economy, Rheingold (2000, p. 390) locates his optimism in human agency: “If online community is NOT a commodity, it is only because people work to make it so”.

The philosophical legacies and conflicts inherent in the cultural reproduction of relationships of power have been theorised in a number of ways. It is in drawing from these theories, in combination with the acquisition and analysis of data relating to the Australian web domain, that we will be able to assess how power, technology and democracy interact to shape digital space and create cultural meaning.

### 2.4 Informationalism and the Public Sphere

The internet has offered fertile ground within which to plant human emancipatory ideals despite its origins in high-tech military nuclear defence. Early internet infrastructure was originally designed in order to provide fail-safe military communications in the event of a nuclear strike (Keane, 1995, pp. 14-15). Ironically, the internet emerged from the heart of the military-industrial complex rather than any democratic think tank. Both John Keane (1995) and Rheingold (2000, pp. xi-xiii) chart the development of the internet
as a mass communication medium of political significance: emerging from the
US Department of Defense; adopted and adapted by universities and
commercial interests; and increasingly adopted by citizens/consumers. The
author William Gibson coined the term “cyberspace” in his 1984 cyberpunk
classic *Neuromancer*. In popular culture, “cyberspace” – the space of digital
networks and computer-mediated culture - has been presented as an
uncharted, anarchic territory beyond governance. This is a common theme in
early expressions of the hopes and fears for the networked digital
environment. Several prominent examples of such expressions are tinged with
the frontier myth and libertarian values of US culture.

The utopian tone of many strands of the literature (notably Barlow,
1996; Dyson, Gilder, Keyworth, & Toffler, 1996; Rheingold, 2000) relating to
the potential of the internet expresses the projection of this philosophical
template onto the possibilities offered by the digital environment. Mervyn
and Allen describe this strand of the literature as “optimistic assertions about
idealistic future societies” (2012, p. 1129). In grand terms, John Perry Barlow
(prominent digital rights campaigner and founder of the Electronic Frontier
Foundation) published *A Declaration of the Independence of Cyberspace* in
1996. The manifesto has a rhetorical tone asserting the rights of an
autonomous, populace of disembodied digital citizens, democratically self-
governing through patterns of collective intelligence and mutual obligation:
Governments of the Industrial World, you weary giants of flesh and steel, I come from Cyberspace, the new home of Mind...Cyberspace consists of transactions, relationships, and thought itself, arrayed like a standing wave in the web of our communications. Ours is a world that is both everywhere and nowhere, but it is not where bodies live. (Barlow, 1996 paras. 1-6)

Esther Dyson, George Gilder, George Keyworth and Alvin Toffler (1996) express similarly grand sentiments with the publication of their *Cyberspace and the American Dream: A Magna Carta for the Knowledge Age*. Again, the tone is rhetorical and draws on themes of collective intelligence and disembodied forms of social organisation:

> The central event of the 20th century is the overthrow of matter. In technology, economics, and the politics of nations, wealth – in the form of physical resources – has been losing value and significance. The powers of mind are everywhere ascendant (Dyson, et al., 1996, p. 295)

For Dyson et al this is a new era, one that must be guided to fruition with assistive political structures; they note “the Knowledge Age...will not deliver on its potential unless it adds social and political dominance to its accelerating technological and economic strength”(Dyson, et al., 1996, p. 296). This provides a “special” political mission, which “also gives to leaders of the advanced democracies a special responsibility – to facilitate, hasten and explain the transition” (Dyson, et al., 1996, p. 296).

Rheingold employs a different rhetorical device to develop similar themes. For Rheingold (2000), the citizens and communities that emerge in the spaces created by digital networks are pioneers (hence the subtitle, *Homesteading on the Electronic Frontier* to his book, *The Virtual Community*).
Drawing on the frontier narrative of US history and culture, Rheingold describes online communities as self-governing through shared decision-making. His is a narrative of possibility, of new beginning, of self-reliance and self-organisation. The template for this particular narrative has a significant legacy, stemming from strands of Western philosophical thought that extend from the Enlightenment, with its emphasis on the centrality of humanity, the freedom of the individual, rationality, tolerance, and subjectivity.

In order to move towards an understanding of what the digital environment is, rather than our aspirations for it, we must draw upon analyses of culture and power. Critical theory offers alternative perspectives from which to engage with our aspirations for what this embedding of the digital environment into daily life might be(come), in that it allows us to contextualise the digital environment within the cultural ideology that forms its basis. Flyvbjerg (2001 p.110) notes the importance of this approach to social inquiry if it is to move beyond the realm of theory into meaningful practice: “social and political thinking becomes problematic if it does not contain a well-developed conception of power.....for the public sphere to make a real contribution to democracy, one would have to link it to conflict, power, and partisanship”. This suggests that there is a need for research that explores how power diffuses across the emerging social spaces of digital networks. For instance, the notion of online community itself has been problematised by Steve Jones (1999) in the sense that communities are defined as much by who
they exclude as who they represent. There is mass public participation with
social media in countries with sufficient network penetration. So, for instance,
in July 2013 Facebook had 13 million active users located in Australia (Cowling,
2013). It is important that the democratic potential of this extension of the
public sphere be explored and theorised. However it is also important that
such exploration acknowledges the role of social and political power in shaping
digital space. In May 2013 Edward Snowden, an employee of a US security
contractor Booz Allen Hamilton, leaked documents detailing a massive global
surveillance program by the US National Security Agency (NSA) (Greenwald,
MacAskill, & Poitras, 2013). Several giants of the internet economy (including
Microsoft, Google, Facebook, Yahoo, Skype and Apple) were complicit in this
operation, providing NSA with data containing details of the online
transactions, connections and emails of their users (Ball, Borger, & Greenwald,
2013; Gellman & Poitras, 2013; Greenwald, MacAskill, Poitras, Ackerman, &
Rushe, 2013). Public engagement with the internet may offer possibilities for
new forms of democratic engagement. It also makes possible surveillance on
an unprecedented scale. This study avoids deterministic speculation on the
democratic potential of the internet, focusing instead on an exploration of
how political activist groups themselves (such as the environmental
movement) create opportunities for democratic engagement in the political
process by using new media and the social networks that they sustain. The
study analyses how this exploitation of new media tools and networks by
activist groups creates new ways for citizens to engage with the political process.

Jurgen Habermas’ (1974) analysis of the public sphere places it as an environment in which societal values can be discussed within a rational framework by the public itself (or, at least, some segments of that public), in this way acting as a valuable component of a healthy democratic society. The public sphere provides an appropriate metaphor for the democratic potential of the internet as mass communication medium, broader in scope than any previous media environment and, as noted previously, more complex in terms of the overlapping cultural values represented within it. This study therefore draws on Habermas’ public sphere as a fundamental overarching theoretical framework. Here we may also draw from notable critiques of modern liberal democracy such as Mouffe (2002a, 2002b) and Žižek (2011a, 2013c) who offer an alternative view of the limits of rational democracy, seeing the drive to consensus through rational debate as a masking of the true animosity that is inherent in the formation of social identity (as discussed for example in Torfing, 1999). Mouffe (2002a para. 5) suggests that:

in order to grasp the nature of democracy it is necessary to acknowledge the dimension of power and antagonism and their ineradicable character. By postulating the availability of a public sphere where power and antagonism would have been eliminated and where a rational consensus would have been realized, deliberative democracy denies this dimension and its crucial role in the formation of collective identities.
In their study of the performance of voluntary organisations on the web as democratic actors, Eleanor Burt and John Taylor (2008 p.1050) offer their view of the relationship between the public sphere and the web as a democratic environment in which rational discourse or ‘strong democratic talk’ may take place:

Political commentators have long recognised the central importance of the ‘public space’ and the opportunities that lie therein for the active engagement of citizens in discourse and debate upon the ‘matters of the day’. Dewey (1927, p. 208) was of the view that a vibrant public sphere depended upon the ‘methods and conditions of debate, discussion and persuasion’, while Habermas (1984, 1989) thought inclusive dialogue and debate to be a key condition of the public sphere. For Barber (2003) ‘talk’ lies at the very heart of a strong democracy. However, as Barber also makes clear ‘strong democratic talk’ is about more than the exercise of ‘voice’, for it ‘involves listening as well as speaking, feeling as well as thinking, and acting as well as reflecting’ (2003, p. 167). Thus, we may infer that ‘good’ and ‘proper’ public engagement involves informed and considered discussion; understanding of issues including openness to opposing perspectives; affective commitment borne of emotion, values, aesthetics; and taking action in pursuit of cause.

This holistic conceptualization of ‘talk’ is crucial to an evaluation of voluntary organisation web sites and the extent to which they can be seen to enable meaningful and active democratic engagement by citizens. It requires a considerably broader and more sophisticated understanding of web-enabled democratic engagement than tends to be conveyed within the cyber-utopian tradition with its emphasis upon the internet as first and foremost a discursive and highly participative medium (Rheingold, 2000). Similarly, it invites us to consider that the internet and web-based technologies may have utility in
facilitating offline engagement, as well; for example, they may provide information about local campaigning groups or activist training events (Van Laer & Van Aelst, 2010), as well as generating ‘virtual’ or online engagement.

Habermas’ conception of the public sphere has been critiqued as idealised (Castells, 2008), abstracted from the real world of institutionalised politics (Chambers, 2003) and as over-simplified in its identification of power relations (Castells, 2004, 2008; Flyvbjerg, 1998, 2001; Mouffe, 2002a). However Castells suggests that the concept of the public sphere offers a useful metaphor, “a useful intellectual construct” (Castells, 2008, p. 80), to assist in thinking around the conflict and interaction, the competing narratives and campaigns of social organisations (civil society), which ultimately inform and shape the formulation of public policy. For Castells, thinking about governance and democracy requires analysis of the nature of the public sphere. To understand how government interacts with society beyond the mechanism of elections we must think about what happens in the public sphere and the role that civil society plays within it:

The public sphere is an essential component of sociopolitical organisation because it is the space where people come together as citizens and articulate their autonomous views to influence the political institutions of society. Civil society is the organized expression of these views; and the relationship between the state and civil society is the cornerstone of democracy. Without an effective civil society capable of structuring and channeling citizen debates over diverse ideas and conflicting interests, the state drifts away from its subjects. The state’s interaction with its citizenry is reduced to election periods largely shaped by political marketing and special interest groups and
characterized by choice within a narrow spectrum of political option (Castells, 2008, p. 78)

Dahlgren (2005, p. 148) agrees with Castells:

a functioning public sphere is understood as a constellation of communicative spaces in society that permit the circulation of information, ideas, debates – ideally in an unfettered manner – and also the formation of political will (i.e., public opinion). These spaces, in which the mass media and now, more recently, the newer interactive media figure prominently, also serve to facilitate communicative links between citizens and the power holders of society.

Castells and others (Bennett & Segerberg, 2011; Boeder, 2005; Dahlgren, 2005; Dean, Anderson, & Lovink, 2006; Iosifidis, 2011; Loader & Mercea, 2011; Papacharissi, 2002; Poster, 1997; J. Ward, 2011) find the idea of a public sphere to be useful in exploring how the digital environment as space of flows, as communications medium, impacts upon the interaction between government and society. As an intellectual construct, the public sphere can be applied across a range of social environments and contexts, where “the material expression of the public sphere varies with context, history, and technology” (Castells, 2008, p. 79). The use of social media and mobile communications through the wave of civil unrest across North Africa (which became known as the Arab Spring) and London riots of 2011 has further fuelled such theorising (see for example Shirky, 2011). Widespread public engagement in political protest took place in 2011 across several states in North Africa (particularly Tunisia, Libya, Syria and Egypt). The use of social media was integral to the mobilisation of wide-spread public involvement in protests, both to organise public demonstrations and to publicise to a global
audience the events themselves and political issues involved (Lotan, et al., 2011; Shirky, 2011). These networks create public spheres that might not otherwise exist. For Shirky (2011), it is in this sense that social media networks have the potential to enhance democracy, by strengthening the public sphere, creating transparency and networks of international support. Those involved in these protests were able to use social media to engage international networks of solidarity. Mobile phones have been particularly significant here. Events such as protest demonstrations and human rights abuses can be captured as digital video, uploaded to a video hosting platform such as YouTube and circulated across users’ social networks. A wave of rioting erupted across London in the United Kingdom, also in 2011. Social media was significant in these events as a channel for organising criminal activity such as looting, as well as the citizens who volunteered to clean up the city in the aftermath (Gentleman, 2011). Following these events, the British Prime Minister was sufficiently concerned about the potential of digital networks for organizing criminal activity that he considered extending police powers of surveillance over social media (Warman, 2011).

The idea of a public sphere, or even of a multi-layered (regional, national, international) set of public spheres, is increasingly interlinked with that of globalisation. Dahlgren (2005, p. 148) notes: “The term “public sphere” is most often used in the singular form, but sociological realism points to the plural. In large-scale, differentiated late modern societies, not least in the
context of nation states permeated by globalisation, we have to understand
the public sphere as constituting many different spaces.” The social spaces
that are created by digital networks make public spheres available to those
with any internet-enabled device, be it a desktop computer, a mobile phone or
laptop. These networked public spaces contain massive global audiences.
Facebook, for instance, had 1.19 billion active users in September 2013
(Facebook Newsroom, 2013). This study explores how these spaces are
appropriated by environmental activists to exploit the political possibilities of
new media as campaigning tools.

The work of Wilson (2011) is relevant here. Wilson suggests that
advanced Western nations (such as Australia, the United States and the United
Kingdom) have become “post-broadcast democracies” (2011, p. 446) with
complex multi-layered media spheres engaging with multiple niche publics (as
opposed to a model of state-funded public broadcasting, for example). As
internet penetration becomes a social norm and, increasingly, internet-
enabled mobile technologies grow in usage, media consumption becomes
increasingly fragmented with significant impacts on media models and the
infrastructure of political communication. As Wilson notes, “Since this applies
equally to political content, it has affected the conduct of elections, the
strategies of political actors, the dynamic between them and established
media outlets, and the nature of the engagement of citizens with political life”
(Wilson, 2011, p. 446).
Castells (2000, 2008) notes the penetration of both the public sphere and the digital environment by transnational flows of global capital. He is not alone in identifying the synergy between networked communications and market ideology. Terranova (2000) sees the prevailing narrative around the creative capacity of digital technologies and user-generated content as being the discourse of neoliberal political economy. David Harvey (2007, p. 22) defines neoliberalism:

Neoliberalism is a theory of political economic practices proposing that human well-being can best be advanced by the maximization of entrepreneurial freedoms within an institutional framework characterized by private property rights, individual liberty, unencumbered markets, and free trade.....if markets do not exist (in areas such as education, health care, social security, or environmental pollution), then they must be created.

Harvey (2007) notes the evolution of a neoliberal consensus in trans-Atlantic politics over the past thirty years, noting how the ideology of the market is pervasive in neoliberalist thinking. In their work on delineating an emerging global public sphere Dean, Anderson and Lovink (2006) and Marres (2006) acknowledge the neoliberal context within which the competing interests of civil society engage. For Sassen the environment in which civil society operates is one of “neoliberal corporate contexts, supranational organisations, and normative orders dominated by older legitimacies, such as human rights politics and nation-based citizenship” (Sassen, 2006, p. viii). The relationship between the dominant companies of the internet economy and the agencies of US state security, as highlighted by the Snowden’s revelations
on the NSA’s surveillance program (Gellman & Poitras, 2013), illustrates Sassen’s point. The potential for state surveillance, for loss of control over personal information, for profiling by both commercial and state agencies, and for the privatisation of cyberspace by internet monopolies provide tangible qualifications on claims of the democratic properties of digital networks.

Nonetheless, this study identifies the ways in which environmental activists operate (i.e., campaign, organize and mobilise) across networked public spaces such as social media, within (or even despite of) commercialisation and surveillance.

2.5 Global village – the Globalisation of the Public Sphere

Pierre Teilhard de Chardin’s early twentieth century formulation of a sphere of the human mind that becomes an increasingly complex form of collective consciousness – the noösphere - has been applied to the Web (Ronfeldt & Arquilla, 2007; Whitworth, 2004) as an appropriate metaphor for evolving social networks formed and sustained within digital space and culture. Ronfeldt and Arquilla see the metaphor as significant in terms of international diplomacy and the manipulation of ‘soft’ cultural power within a global media sphere. Bey (2001, p. 115) too notes this significance, describing this global cultural interplay as “information war”. Whitworth (2004 para. 37) effectively captures the tensions within the collective (in de Chardin’s sense): “it is the ability to shape those parts of the noösphere that we call cyberspace
that must form the basis of analysis: what is cyberspace, how is it continually produced and reproduced, and who has the power to do this?“.

Here Whitworth reminds us of the critical standpoint that can be effective in cultural analysis, a standpoint embraced by critical theory, as noted previously in discussing Flyvbjerg. It is vital, if we are to understand the democratic potential of the internet, that we problematise conceptualisations of cyberspace (the domain of digital content and culture bounded by the internet) that are not rooted firmly in existing theories and analyses of power, for without such frameworks our understanding is superficial and impoverished. Expressions of faith in the internet as creator of a new era of equality and prosperity take on deterministic tones (see for instance the discussion of the rhetorical language of Barlow (1996) and Dyson, et al (1996) as discussed in Section 2.4). If this potential is to be realised then our understanding needs to see through the millennial fabric that shrouds predictions relating to the social impact and value of the internet.

2.6 The Infrastructure of Informationalism: Web 2.0 and New Media

In digital space, communities form around sites of shared interest and activity. Commentators such as Rheingold (2002) view these communities as becoming more collectively intelligent as their critical mass grows (what he terms *smart mobs*). This process is increasingly facilitated through the use of web 2.0 technologies. Web 2.0 refers to a newer generation of technological
manifestations (e.g., simple web publishing tools, hosting platforms for user-generated textual and audio-visual digital content) that use the web as a platform for content creation and collaboration by multiple participants. This is a shift away from online sites of one-to-many broadcast transmission of information towards multiple environments of many-to-many communications in which shared goals generate collaborative activity by stake-holding communities of participants. Allen (2013) notes that the emancipatory, participative narrative of web 2.0 is contested (for instance by Fuchs, 2011; Terranova, 2000) and highlights the versioning of the web as itself a narrative prioritising particular interests.

Park and Thelwell suggest that networks of online interactions around social issues provide an overview of stakeholders and their positions, in that the “configuration of hyperlink networks itself can convey useful overall information about the landscape of certain issues in a society” (2003 Social movements section, para. 1). If we think about these technologically enabled developments and relate them to the Habermasian concept of the public sphere we can see how the internet might be viewed as a modern extension of the public sphere; where as a medium of mass communication the internet enables not just the transmission of information but the generation of informed debate open to many and moderated by the collective.
A number of people emphasise the element of human agency and emerging social practices in their analysis of web 2.0. Lievrouw (2011, p. 7) provides a more expansive definition of new media that moves beyond its technological functionality to incorporate emergent social practices and organisational structures: “(1) The material *artifacts* and devices that enable and extend people’s abilities to communicate and share meaning; (2) The communication activities or *practices* that people engage in as they develop and use those devices; and, (3) The larger social *arrangements* and organisational forms that people create and build around the artifacts and practices”. Bruns (2008) uses the term “produsage” to describe emerging practices in the production of user-generated digital content and the participative, decentralised community structures that enable such practice.

This study uses the definition from the Australian Centre for Public Communication as its foundation for investigating (and ultimately coding) the usage of new media within the sample of web sites. The Australian Centre for Public Communication (2008) provides a definition of new media in the context of the political environment. For them, new media are represented by a range of digital communications channels such as: political, election campaigning and election coverage web sites; political blogs; social networking sites of political candidates, activists and commentators; multi-media political content; wikis, chat-rooms and online forums engaging in political
campaigning and commentary; online newsletters and petitions (Australian Centre for Public Communication, 2008, p. 8).

The thematic discussion in Chapter 4, however, highlights the significance of social practice and decentralized online communities (as identified in the perspectives of Lievrouw and Bruns) in analyzing the social movement practices and structures that emerge as new media and digital communications networks embed themselves within the “repertoires” (Garrett, 2006; Van Laer & Van Aelst, 2010) of political activists. This study’s thematic analysis explores the agency of activist groups in appropriating the structures of digital communications networks to create moments of democratic opportunity within the political process. When successful these new media activist practices can mobilise sufficient public engagement to transfer issues from the online sphere into offline public spaces (through marches, meetings, protests and demonstrations) and perhaps even into the realm of institutional politics and policy making.

2.7 Informationalism and Australian Politics

The growing prominence of the web as a democratic political forum and broadcast medium came strongly to the fore in the 2007 Australian Federal election with its active use in campaigning, including the appropriation of online platforms such as YouTube.com (for digital video content) by both the Liberal Party of Australia (http://au.youtube.com/user/LiberalParty07) and the Australian Labor Party (http://au.youtube.com/user/australianlabor).
Both parties used YouTube as a channel to post election campaign messages. It is notable that the strategy appears to follow a more traditional broadcast model, with YouTube used as an extension of television broadcasting. The comments facility is disabled across most of the videos of both Parties, indicating that the platform is not being used to engage the public in political dialogue. Viewing statistics are modest. For example, *Rudd and Labor’s Plan for a Positive Australia* ([http://www.youtube.com/watch?v=HfwiVR7VlWg](http://www.youtube.com/watch?v=HfwiVR7VlWg)) from October 2007 has been viewed 8,324 times (at 5 February 2014). Compare this to footage of a truck crashing in a tunnel on the M5 motorway in Sydney uploaded to the 9 News network’s YouTube channel ([https://www.youtube.com/watch?v=UPXNoTc-QTg](https://www.youtube.com/watch?v=UPXNoTc-QTg)), which has 651,380 views (at 5 February 2014). A video ([http://www.youtube.com/watch?v=ecs8lfEV34Q](http://www.youtube.com/watch?v=ecs8lfEV34Q)) from Australian Labor’s 2013 federal election campaign – *The choice today* – has even lower viewing statistics (1224 views at 5 February 2014). This study explores how those environmental groups within civil society as well as the activist groups on the fringe of the political spectrum make use of the new media content and platforms to generate networks of support and to assert a particular perception of environmental issues within the extended public sphere created by digital networks. In their analysis of how political parties in Australia, Austria, France, Germany, Italy and the UK use hyperlinks within their web sites, Ackland and Gibson (2013, p. 241) suggest that the environmental
movement and its political affiliates (political parties such as the Australian Greens) have a tendency to make extended use of the hyperlink functionality of the internet to build international and cross-sectoral networks of support. In exploring in detail a specific environmental campaign in an Australian context, this study provides more depth to Ackland and Gibson’s finding. The study extends understanding of the ways in which the environmental movement makes use of new media to build these networks of support.

There are ways in which the relationship between technology and democracy is increasingly symbiotic. The trend is evidenced by the formation of the Senator On-Line (SOL) political party (http://www.senatoronline.org.au/), a new arrival on the Australian political scene. SOL takes a completely new stance on political activity, moving away from the traditional ideologies of Australian politics towards what it views as a purer form of direct democracy. Its view of direct democracy is for everyone in Australia with access to the internet to be able to vote directly on every bill passing through Parliament (Senator On-Line, 2009). This is a radical vision of technologically enabled direct democracy, in a form and to an extent that would not have been possible without the internet. SOL is yet to win a seat in the federal parliament, however, its very existence is indicative of the potential impact of technology on the political process.
How do concepts such as Habermas’ public sphere, McLuhan & Fiore’s global village and Rheingold’s smart mobs apply to Australia as informational society? The Australian government presents Australian society as a model of pluralistic democracy, a multicultural and gender equal society that respects the rights of the individual in balance with social responsibility:

Australian society values respect for the freedom and dignity of the individual, freedom of religion, commitment to the rule of law, Parliamentary democracy, equality of men and women and a spirit of egalitarianism that embraces mutual respect, tolerance, fair play and compassion for those in need and pursuit of the public good (Department of Immigration and Citizenship, 2008 para. 4).

In the post-industrial age, in similarly positive terms Australia regards itself as an information economy, “one where information, knowledge and education are major inputs into business and social activity. It is not a separate ‘new’ economy – it is an economy in which the rapid development and diffusion of ICT-based innovation is transforming all sectors and all aspects of society” (Department of Communications Information Technology and the Arts, 2004).

With the election of the Australian Labor Party to government in 2007 this alignment with the information economy became more pronounced as a national policy agenda with the inauguration of the Department of Broadband, Communication and the Digital Economy (http://www.dbcde.gov.au/). Two significant strands of the Australia 2020 governmental policy summit (held in Canberra in April 2008) relate to:
• Ensuring that digital technologies are harnessed to improve consumer services, business productivity and the delivery of government services; and,

• Best preparing for a global economy that will increasingly be based upon advanced skills, advanced technology, low carbon energy sources and integration with global supply chains (Australian Government, 2008b).

This, in Castells’ terms, is Australia’s distinctively flavoured informational society, with the concomitant implications for forms of social interaction and control noted previously. Of significance here is a subtle redefinition of terms, which has taken place over time. Since 1997 ‘information economy’ had been the standard term used within Australian government policy for the convergence of economic and social activities around information and communications technologies. The shift to ‘digital economy’ places more of an emphasis on the importance of infrastructure and digital literacy in generating social capital, particularly given the remit of the Department of Broadband, Communications and the Digital Economy (Australian Government, 2009 para. 1): “Working toward a better future for all Australians and developing a world-class Australian communications and information technology sector”. It is interesting to note how, through the use of aspirational language, such a mission emphasises the significance of ICT and
the telecommunications infrastructure in relation to Australia’s social capital and quality of life.

The growing significance of the web in Australian politics is highlighted by Robert Ackland, Amanda Spink & Peter Bailey (2007) in broad terms, whilst the 2008 report on e-electioneering from the Australian Centre for Public Communication explores the use of emerging digital media in the 2007 Australian Federal election (Australian Centre for Public Communication, 2008). In their analysis of the .au (Australian) web domain, however, Ackland et al (2007 p.5) found a “predominance of commercial- and business-oriented material on the Australian public Web,” with non-commercial sites representing, at most, 22% of web sites within that domain. Whilst acknowledging the limited use by politicians, the Australian Centre for Public Communication (2008 p.11) found that “new media are being used more interactively and in novel ways by political parties and particularly by interest and activist groups”. This potential for challenges to mainstream culture is identified by Ackland et al (2007 p.1) as one of the social impacts of the web in relation to the expression of Australian national identity:

One social impact of the Web may therefore be in its use as a tool for promoting alternative conceptualisations of Australian national identity; the use of the Web in this way would parallel its extensive use in activist networks such as the global justice movement and the environmental movement who endeavour to bypass the mass media, which tend to highlight mainstream views.
2.8 Informationalism and Political Engagement

Burt and Taylor (2008, p. 1049) note the body of research describing a widespread downturn in political engagement through the formal structures of mature democracies, whilst acknowledging new forms of direct political activism:

There is growing evidence that citizens are choosing to engage democratically in new ways, ranging from signing petitions, writing to their elected representatives, participating in demonstrations, and taking part in consumer boycotts….These, and other examples, are indicative of a politically informed, concerned, and actively engaged citizenry, seeking and exercising forms of voice and influence within the polity. This seeking out by citizens of new forms of democratic engagement opens up strategic opportunities for voluntary organisations that have the capability to facilitate democratic participation in ways attractive to citizens, including online engagement.

Such fluid and directly participative forms of informed political engagement are well suited to networked online structures in that such configurations are able to pull citizens into active positions by providing tools for involvement, expression, collaboration, and the formation of relationships with like-minded individuals and organisations. Furthermore they see such participative engagement – which they describe as “active citizenship” (2008 p.1050) – as crucial to the integrity and legitimacy of democracy itself.

The Australian National Institute for Public Policy (2011) explores the relationship between internet usage and civic engagement in Australia. The Institute’s study produced several relevant findings in relation to the influence
of internet usage on democratic participation in Australian society. The study finds:

- that online interactions are beneficial in developing social capital by promoting interaction between individuals of different cultural backgrounds;
- that political activity is complementing rather than replacing, traditional forms of political activity;
- that those who use the internet more frequently are also more likely to be involved in offline political activity - internet use is linked with promoting both offline and online political engagement (Australian National Institute for Public Policy, 2011, pp. 6-12).

In this study, the work of Burt and Taylor (focusing on the voluntary sector in the UK) and the Australian National Institute for Public Policy (focusing on individual perceptions of the influence of internet usage on civic engagement) is developed further by exploring the practices of civil society organisations in using digital networks and new media to campaign within Australia’s political culture.

### 2.9 Informationalism, social movements and political action

A starting point for this study is an acknowledgement that a layer of digitally-mediated political engagement, participation, protest, action and conflict is an increasingly identifiable feature of the intersection of civil society
and the public sphere in informational societies. The seepage of political protest from Iran, Russia, China, Egypt and Syria across digital communications networks is illustrative, indicating that state attempts to control the leveraging of social media in political dissent are limited (Shirky, 2011). Loosely organized protest movements in Australia, Europe and the US employ extensive strategic use of digital networks to organize and campaign. There are a number of examples of new forms of direct protest and action that arise in an informational context. The Occupy Wall Street movement (and its variously titled incarnations across Europe) arose as a reaction to the economic crash, unemployment and austerity measures that resulted from the global financial crisis of 2008 (Žižek, 2013c). The Occupy movement maintains local protest collectives whilst sustaining public engagement and global networks of support across digital media spaces such as Facebook, Twitter and YouTube (Bennett & Segerberg, 2012, pp. 741-742). Through the movement’s occupation of these spaces it asserts a political narrative countering the dominant neoliberal discourse of economic rationalism (Žižek, 2013a, 2013b). The ‘Anonymous’ collective is an international group of hacker activists (or hacktivists) that engage in acts of computer sabotage predominantly against government and corporate targets. A feature of a distributed global collective is the absence of identifiable leadership (Morozov, 2012b). In November 2013 Anonymous mobilised public protest and civil unrest in Japan, Brazil, UK, Australia and New Zealand in opposition to political corruption, austerity
measures and state surveillance (SBS News, 2013). Wikileaks is a not-for-profit organisation that publishes documents through its online portal (at http://wikileaks.org/) that have been leaked by anonymous sources in order to enhance the accountability of state government regimes and commercial organisations. Wikileaks has been prominent in releasing documents sensitive to a number of international governments and corporations. Of particular high-profile has been the leaking of the Iraq war logs – classified US military field reports – to Wikileaks by US intelligence analyst Bradley Manning in 2010 (Leigh, 2010). These movements (such as Occupy), collectives (for example Anonymous) and civil society monitory agencies (for instance Wikileaks) provide models of the possibilities for political dissent and direct action both within and across informational societies.

The integration of digital networks within the structures of social and political movements plays a role in the rapidity of their mobilisation, as well as in generating networks of support beyond regional or national political contexts. Shirky (2011) highlights this role, noting their capacity to create the embryonic structures of a public sphere where none might have been available to civil society before. This study focuses on an established social and (increasingly) political movement in the context of Australian democracy, the environmental movement. Mario Diani (1992, p. 1) defines social movements as “networks of informal interactions between a plurality of individuals, groups and/or organisations, engaged in political or cultural
conflicts, on the basis of shared collective identities”. Despite writing before the current dominance of pervasive computing, Diani’s definition provides a valuable starting point for exploring the structures of political action in informational societies and provides a foundation upon which this study begins its investigation of the relationship between the environmental movement and digitally-mediated political action.

For political action in a globalised informational context, collective identity and international networks of solidarity and support become increasingly important. Diani (2000) notes that it is on these points that digital networks become of real strategic significance to social and political movements. This position is reflected by Jeroen Van Laer and Peter Van Aelst (2010) who note that as political and economic power shift to become more globalised dynamics, networks of digital communications assist broad coalitions of political mobilisation and action to follow suit. The rapidity of social movement mobilisation facilitated by digital networks of new media is problematic in terms of the sustainability of coherent political agendas. Two studies – from Summer Harlow and Dustin Harp (2011) and Andrew Pilny and Michelle Shumate (2011) – illustrate how digital communications, new media and social networks extend the capacity of social movements in political struggles within a context of globalised power structures. The study of Harlow and Harp touches on question of the sustainability of political action. Those activist groups with which Harlow and Harp worked (across the US and Central
America) prioritised the capacity of digital networks for drawing supporters into political action in offline, material contexts. It is this capacity for the transfer of political participation from the online to the offline context of political institutions that may be indicative of the sustainability of political action in informational societies.

Another strand of research on political action focuses on the structural change to mobilisation that arises from digitally-mediated political participation. In two studies, Bennett and Segerberg (2011, 2012) explore and articulate a shift in the dynamics of the relationship between the individual and the collective in political movements. Lance Bennett and Alexandra Segerberg (2011) suggest that a decline in collective political affiliations (to political parties for instance, or trade unions) is a result of globalisation and the dominant neoliberal political agendas of economically advanced democracies. They note that in this context political participation is often mobilised around lifestyle politics, with the personalization of social media as a key engagement strategy. Here they reflect the findings of Roman Gerodimos (2011, p. 236) who identifies an emerging paradigm of “civic consumerism” around lifestyle politics, both in terms of the mode of political engagement offered online by civil society organisations and in the attitudes of young people towards their stake in political participation.
Gerodimos identifies emotional ‘buy-in’ as a significant factor in the attitudes of younger people to political participation, possibly in response to skepticism around ideals of collectivity. A study of striking Dutch school children by Victor Bekkers, Henri Beunders, Arthur Edwards and Rebecca Moody (2011) highlights this point. The study identifies the mixed media capacity of new media in combination with digital transfer across social networks as providing powerful political narratives, with images, video and audio generating emotive responses and emotional engagement. They note the potential for the strategic use of these tools in political campaigning, offering agency to social and political movements in shaping how social issues are framed in the public sphere and potentially framing the agenda within which discussion of these issues takes place. The Kony2012 campaign of digital activism by the US–based not-for-profit organisation Invisible Children, generated massive global audiences across the web (Lotan, 2012), and illustrates the potential impact of such a strategy (in the online environment, if not within political institutions). For Bennett and Segerberg (2012) the looseness of digitally-enabled social networks, the prevailing online behaviours of content sharing and personalized processes of engagement with a digitally-mediated public sphere and the rapidity of mobilisation through campaigns around new media narratives, are becoming prominent features of political action in the instances of significant social unrest across contemporary society. For Lester and Hutchins (2009, p. 591) the extension of the public sphere
through digital networks and flows of new media content is of significant strategic value for the environmental movement:

The continuing diffusion and growth of the internet and digital media means that 'new media' are actually everyday media (at least in developed economies), and it is in these mechanisms and networked media practices that the real potential of online communication resides for environmental politics into the future. Both philosophically and practically, initiating a strategic move away from a reliance on news media outlets to publicize environmental messages pairs the discourse of ecological sustainability with informational sustainability."

This informational context of emerging modes of political participation and activism, as described in this chapter, brings these issues to the attention of information science.

**2.10 Informationalism and information science**

As a field of study, information science is already exploring aspects of these emerging social dynamics; through studies of the digital divide (Gurstein, 2003; Mervyn & Allen, 2012; Partridge, 2004; Wallis, 2005b; Yu, 2010); digitally-mediated information behaviours and practices (Bawden & Robinson, 2013; Cooke & Hall, 2013; Figuerola & Alonso Berrocal, 2013; Lloyd, Kennan, Thompson, & Asim Qayyum, 2013; Waller, 2011; Wallis, 2004), and the significance of digital literacy in informational societies (Jaeger, Bertot, Thompson, Katz, & DeCoster, 2012; Thompson, 2008; Wallis, 2003, 2005a). There is good reason for information science to do so. As Liangzhi Yu notes in her study of the relationship between information behaviour and
socio-economic disadvantage in China, “information continues to hold increasingly high-stakes in the information society” (2010).

A review of studies presented between 2009 and 2013 at: the International Conference on Conceptions of Library and Information Science (COLIS); the annual international conference of Association for Computing Machinery Special Interest Group on Information Retrieval (ACM SIGIR); and, the Association for Information Science and Technology (ASIST) Annual Meeting reveals an array of studies focusing on the intersections between social media and information practice.

Monica Lassi and Diane H. Sonnenwald (2010), presenting at COLIS, explore the emergence of virtual communities of academic researchers who collaborate across distance. They suggest that online collaboratories - containing social spaces researchers can interact, generate and share data - might enhance research cooperation in library and information science. Chern Li Liew’s (2013) study presented the COLIS audience with a set of design principles to frame “digital cultural heritage 2.0”. Liew notes the participatory turn across libraries, museums and archives, with many institutions implementing social media as a means of adding value to their collections and engaging their user communities in service development. In order to develop a culture of productive and sustainable online user participation Liew suggests that an overarching strategic framework is
needed; providing instructional scaffolding, moderation processes for user-generated content (2013, Engaging participants section, paras. 1-3) and recognition valuing and incentivising community contributions (2013, Encouraging participation section, paras. 1-3). Also presented at COLIS 2013 was the study of Paul Scifleet, Maureen Henninger and Kathryn H. Albright (2013). In their study Scifleet et al. investigate the use of social media as a data source in library and information science research. Using a combination of qualitative content analysis and quantitative supporting data, Scifleet et al. explore the communicative and symbolic meaning of social media streams arising from a natural disaster state of emergency. Of particular interest here is their assertion (Scifleet, et al., 2013, Conclusion section, para. 1) that social media constitute “a significant social and cultural record” of relevance to the library and information science research agenda, which can be selectively sampled for in depth qualitative analysis.

Studies relating to social networks at ACM SIGIR focus on emerging innovations around models of information behaviour and retrieval within the structures of social media. Ionnis Konstas, Vassilios Stathopoulos and Joemon M. Jose (2009) investigate the collaborative recommendation features that are a common feature of many online social media environments. These recommendation systems store aggregated data relating to the social networks to which users belong.
From these data extrapolations are made as to the kinds of personalised services or products that might enhance the individual user’s experience. Examples of this kind of collaborative recommendation include: system generated suggestions of possible personal connections to add to social networks (potential Facebook friends for instance); specific online postings that may be of interest (such as specific postings on Twitter); and, the suggestion of digital media content (such as YouTube videos similar to those that might have been viewed in the past). Konstas et al. (2009, p. 202) suggest that this kind of functionality is likely to become increasingly common in social networking web sites, producing: “a shift of the established at the moment paradigm of ‘people who like this also like that’ to the more social ‘people who like me also like this’”. Wouter Weerkamp’s (2010) work, also presented at ACM SIGIR, notes the specific information retrieval challenges that emerge from the public and personal communications published on social media: informal spelling and grammar; specifically contextual language use (for example abbreviations such as ‘lol’ for ‘laugh out loud’); and, the difficulty of identifying topic. Zhiheng Xu, Yang Zhang, Yao Wu and Qing Yang (2012) report (at ACM SIGIR 2012) on their work towards the development of a model that replicates social media user posting behaviour. Xu et al. (2012, p. 545) suggest that there are combined
influences on posting behaviour from breaking news and the posts of friends within social networks.

A number of studies presented at ASIST explore emerging patterns of information behaviour across social media networks. Lupita O’Brien, Pamela Read, Jacqueline Woolcott, Chirag Shah (2011) investigate the extent to which younger users of social networking environment are conscious of their privacy. They note (O’Brien, et al., 2011, Conclusion section, paras. 2-9) that the young people interviewed for their study are highly conscious of the management of their online identity; learning privacy conscious practices from each other and employing these across social media. June Ahn, Lauren K. Bivona and Jeffrey DiScala (2011) explore the complexities around the development of social media policies within schools. The findings of their study suggest that social media use can promote learning and literacy where the use of new media is framed as encouraging learning goals and behaviours (Ahn, et al., 2011, Discussion section, para. 6).

Anatoliy Gruzd, Kathleen Staves and Amanda Wilk (2011) report on their study of social media use by academics. Gruzd et al. (2011, Introduction section, paras. 1-3) note that social media are increasingly incorporated into the scholarly communication process. Their study’s focus is on the role that social media use plays in academic tenure and promotion. Gruzd et al. (2011, Discussion and Conclusion section,
paras. 2-7) find that whilst the use of social media by academics is not specifically recognised within the tenure and promotion process, there is evidence that several institutions have tenure policies with sufficient flexibility around their definitions of scholarly activity and community service to include it. Jeanine Finn and Homero Gil de Zuniga (2011) investigate authority, credibility and social capital in the participatory culture of web 2.0. They frame (Finn & de Zuniga, 2011, Introduction section, paras. 3-4) participatory online information as situated within a social context in which trust mediators information interactions. Their findings suggest (2011, Conclusion and Implications for Future Research section, para. 1) that further research into the role of trust and credibility in knowledge creation is vital in an era of distributed and digitally-mediated information exchanges. At ASIST 2012 Jutta Haider, Isto Huvila, Andrew Cox, Helena Francke and Hazel Hall (2012) moderated a panel exploring the impact of social media on information theory and practice. The panel noted: the shifting patterns of individual and organisational use of information driven by social media; the relationship between social media and social identity; and, the importance of social practice theory as a lens through which to examine the use of new media. A study by Randolph Chun Ho Chan, Samuel Kai Wah Chu, Celina Wing Yi Lee, Bob Kim To Chan and Chun Kit Leung (2013) investigates the use of social media for knowledge
management, focusing in particular on a comparison between blogs and the social networking environment Facebook. They find (2013, Significance section, paras. 2-3) that the functionality offered by Facebook enhances knowledge sharing and reflection, assisted through the feedback provided by social networks within the environment. Rhonda McEwen and Kathleen Scheaffer (2013) explore the ways in which Facebook is used as a space for mourning and remembering the deceased. They find (2013, Discussion section, para. 3) that continuing engagement with the Facebook account of the deceased can provide a space where mourners can express their grief and offer each other mutual support, through the posting of messages, comments and images. McEwan and Scheaffer also note (2013, Conclusion section, paras. 1-4) the complexities in relation to online identity around Facebook’s policy of permitting family or friends to take over the curation of the deceased’s Facebook profile. Lisa M. Given, Eric Forcier and Dinesh Rathi (2013) study the use of social media by Non-Profit Organisations (NPOs). They find that NPOs use social media for a number of communication and knowledge management purposes. In particular the organisations involved in their study employed social media for marketing, fundraising and to present a narrative as to the NPO’s mission (Given, et al., 2013, Conclusion section, paras. 1-2). Given et al. (2013, Conclusion section, para. 3) note another significant
finding, the importance for return on investment of a communications
strategy that articulates the aims of the NPO in terms of how it
employs social media.

Kieran Mervyn and David Allen (2012) explore the social and
spatial fluidity of information behaviour that emerges in the context of
information systems, mobile devices and wireless networks. They find
that “new forms of social relations and social practice occur within
these ad hoc, mobile information grounds” (2012, p. 1137). Helen
beyond conceptualising the digital divide in terms of a deficit of access
to technology. Both Partridge (2004, p. 6) and Gurstein (2003
Conclusion section para.1) aim to shift the focus towards effective use
of digital communications technologies at a community level in order
to drive socio-economic development. In my own, earlier work (Wallis,
2005b), I noted the significance of this effective use of digital
technologies for engaged citizenship in the context of the UK
government’s drive towards e-government (a model of government as
online provider of services). Several studies (Jaeger, et al., 2012;
Thompson, 2008; Wallis, 2003, 2005a) highlight the importance for
both socio-economic inclusion and engaged citizenship of the digital
literacy that is required to engage with a digitally-mediated
information environment. These studies indicate that information
science research can assist in identifying the informational contours of social disadvantage and possible pathways towards inclusion.

Exploration of the social practices and information behaviours that emerge from digitally-mediated interaction broadens understanding of the impact of this informational context. David Bawden and Lyn Robinson (2013) suggest that there is a strong case for exploring the information behaviour of both individuals and the networks of sociality and connectedness in which they interact. Annemaree Lloyd, Mary Anne Kennan, Kim Thompson and Asim Qayyum explore contexts of disrupted connection in their study of the challenges faced by refugees in adapting to a new “information landscape” in Australia (2013, p. 128). I have also highlighted (Wallis, 2004) the importance of inclusive web design practices that enhance the accessibility of web sites for those with sensory, cognitive or physical disability. Louise Cooke and Hazel Hall (2013) explore the significance of social interaction (through workshops and social media) in strengthening networks and knowledge transfer across Library and Information Science researchers and practitioners. Carlos Figuerola and José Alonso Berrocal (2013) examine this network paradigm at an organisational level; investigating the patterns of interlinking between the web sites of 100 major European universities. For Figuerola and Berrocal the creation of hyperlinks between these universities
constitutes a form of social practice within “network communities” (2013, p. 630). In her study, Vivienne Waller (2011) explores usage of the search engine Google by the Australian public. Waller (2011, p. 767) finds that Google is predominantly used for searching on topics relating to popular culture and e-commerce, rather than as a means of engaging with contemporary political issues.

Mark Graham, Ralph Schroeder and Greg Taylor (2013) note that there is a significant gap in research that explores the social aspects of intensive information practices and digital information gateways (such as search engines). They note that contemporary knowledge is structured by search algorithms and online networks in ways that create power dynamics which are, as yet, relatively unexplored.

Building on these emerging explorations of social practices both enabled and constrained by digital media, the study described in this thesis develops the information science research agenda through an investigation of the ways in which the environmental movement engages in activist practices using new media across online networks within the context of a specific environmental conflict. In doing so the study develops an approach to research that engages with the informational context of contemporary social and political practices. In this context, the social and organisational behaviours of digitally-
mediated interaction and the properties of digital networks are of particular interest. The study does not limit itself to the digital sphere however. Practices of digital activism are located within a broader context of political action. The study therefore analyses the role that digitally-mediated activism plays in transferring a political campaign into policy formulation and legislation.

The study explores how social actors (individuals and organisations) interact online in the context of contemporary political activism. There are two elements that become entwined in research of this nature. One is analysis of the structures of the social spaces of digital networks. The other is around the practices and social behaviours that emerge from digitally-mediated social and organisational appropriation of these spaces. Chapter 3 articulates how the study identifies and analyses these elements of current political practice.
3.1 Introduction

The impact of the proliferation of digital communications networks on political movements (such as the environmental movement) is a social phenomenon that has produced speculation on the potential of these technologies (see for instance Shirky, 2011) to enhance democratic politics. The influence and association of digital communications networks with prominent social upheavals such as the Arab Spring have done nothing to minimize such suggestions; however, theorising around their political impact is embryonic. Theory on this phenomenon comes from the range of disciplinary areas highlighted in Chapter 2, with influences and metaphors such as the public sphere of Habermas (1989) and the global village of McLuhan (M. McLuhan & Fiore, 1968). This study explores this phenomenon - i.e., the relationship of political action and digital networks - in a specifically local context; an environmental conflict emerging around the protection of native forests and forestry on Australia’s island state of Tasmania was chosen as the focus of the study. This context offered a valuable setting in which to situate the study as a range of political groups have been involved in the conflict, from representative political parties through to direct action environmental activists. This range offered scope to explore a spectrum of online political action, from political lobbying through to tree-top sit-ins. This chapter
outlines the research design that informs the study, as well as details related to data collection and analysis.

With a view to gaining some depth of understanding around the social processes that underlie digitally-mediated political participation (as noted in Chapter 1), the study is driven by three research questions:

1. How can we map political participation across networked space?

2. How do political movements use the structures of networked space, such as hyperlinking, to develop a collective identity and mobilise participation?

3. How do political actors within these movements solicit, encourage and facilitate wider public participation through the affordances of web and social media tools?

4. Investigating questions such as these involves a complex interplay between the researcher and the research participants. The aspiration is for this interplay to produce communicable description of the processes and understandings of actors involved in political action around this specific environmental conflict. Foregrounding the role of the researcher here is crucial; as mediator, synthesizer, interpreter and communicator, the researcher becomes the primary instrument by which the process of research is undertaken. All of these issues are discussed in the sections that follow.
3.1 Qualitative research

This study is framed by a view that knowledge and meaning are socially constructed (Crotty, 1998; Denzin & Lincoln, 2005). This view has significant implications for the research process. It asserts that the reality of phenomena is not already ‘there’, waiting to be discovered by the intrepid researcher. Rather, this constructivist view of phenomena suggests that meaning may be created in multiple ways dependent on context. According to this view, meaning emerges from the interplay between phenomena and their interpretation by an observer. The derivation of meaning from the interaction between observed phenomena and observer foregrounds the axiological position of the researcher (Lincoln & Guba, 1985; Owen, 2008), as interpreter of phenomena. Multiple interpretations of phenomena become possible therefore, as different observers may vary in how they construct meaning.

A constructivist epistemological framing of the process of meaning creation highlights the importance of the context in which human behaviour occurs. The context of human interactions shapes how meaning is constructed from those interactions, within that particular setting. Research that is framed by a constructivist epistemology acknowledges the influence of the natural setting of phenomena on the interaction being observed and, by extension, on the process of interpretation (Lincoln & Guba, 1985, p. 39; Owen, 2008, p. 547).
Qualitative methods are helpful in research framed by this constructivist perspective in that they facilitate an inductive process of investigation and an emergent mode of analysis. This does not prescribe the use of quantitative data within a broader process of analysis and interpretation. One set of data can be helpful in supporting or confirming the interpretation of another. Given (2008, p. 717) notes that “even deeply committed constructivists normally have not objected to using descriptive statistics to triangulate qualitative data”. Interpretation arises from the interplay between observer, the observed phenomena and the setting in which observation and phenomena take place (Owen, 2008). Each (observer, observed phenomena and setting) influences the creation of meaning. Denzin and Lincoln note that it is through interpretive research practice that the exploration of social interaction in a naturalistic setting becomes meaningful to others:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible...This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2005, p. 3)

Two methodological frameworks have been used in this study to explore, interpret and describe emergent political practice across digital communications networks – i.e., grounded theory and network analysis. Here the study builds on the call to arms of Caiani and Wagemann, who suggest
that qualitative studies of political mobilisation across digital networks are needed to provide a deeper understanding of the social processes involved.

It is the view of Caiani and Wagemann that the increasing role of the internet within civil society is of crucial importance in exploring evolving social processes. They suggest that more qualitative analytic tools might be of benefit in research of this nature, particularly when exploring the role of the internet in the identity formation of groups and individuals, and also in collective action. This study takes up the challenge laid down by Caiani & Wagemann in a number of ways:

1. Through its use of grounded theory methodology and digital research methods to explore online networks; and furthermore, by taking the level of analysis a stage deeper, by applying a phase of qualitative content analysis to the sample of web sites making up the network;

2. By defining networked politics as a process involving more loosely and less ideologically driven coalitions across civil society supported and shaped by networks of digital communications;

3. By exploring how the network affects the shape of issue politics within a specific political context – focusing in on the .au web domain to identify
networked political action around social issues of particular relevance to that site of social activity (i.e., Caiani and Wagemann’s study compared far right political identity and action across two specific social and geographical contexts). In this study the investigation of issue-based political action is more relevant to the networked environment than the exploration of strong ideological divisions, as an issues-based study is more reflective of the nature of a public sphere in which competing interests across civil society act as stakeholders.

The following sections outline the methodological frameworks that have been used to drive the development of research design.

3.2 Methodology

Section 3.2 introduces the two paradigms that frame the study’s research design; constructivist grounded theory and network analysis. Sections 3.3 (Data Collection) and 3.4 (Data Analysis) describe the techniques that were used to apply these frameworks within this study’s research setting.

3.2.1 Constructivist grounded theory

Constructivist grounded theory is a strand of the grounded theory methodology that has evolved from the original defining work of Barney Glaser and Anselm Strauss in their 1967 *The Discovery of Grounded Theory*. Widely used in research that focuses on professional practice such as information science, education, psychology, nursing, public health, social
work, accounting, business studies and environmental management (Berterö, 2012; Ellis, 1993; González-Teruel & Abad-García, 2012; Heath & Cowley, 2004; Julien & Genuis, 2009; McKnight, 2007; Mills, Bonner, & Francis, 2006; Mutshewa, 2010; Nazari & Webber, 2011; Seldén, 2005; Tan, 2010), constructivist grounded theory offers a methodology for generating theory from an ontologically relativistic standpoint. For Glaser and Strauss, grounded theory afforded a way of allowing for “the discovery of theory from data” (1967, p. 1). This original formulation of the methodology implies an objectivism in the suggestion that theory is there somewhere in the data, waiting to be discovered (Heath & Cowley, 2004). A student of Glaser and Strauss, Kathy Charmaz, has developed a strand of grounded theory that is firmly socially constructivist in perspective (Charmaz, 2005, 2008, 2010; Charmaz & Bryant, 2008; Mills, et al., 2006). Charmaz asserts a more interpretive perspective on the emergence of theory. Distancing herself from Glaser and Strauss, Charmaz argues: “Unlike their position, I assume that neither data nor theories are discovered. Rather, we are part of the world we study and the data we collect. We construct our grounded theories through our past and present involvements and interactions with people, perspective, and research practices” (2006, p. 10).

Within information science, this constructivist strand of grounded theory has been applied in studies of information behaviour (see for instance Ellis, 1993; McKnight, 2007; Mutshewa, 2010; Nazari & Webber, 2011) and the

Essential elements of a grounded theory methodology, Charmaz suggests, are: the minimising of preconceived ideas around both research problem and data; a simultaneous process of data collection and analysis, each informing the other; the importance of openness to different understandings of the data; and, a focus in data analysis on the construction of theory (Charmaz, 2010, p. 155). Note taking (which Charmaz calls memo-writing) throughout the research study assists in the development of exploratory ideas around the construction of meaning from the data. Jane Mills, Ann Bonner and Karen Francis (2006, p. 5) emphasise the use of diagrams alongside memo-writing, as an aid in generating ways of understanding the data.

Grounded theory as a constructivist methodology focuses on relationships and underlying social processes in the research setting (Charmaz, 2005; Mills, et al., 2006; N.Thompson, Cole, & Nitzarim, 2012). Rather than working with samples that might produce generalisable findings, in
constructivist grounded research sampling is focused on the development of
theory. Sampling is purposive in order to enhance the relevance of findings
and to aid in theory generation (Lincoln & Guba, 1985, p. 102; Owen, 2008, p.
concept of purposive sampling. For Charmaz sampling can be undertaken not
only at the point of data collection but also from data throughout the study as
a way of developing a theoretical analysis. Charmaz (2010, p. 166) describes
this process as “theoretical sampling”. An iterative process of data collection
and analysis, each informing the other, enables the researcher to develop
conceptual categories and analytic themes. Constructivist grounded theorists,
such as Charmaz, note the centrality of interpretation within the approach;
“the questions we ask of the empirical world frame what we know of it. In
short, we share in constructing what we define as data. Similarly, our
conceptual categories arise through our interpretations of data rather than
emanating from them or from our methodological practices” (Charmaz, 2005,
p. 510). As a constructivist methodology, Charmaz implies grounded theory is
an attempt to generate theory from data whilst acknowledging the positioning
of the researcher in the process of interpretation. Mills et al. (2006) note the
significance of this positioning - as interpreters and narrators - for researchers
using constructivist grounded theory. They suggest (Mills, et al., 2006, p. 2)
that constructivist grounded theory “actively repositions the researcher as the
author of a reconstruction of experience and meaning”.

118
3.2.1.1 Data analysis in constructivist grounded theory

Participant interviewing and observation are typical data collection methods for constructivist grounded theorists in information science (see for instance Julien & Genuis, 2009; McKnight, 2007; Tan, 2010), however there is flexibility within the methodology for what Charmaz (2010, p. 168) describes as “creativity” in relation to methods. This is a significant point in the context of this study, which draws its data from the web rather than from participant interviews and uses multiple approaches to memo-writing and diagramming (the process of data collection and analysis is described in sections 3.3 and 3.4). Lincoln and Guba, similar to Charmaz, suggest that a flexible approach to research study design – what they describe as “emergent design” (Lincoln & Guba, 1985, p. 208) - is an important element in research from a constructivist perspective in that such an approach can respond to the unknown, unpredictable nature of a research setting. The study thus situates itself within the “constellation of methods” (Charmaz, 2010, p. 161) that constitute constructivist grounded theory in research practice. The defining elements of Charmaz’s constructivist grounded theory are: “(1) the systematic, active scrutiny of data and (2) the successive development and checking of categories” (Charmaz, 2010, p. 161). The constructivist grounded theorist enacts this scrutiny of the data through memo-writing and coding of the data, through the development of analytic categories, and through a constant comparison between each.
In order to avoid super-imposing structural concepts in this exploration of the role of information and communications technologies within processes of political action, this study focuses not on the technology but on how it is used and how the multiple actors within this conflict display agency in appropriating the communicative and campaigning potential of digital networks and new media. Such a focus must acknowledge the multiple positioning of these actors by allowing their narratives to emerge within the narrative that the study ultimately produces. In this way the project acknowledges that the findings of the research are influenced by the actors involved, as well as the researcher (Mills, et al., 2006; Owen, 2008). The studied actors involved in the study include local community and environmental groups, their regional, national and international sympathizers, political parties, media, forestry industry, state and federal government. From the multiple positioning and realities of this mélange of stakeholders, the results present a narrative that describes practices of digitally-mediated political involvement in this particular setting, at this particular time. Here, then, a researcher can offer a description to the wider communities of researchers and stakeholders, suggesting ‘this is how I interpret what is happening in this setting’.

The specificity of the setting and of its interpretation is highlighted in the study through: the local context; the stakeholders involved; and, the inter-relationships and actions of those stakeholders and processes underpinning
their actions. The aim here is to produce a depth of understanding of this setting, whilst acknowledging the investigator’s role in interpreting and articulating the actions, relationships and processes that intersect in synergy and conflict (Charmaz, 2005). The analysis arises not from an external data source but in close conjunction with the meaning that the actors themselves ascribe to their actions in this setting. Here the study situates itself within the constructivist strand of qualitative research (Denzin & Lincoln, 2005, p. 24), which emphasises subjectivity, interpretation and the importance of the particularities of the research setting. The study’s conclusions arise from the specificity of the setting. The subjectivity of the researcher is implicit in this process of analysis, interpretation and narration (Tan, 2010). The value of this subjectivity is the richness of description that can be produced, with findings nuanced from the specifics of the research setting yet sufficiently theorized so as to enable comparison of similar processes in alternate circumstances.

Typically in this approach, the researcher codes data as part of the process of analysis. This processes of content analysis generates qualitative categories that describe meaning, action and process within the context of the study. Codes are used to represent these categories, as they emerge through this process, to provide the researcher with the framework upon which to build conceptual understanding and emergent theory. Coding is iterative, continuing in phases. In this study, as outlined later in this chapter, two phases of coding were necessary to provide sufficient understanding and
development of analytic themes from the data, i.e., “to make sense out of a local situation” (Denzin & Lincoln, 2005, p. 17).

Charmaz emphasizes the importance for the researcher of writing throughout this period of analysis. As coding makes explicit the researcher’s interpretations of the setting, writing “leads to further discoveries and deeper insights; it furthers inquiry” (Charmaz, 2005, p. 529). Delving deeper is important for grounded theorists, so that through iterative stages of coding, analysis and writing the interpretive “thick description” of the setting, famously called for by anthropologist Clifford Geertz (1973), might emerge. This iterative process allows for emerging analytic concepts to be refined as the researcher becomes increasingly familiar with his/her data. The value in this is openness to conceptual flexibility and data-driven direction in theorising. Charmaz (2010, p. 166) suggests that “Grounded theorists cannot anticipate where their theoretical inquiry will take them”. An iterative and simultaneous process of data collection and analysis allows emerging ideas to be compared to the data. It also enables reflexivity within the process of analysis, through which the researcher may acknowledge the influences and subjectivity (for instance personal experiences, social conditioning) that he/she brings to the project. Through this process the researcher acknowledges the constructivism implicit in his/her analysis, findings and theories.
3.2.1.2 Rigour in constructivist grounded theory

The qualitative paradigm’s “ongoing critique” of the search for an external, measurable reality (Denzin & Lincoln, 2005, p. 10) raises questions around how research that has taken a grounded theory approach may be evaluated by others. Lincoln and Guba (1985, p. 289) suggest that constructivist research in a naturalistic setting should strive for “trustworthiness” as opposed to the measure of validity commonly associated with positivist research projects. They offer four parameters by which the trustworthiness of a constructivist study might be evaluated: that it be credible; transferable; dependable; and, confirmable. Charmaz (2005, p. 528) suggests specific criteria for the evaluation of constructivist grounded theory research: that it be both credible and original; that it resonates with the studied phenomena; and, that it is useful to society.

Articulation of what both Charmaz (2005, p. 528) and Denzin and Lincoln (2005, p. 24) describe as the overarching “credibility” of the grounded theory approach is vital here. What they refer to is the articulation in grounded theory research of “sufficiency” (Charmaz, 2005, p. 528) in the relationships between setting, data, interpretation and analysis. Charmaz (2010, p. 167) later describes this sufficiency as “theoretical saturation”. The narrative of the grounded theorist must convey sufficient linkages between each (data, interpretation, and analysis) to allow for independent evaluation of the researcher’s findings. The researcher’s narrative must convey the
credibility, originality, resonance and usefulness of the study. The focus on context and setting and the acknowledgement of interpretation within the process of analysis are factors that result in research that is both specific and subjective. How can this specificity be of use, be transferable (Charmaz, 2005, p. 528) in a broader context? It is this subjectivity that is of value here in that it may provide original insight, perhaps extending, clarifying or even challenging prevailing theory. The rich understanding that comes from the depth of the grounded theory approach has value in relation to similar, comparable contexts. Such comparison of local settings can identify broader patterns or processes of interaction. This study, for instance, explores comparable international studies of networked political activism in Chapter 4 in order to enhance the analysis.

The project was designed to explore the interactions between environmental groups and, between these groups and their wider publics; digital research methods were used through cycles of data collection and analysis. By appropriating the algorithms and metaphors of the web in the research design, the study achieves authenticity within the context of the setting, the structures and prevailing practices and behaviours under analysis. The study is embedded in this setting, providing rich description of the ways in which environmental groups exploit the affordances of digital networks and new media in campaigns of political action.
3.2.2 Network analysis

Another methodological approach that shapes the design of this study is network analysis, which explores the relational and communicative structures that interconnect social and organisational actors online. Network analysis has evolved from the study of social networks that establish and maintain communities. Sociologist Barry Wellman (Marin & Wellman, 2011; 1988; Wellman et al., 2003) has pioneered the extension of this approach into the sphere of online relational patterns and structures. As internet penetration increases (in a country such as Australia for instance), modes of communication and community are extended by the emerging online behaviours (linking, ‘friending’, ‘liking’). Anatoliy Gruzd, Wellman and Yuri Takhtevey (2011) note how a social networking platform (Twitter) can extend how we might think about the idea of community to incorporate the relational patterns that become possible using digital communications technologies.

This approach can be applied at an organisational level. Carlos Figuerola and Jose Alonso Berrocal (2013) for instance have explored the online relational patterns between European universities using hyperlink data from their web sites. It has become commonplace for an organisation to have a web site; for an individual to have a social networking profile on a site such as Facebook. As digital communications technologies continue to embed themselves into the fabric of our daily lives, our social and organisational practices become increasingly digitally mediated. There is a convergence between social
networks of interpersonal relating and networks of digital communications. A
dichotomy – a “digital dualism” (Jurgenson, 2011, para. 2) - between the real
and the virtual becomes less straightforward to distinguish. The proliferation
of social and organisational interaction with online presence provides an
opportunity to explore the internet, not as a repository of digital documents
but as a web of social and organisational networks, a social phenomenon.

Analysis of these networks of relationship and interaction can be
revealing, assisting us in understanding how the overlay of digital
communications and new media onto existing and new social and
organisational networks relates to emergent social and organisational
practices within a wider socio-cultural context. Research that explores digital
data-sets to investigate patterns of inter-relating within online spaces is
broadly described as network analysis. Network analysis involves the
investigation of the networks of digital actors (organisations and individuals)
that are created by hyperlinks and other forms of socio-technical relational
structure (such as the connective properties common to social networking
web sites). Software can be used to explore and represent these networked
relationships, assisting the researcher in investigating social structures as they
are reflected online. The patterns of hyperlinks to and from web sites may
provide meaningful data here, or the flow of messages across social
networking platforms such as Twitter (a popular micro-blogging site). Gruzd,
Wellman & Takhteyev (2011) for instance, use data from Twitter to explore
how the concept of community has evolved to incorporate the online extension of relationship beyond the co-present and physical to the distributed and networked. Such analysis can provide insight into socio-cultural events of significance. Gilad Lotan, Erhardt Graeff, Mike Ananny, Devin Gaffney, Ian Pearce & danah boyd (2011) have analysed Twitter data (the flow of messages across users of the platform) to identify ways in which the events of the Arab Spring in Tunisia and Egypt were amplified and rapidly distributed to a global audience via networks of Twitter users. For Michelle Shumate and Lori Dewitt the interconnected networks that these patterns of online relating create are of interest in exploring how social structures impact on the formation of the web:

Hyperlink networks have meaning and are fundamental elements of community creation. Foundational to the understanding that hyperlinks represent communities is their intentionality. These links do not happen automatically or at random. The decision to link one organisation with another is a strategic communicative choice (Shumate & Dewitt, 2008, p. 407).

Analysis of the patterns of interconnection that are enabled by the practice of hyperlinking between web sites suggest that such practices are more than informational, they can also be relational. The hyperlink in this relational sense may convey symbolic meaning; affiliation, deference, even hostility. Studies of the hyperlinking practices between environmental groups suggest that these linkages enable diverse groups to generate a collective identity on the web, to identify who is ‘in’ and who is ‘out’. In their
exploration of climate change debate online, Rogers and Marres (2000, pp. 156-157) note the significance of meaningful reciprocation in participation: “Greenpeace does not link to Shell but Shell links to Greenpeace”. This acknowledgement of participation within networks of online debate and campaigning is significant not only for the participants themselves but also, due to the public nature of the web, to those engaging with online media in order to inform and involve themselves in the issue (through search engines or social media sites, for example). The context within which hyperlink patterns and practices are being explored can alter how these patterns and practices are interpreted. In political communication for instance, hyperlinks may signify a poor view or negative relationship between organisations. Robert Ackland & Rachel Gibson (2013, p. 233) note that whilst social movements use hyperlinked inter-connection as identity reinforcement, for political parties hyperlinks can act as “rejection devices” representative of a negative symbolic relationship. Context, as always, is everything.

Network analysis can draw out significant factors in the pattern of relationship between online actors, however the data are not deterministic. An understanding of specificity of context and the acknowledgement of interpretation are essential in research if meaning is to be derived. boyd and Crawford (2012) highlight the importance of a nuanced interpretation of the large-scale data sets that can be harvested from digital communications networks and new media as presenting one of the “critical questions for big
data”. They elaborate (boyd & Crawford, 2012, pp. 668-671): “Interpretation is at the center of data analysis...Data analysis is most effective when researchers take account of the complex methodological processes that underlie the analysis of that data...Data are not generic. There is value to analyzing data abstractions, yet retaining context remains critical”.

The value of digital research methodologies such as network analysis is that they are grounded in the milieu of digital communications. Network analysis is an approach that operates within the data structures of the web, appropriating the algorithms of search engines and social media environments to produce rich data. Visualisation – the graphical representation of the data set - is often used to assist in analysis, as an aid in the identification of patterns within the data and as a basis for further exploration.

Han Woo Park and Mike Thelwall have noted the lack of extended investigation into technologically supported social networks in terms of the meaning that such connections create: “there is a lack of investigation into social networks among the nodes. In other words, no systematic examination of how hyperlink networks among the Web sites...reflect social relations among their producers has been undertaken” (2003, Social movements section, para. 2). Chapter 2 noted the application of social network analysis to the study of political activity online by far right groups from both Italy and Germany (Caiani & Wagemann, 2009). Six years after the work of Park and
Thelwall (2003), Caiani and Wagemann note the apparent paradox between social network analysis as an appropriate method of investigation and its infrequent use in social internet research, particularly relating to the use of the medium by those on the fringes of the political spectrum; they note that “even though the Internet has become an important component of social life and despite its obviously reticular characteristics, the instruments of social network analysis have not been frequently applied to the study of this new medium and even less so for its use by extremist groups” (Caiani & Wagemann, 2009, p.68). They, similar to Castells (2012, pp. 10-18), emphasise the meaning that networks create, functioning as spaces in which values are shared and overlapping identities created, framed and maintained. Not only does the network connect values and identities, it facilitates action. Shared space and interconnection enable mobilisation, campaigning, resource sharing, dissemination of information and multiple media perspectives.

3.2.2.1 Using network analysis to explore online democratic practice

In the realm of political action, digital networks of communication, mobilisation and identity formation become increasingly significant. In their study Caiani and Wagemann (2009, p. 95) acknowledge this whilst noting the necessity for combinations of network analysis with other forms of qualitative analysis in order to highlight significant dynamics:

If the Internet is assuming an increasingly important role for civil society organisations, including extremist ones, a crucial subject for
future research would be to investigate in more detail, and also with more qualitative tools of analysis, the role of this medium as a potential substitute for important face-to-face social processes, namely its role in the construction of extreme right identity, as well as in terms of mobilisation resources and action strategies.

How can the nature of online networks of identity and action be explored effectively? The identification of networks enables researchers to examine the role that individual organisations play online within this interconnected context. Network analysis also allows researchers to explore the landscape of civil society stakeholder viewpoints (organisations’ and individuals’) on specific issues at specific points in time. Bruns (2007), for example, has used this approach to investigate the online debate around the (now freed) Australian Guantanamo detainee, David Hicks and, by extension, the role of political blogging in the public sphere.

Network analysis is an emerging methodology in Information Science (Schultz-Jones, 2009). It has been suggested that the analysis of hyperlink networks between web sites is “a new and growing area of interest” (Park, 2003, p. 50). For Park (2003, p. 58) the value in this approach is that “hyperlink analysis not only reveals the social structure of the Internet, but also can be used to examine the communication among actors”. Laura Garton, Caroline Haythornthwaite and Barry Wellman (1997) have emphasized the importance of social networks in the study of online interactions between social actors. Haythornthwaite (1998) has demonstrated the value of this approach in her analysis of how distance education students experience online
learning. Louise Cooke and Hazel Hall (2013) have used social network analysis to explore how the combination of workshops and social media can enhance library and information science researcher and practitioner networks. Anatoliy Gruzd and Caroline Haythornthwaite (2013) have discussed how social network analysis can be used to explore the structures of online communities, focusing on the social media platform Twitter. David Wilkinson, Gareth Harries, Mike Thelwall and Liz Price (2003) and Thelwall (2003) study the motivations for the inclusion of hyperlinks within academic web sites by employing network analysis. As Park (2003, p. 58) suggests in these studies Wilkinson, Harries, Thelwall and Price (2003) and Thelwall (2003) focus on the hyperlink as a communicative structure. Figuerola and Berrocal (2013) draw on these studies (Thelwall, 2003; Wilkinson, et al., 2003) in their own network analysis of patterns of interlinking between European universities. They suggest that the analysis of hyperlink patterns between these universities demonstrates a tendency towards geographic-linguistic affiliation in the establishment of hyperlinks; European universities “tend to link preferentially with others of their own country” (2013, p. 639).

Park and Thelwall (2003) note that social network analysis transfers well as a mode of investigating a hyperlinked digital environment, where structure is created through links, which are in effect constructed relational connections (one-to-one, one-to-many, many-to-many). As a methodology it provides indications of the choices, the communicative and relational agendas
that social actors have in networking (hyperlinking) with one another. In terms of social interaction, the complexity of these information ecologies can only be captured and understood if each component of that ecology can be contextualized in relation to its wider environment. In their work Park and Thelwell (2003, Introduction section, para. 4) note the significance of the wider hyperlinked environment in the process of online content analysis:

Given this interweaving hyperlinking structure, it may be necessary to recognise individual web sites as mutually dependent entities...If a content analysis of individual Web sites does not include materials to which the Web site under investigation hyperlinks...it fails to see the structures in the environment that afford social navigation.

They suggest that, as a methodology for exploring digital space, network analysis offers an affordance of wider environmental context; however, processes such as data collection, analysis and interpretation must support this primary overarching mode of analysis. The pattern of hyperlinking can be explored using web crawling software. A web crawler is a software program that follows hyperlinks from one web site to another. Web crawlers that have been developed for network analysis can be queued to start from any number of web sites and configured so as to find additional web sites to which these points of origin have common hyperlinks. An iterative process of web crawling through selected web sites and the identification of sites to which they hyperlink enables the researcher to explore the patterning of sites with common linkages. Graphical representation of these networks of common hyperlinks is often used by researchers (see for instance Figuerola &
Alonso Berrocal, 2013) to assist in the interpretation of patterns of linking. In the context of this study, the use of web crawling and visualisation are described more fully in section 3.3.1 and section 3.4.1 respectively. Park and Thelwell (2003) suggest a number of potential exchanges:

Social relations are generally arranged based on exchanges among social actors. The contents of exchanges can be visible or intangible, and include manufacturing goods, knowledge, political power, citation, social support, media content, or information. The exchange takes on the patterns or regularities that could not be found if social members are analyzed individually. In other words, exchange relationships among members of a social system can be represented as network sets of ties describing their interconnections. In the field of communication, social network analysis examines the relationships among a social system’s components (generally the individual) based on the stable patterns of use of the communication system (consisting of channel/media, message, and symbol) (Theoretical background section, para.2).

Whilst they take the perspective that configurations of hyperlinked social networks both represent and reflect social relationships in the offline world, this study questions positions that distinguish between the offline and the online environments, given the growing interdependence of the two. A decade ago Park and Thelwell (2003) were suggesting that online social networks and offline relationships were co-constructing each other:

The hyperlink analysis approach is based upon the assumption that hyperlinks may be formalized bridge between hyperlinking and hyperlinked Web sites’ authors, serving as social symbols or signs of communication hyperlinkage among themselves. In other words, hyperlinks are considered not simply as a technological tool but as a newly emerging social and communication channel. There is a tie through hyperlinks that connects individuals, organisations, or countries on the Web...Further, hyperlink networks among Web sites and social relations in the offline world may be seen as co-constructing
each other to some extent, so that offline relationships can influence how online relationships are developed and established (Conclusions section, para. 1).

As Park and Thelwell suggest, network analysis can identify alliances and relationships between social actors. In the context of this study it provides a framework for exploring inter-organisational relationships between civil society actors involved in online campaigning around forestry and forest protection in Tasmania. To investigate how these civil society organisations extend their campaigning into the public sphere by soliciting and mobilizing public participation, a further methodological framework – content analysis – was employed.

3.2.3 Content analysis

Content analysis offers researchers a means to examine communicative processes for content and meaning. Alan Bryman (2004, p. 183) highlights the use of content analysis in positivist research paradigms as: “an approach to the analysis of documents and texts that seeks to quantify content in terms of predetermined categories and in a systematic and replicable manner”. However W. Lawrence Neuman’s (2007 p.227) definition expands on this;

Content analysis is a technique for gathering and analyzing the content of text. The content refers to words, meanings, pictures, symbols, ideas, themes, or any message that can be communicated. The text is anything written, visual, or spoken that serves as a medium for communication.
Important in Bryman’s definition is that content analysis is seen as analysing documents and texts using predetermined categories and can most accurately be termed “quantitative content analysis” (Bryman, 2004 p.183). However Bryman (citing Altheide 1996) also mentions what he terms “qualitative content analysis”. The difference between the two is significant in terms of the main thrust of this study. In qualitative content analysis it is the researcher who constructs the meaning out of text, the categories emerge out of the data and the researcher constructs meaning in the context of the data (Bryman, 2004 p.183). This difference represents the essential dichotomy between quantitative and qualitative research. Given the epistemological paradigm and grounded theory methodology underlying this study, qualitative content analysis is used to draw out meaning from the data. As Michael Patton (2002 p.453) puts it: “content analysis is used to refer to any qualitative data reduction and sense-making effort that takes a volume of qualitative material and attempts to identify core consistencies and meanings...core meanings found through content analysis are often called patterns or themes”.

In this study content analysis has been used as a way of exploring the socio-technical functionality of those sites identified by the web crawler as representing a network of interlinked web sites. Here the researcher explores how those social actors on the network use web design, imagery and multimedia, social media and communication functionality (online forums,
subscription-based newsletters for instance) to engage networked publics in environmental activism. Content analysis in this context facilitates the analysis of a diverse range of digital objects (web sites, online videos, social media channels). The decisions that activist groups have made around web design, their hyperlinking practices, the appropriation of social media environments for campaigning, the embedding of socio-technical functionality (social media channels within organisational web sites for instance) to enable extended engagement with networked publics and campaign participation have influenced the creation of the study’s analytic narrative (which is developed more explicitly in Chapter 4). In this way the study ensures the visibility of the experience (Charmaz, 2005, 2008; Mills, et al., 2006) of these activist groups in its reconstruction of the meaning of their digital activism practices.

In its use of content analysis to explore a range of digital media, this study displays some originality as an exponent of constructivist grounded theory. The thematic analysis of interview data is a more common approach to capturing experience (see for instance Charmaz, 2005; Ellis, 1993; Tan, 2010). Others extend their data collection with, for instance, questionnaires (Castells, 2012; Nazari & Webber, 2011), participant diaries (Julien & Genuis, 2009) and participant observation (McKnight, 2007). In that this study focuses on new media, with digital networks as the naturalistic setting (Charmaz, 2005; Lincoln & Guba, 1985; Owen, 2008) of the activist practices being explored, an approach that incorporates the communicative practices of the
medium is important in understanding the context in which those practices occur. Content analysis in this context provides a stepping-stone to the thematic analysis that is described in Chapter 4. Within Information Science content analysis has been an effective approach in the investigation of the social and informational aspects of digital media. Amy Madden, Ian Ruthven and David Mcmenemy (2013) use content analysis to develop a classification scheme of social engagement and commentary on the digital video hosting site YouTube. Kayvan Kousha, Mike Thelwall and Mahshid Abdoli (2012) focus their application of content analysis on the use of YouTube videos in innovative academic practice around research communication, in order to explore differences of approach across discipline areas. Michael McCluskey (2013) uses content analysis to investigate rates of persistence and change in web site content over time.

Content analysis in this study was used to explore the nature of the sites within the network of organisations identified by the web crawler with a view to investigating how technology and new digital media are being used to facilitate democratic engagement within the online environment. Susan Beck and Kate Manuel (2008, p. 35) define content analysis as consisting “of procedures for defining, measuring, and analysing both the substance and meaning of texts or messages or documents” and note that “the definition of content analysis has evolved to embrace larger contexts”. The ‘text’ can consist of any form through which meaning is communicated. Given the
prevalence and ubiquity of the web as a communications medium in liberal democracies such as Australia, the United Kingdom and the United States, content analysis has been used effectively to explore political communication through web sites and new media as components of the current iteration of the public sphere (see for instance Australian Centre for Public Communication, 2008; Gerodimos, 2008).

Sotirios Sarantakos (1993, p. 211) notes that content analysis can be used to explore issues around communication within both qualitative and quantitative social research:

As a method of social research, content analysis is a documentary method that aims at a qualitative and/or quantitative analysis of the content of texts, pictures, films and other forms of verbal, visual, or written communication....This analysis may be related to forms of communication, intentions of the communicator, techniques of persuasion, text style, the audience, and any aspects of communication, especially those not obvious to ordinary receivers.

As a qualitative technique it may be directed toward more subjective information, such as motives, attitudes, or values.....In the context of a quantitative study, content analysis investigates the thematic content of communication and aims to make inferences about individual or group values, sentiments, intentions or ideologies as expressed in the content of communication; and to assess the effects of communication on the audiences they reach.

Within the context of this study, the strength of content analysis is that it enables identification of trends across the data in terms of how technology and new media have been used to facilitate democratic engagement. With a study such as this, content analysis is helpful in that a relatively small sample
size (i.e., fifty web sites) can be used within an inductive, exploratory framework to produce a detailed description of the setting. In parallel with the advantages of web crawling, content analysis is unobtrusive and unlimited by time and space; Neuman notes its applicability where studies must be carried out “at a distance” (2007 p.228). The sample population is not disturbed by or during the research process, enhancing the credibility of the study itself. Furthermore, the unobtrusive nature of the process results in the study being free of ethical concerns (Beck & Manuel, 2008 p.38; p.60).

3.2.3.1. Using qualitative content analysis to explore online democratic practice

A number of commentators note that the traditional ‘text’ of content analysis has had to evolve as our publications and media environment has evolved (Beck & Manuel, 2008; Neuman, 2007). The text or publication, which was the unit of analysis in this approach, now encompasses such media as advertising, television and radio programs, digital publications and audio-visual material. In the context of this study the web sites identified through the first phase of data collection (web crawling, which is discussed later in this chapter) constituted the units of analysis. The content identified was in a variety of digital formats, from text through images to combinations of audio and video. This is a prominent feature of the online environment; digital content delivered over the web may be in a variety of formats.
Burt and Taylor (2008) have demonstrated how qualitative themes may be identified within a dataset made up of web site content of mixed media in their study of the performance of voluntary organisations on the web as democratic. Both the studies of Burt and Taylor and that of the Australian Centre for Public Communication (2008), as with this study, place Habermas’ public sphere as a central pillar in their conceptualizing of the online environment as an extension of public, civic space. Burt and Taylor’s study also highlights how democratic attributes may be associated with the technological functionality of web sites. This study draws on this work in its investigation of the relationship between technology and democracy. Themes identified by Burt and Taylor helped in formulating a framework for the phase of content analysis. Another significant study in this context is that of Gerodimos (2008), which explored the effectiveness of web sites designed to increase United Kingdom youth engagement with contemporary politics. Similar to Burt and Taylor, Gerodimos used the content analysis of web sites to explore how the features of youth mobilisation web sites, in terms of design and functionality, were successful in helping their parent organisations to achieve their aims.

These three recent studies guided the formulation, in this project, of what Matthew Miles and Michael Huberman (1994 p.58) describe as a “start list” of potential coding categories for use during the analysis. These potential categories provide a framework for initial exploration of the data; however,
they may evolve if the researcher is taking a grounded approach in which the qualitative research themes are allowed to emerge from the data itself. This is an approach that Patton (2002 p.453) describes as “open” and Miles and Huberman (1994 p.61) as “postdefined” coding.

The work of Burt and Taylor (2008) on web site content analysis has been important in defining a framework for exploring the intersection between online content and democratic values. Their definitions of citizen engagement in democratic practices in the context of advanced liberal democracies, where participation in the traditional mainstream political process has broken down in favour of less linear, more issues-based activism, has been helpful in creating meaning around (social and at the same time computer) networked political relationships and activities. Combining Habermas’ public sphere with the notion of active citizenship, which Burt and Taylor view as fundamental to the health of democracy itself, the authors develop the concept of “strong democracy” and explore its relationship to technology-facilitated communication:

Political commentators have long recognised the central importance of the ‘public space’ and the opportunities that lie therein for the active engagement of citizens in discourse and debate upon the ‘matters of the day’. Dewey (1927, p. 208) was of the view that a vibrant public sphere depended upon the ‘methods and conditions of debate, discussion and persuasion’, while Habermas (1984, 1989) thought inclusive dialogue and debate to be a key condition of the public sphere. For Barber (2003) ‘talk’ lies at the very heart of a strong democracy. However, as Barber also makes clear ‘strong democratic talk’ is about more than the exercise of ‘voice’, for it ‘involves listening
as well as speaking, feeling as well as thinking, and acting as well as reflecting’ (2003, p. 167). Thus, we may infer that ‘good’ and ‘proper’
public engagement involves informed and considered discussion;
understanding of issues including openness to opposing perspectives;
affective commitment borne of emotion, values, aesthetics; and taking
action in pursuit of cause.

This holistic conceptualization of ‘talk’ is crucial to our evaluation of voluntary organisation web sites and the extent to which they can be seen to enable meaningful and active democratic engagement by citizens. It requires a considerably broader and more sophisticated understanding of web-enabled democratic engagement than tends to be conveyed within the cyber-Utopian tradition with its emphasis upon the Internet as first and foremost a discursive and highly participative medium (Rheingold 1993). Relatedly, it invites us to consider that the Internet and web-based technologies may have utility in facilitating offline engagement (providing information about local campaigning groups or activist training events, for example) (Schneider 2002; Van Os 2005) as well as generating ‘virtual’ or online engagement. (Burt & Taylor, 2008 p.1050)

By drawing on the ideas of talk, of a public sphere and technology as communications medium Burt and Taylor effectively situate the web within modern democracy. The identification of democratic attributes such as talk, listening, engagement and participation, and the definition of technological features of web sites that enable these attributes provides an example of how effectively online content analysis can be applied in the collection of qualitative data relating to technology and democracy.

This research project extends Burt and Taylor’s (2008) notion of talk as fundamental to an effective public sphere and strong democracy. The social qualities of new media and Web 2.0 technologies are their capacity for: facilitating relationships; building communities; enabling dialogue through interaction (as opposed to the dominant mainstream media one-way
transmission of information) of a nature more akin to an ongoing conversation; presenting multiple points of view; and, incorporating an affective dimension through the use of multimedia stories and emotive imagery.

Burt and Taylor (2008) explore the ways in which web sites can play an effective role in this new era of active issues-based politics by providing engaged user communities with the tools that they need to take direct action. In a broader context this analysis is in parallel with that of Leadbeater (2008) and Rheingold (2002) who suggest the power of the web is its capacity to provide tools for mass participation, producing innovation through critical mass. This is the new paradigm of social participation in informational societies. In this study, when this new paradigm is applied to political action in the online environment it is described as ‘networked politics’ (see discussion in Chapter 4).

Burt and Taylor (2008) identify various technological functionalities as representing democratic attributes when enabled within the web sites of UK voluntary organisations. Table 3.1 illustrates their findings, linking the implementation of interactive and participative features and functionality with democratic qualities that these features can enhance. They suggest that these kinds of functionality strengthen the nature of democratic engagement with civil society.
Table 3.1. Democratic attributes enabled by the technological functionality of UK voluntary organisation web sites

<table>
<thead>
<tr>
<th>Attribute of strong democracy</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Affective and engaging</strong></td>
<td>Blogs by activists, the use of emotive imagery, local group information</td>
</tr>
<tr>
<td><strong>Thinking/reflective/informed</strong></td>
<td>Information resources relating to the relevant issues and hyperlinks to information from a cross-section of other organisations (such as government and research institutes)</td>
</tr>
<tr>
<td><strong>Listening</strong></td>
<td>Solicitation of views from site user community on campaign policy</td>
</tr>
<tr>
<td><strong>Active participation</strong></td>
<td>Information about/register for, activism training, email alerts, listservs, cyber-activism (petitions, e-postcards, email message links), model letters, campaign timetable, campaign diary, campaign events, contact details/hotlinks for elected representatives, how to communicate with your elected representative, how the governmental process works, getting the message across to business (eg contact details, hotlinks, product/employment information)</td>
</tr>
<tr>
<td><strong>Speaking, community</strong></td>
<td>Discussion forums</td>
</tr>
</tbody>
</table>

(adapted from Burt & Taylor, 2008, p. 1052)
Gerodimos (2008) used online content analysis to draw out democratic attributes from political youth mobilisation web sites, again in the UK. Similar to Burt and Taylor, through a process of content analysis of the web sites comprising his dataset, Gerodimos identifies several attributes that illustrate (see Table 3.2) the extent to which civic organisations (through their web sites) are realizing the potential of the web to re-engage young people with the political process.
Table 3.2. Democratic engagement enabled by the technological functionality of UK youth civic organisation web sites

<table>
<thead>
<tr>
<th>Attribute of engagement</th>
<th>Functionality</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accessibility</strong></td>
<td>Text-only version, tools for the visually-impaired, special needs tools, other languages</td>
</tr>
<tr>
<td><strong>Utility</strong></td>
<td>Clear geographic focus, specific agenda, case-studies, human stories</td>
</tr>
<tr>
<td><strong>Participation</strong></td>
<td>Emailing MPs, on-screen petition, donation, voluntary work (offline and online), fundraising, written issue input, creative input, setup contributor profile</td>
</tr>
<tr>
<td><strong>Navigation</strong></td>
<td>Consistent branding, palette and fonts, Link to Homepage, What’s New, Help page, site map, menu - A-Z, topic and target group, in-site search engine, in-site postcode engine</td>
</tr>
<tr>
<td><strong>Transparency</strong></td>
<td>About us, mission statement, current activities, organisational history, legal status, contact – general email, telephone and address, manager’s details</td>
</tr>
<tr>
<td><strong>Interactivity</strong></td>
<td>Feedback email, chatrooms – both open and controlled, message boards – both open and controlled, blog comments, on-screen auto comment form, on-screen controlled comment form</td>
</tr>
<tr>
<td><strong>Community</strong></td>
<td>Setup profiles – user and contributor, bios for team and contributors, virtual and offline meetups, contributor and user details</td>
</tr>
<tr>
<td>Media relations</td>
<td>Press releases, archived news, gallery of images, gallery of Word/PDF documents, directory of email addresses</td>
</tr>
<tr>
<td>-----------------</td>
<td>------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Promotional features</td>
<td>Free subscription email and SMS, promotional material, online and offline skills training</td>
</tr>
</tbody>
</table>

(adapted from Gerodimos, 2008, pp. 974-981)

These two studies provided useful points of reference for the current study in terms of their use of qualitative content analysis as a method of exploring the relationship between the structures of digital communications technologies and the processes of political participation.

3.3 Data Collection

3.3.1 Web crawling

Web crawling, such as that undertaken by search engine providers like Google (http://www.google.com), identifies sites on the web through the use of computer programs (known as web crawlers or spiders) that follow hyperlinks between sites, recording specific information about those sites along the way. The huge digital morass that constitutes the web requires web crawling to navigate through and identify components of its content. As noted previously, web crawling is commonly used by search engine providers to identify, index and rank sites. In relation to e-research web crawling has a variety of applications:
• Crawling is used in digital preservation, to capture snapshots of the ever-changing web. The Internet Archive (http://www.archive.org/) uses web crawling in its ambitious mission to preserve the web;

• National libraries are also using web crawling to harvest and preserve whole web domains; for example, since 2005 the National Library of Australia has been experimenting with web crawling to identify, harvest and thereby preserve the Australian web (predominantly but not limited to sites within the .au domain) (Fellows, Harvey, Lloyd, R., & Wallis, 2008; Koerbin, 2008);

• Robert Ackland, Amanda Spink and Peter Bailey (2007) demonstrated the potential research application of web crawling by using CSIRO’s 2005 web crawl data in their analysis of the elements of the Australian (.au) web domain;

• Gerodimos (2008) has made use of the web crawling capabilities afforded by Issue Crawler (http://www.issuecrawler.net) in combination with online content analysis in his study of online mobilisation of youth civic engagement in the UK; and,

• In his investigation of the ways in which the search engine Google shapes global information and communication flows Elad Segev has made extensive use of web crawling and network analysis, concluding that “network analysis has become an increasingly useful method for
studying the complexity of the global communication flow” (Segev, 2010, p. 127).

Web crawling techniques offer rich potential in exploring the networked environment of infrastructure and content, publication, interaction and activism that has been created by widespread access to the web. This approach is of particular use in exploring political and social issues as they are reflected online by identifying key actors and agents, the linkages and networks between these actors, the proximity and strength of links and associations, and, by their absence, those not represented and voiceless. Datasets that result from specific web crawls can provide, in effect, a record of online activity around specific issues and issue networks at particular points in time.

3.3.1.1 Web crawling using the Issue Crawler

For this study web crawls were undertaken using the Issue Crawler network mapping software remotely located at the University of Amsterdam and accessible online at https://www.issuecrawler.net/. The Issue Crawler is an online collaboratory offering a suite of tools to an international community of researchers exploring networks of online activity around social and political issues. The Issue Crawler was selected as a research instrument for a number of reasons:
1. The Issue Crawler is designed specifically to undertake web crawls with the aim of identifying online networks around social issues, which Rogers (2006) and Marres (2006) describe as “issue networks;”

2. The Issue Crawler provides a number of research tools of potential use to researchers. Of primary use for this study were the web crawler and the graphical representation tools that enable the visual representation of identified networks;

3. The software is a product of the research community, which is made available for exploratory research work at no cost. For longer term and larger projects (like this study) the payment of a subscription fee is encouraged to support further development of the software. Preliminary investigations of potential issue networks and pilot research data were explored without cost. Once the functionality and capacity of the Issue crawler had been explored and deemed appropriate for the full study, a subscription fee was paid for full access to the software environment; and,

4. As an online collaboratory the environment and tools offered by the Issue Crawler are well supported through the Digital Methods Initiative Issue Crawler FAQ wiki (at https://wiki.issuecrawler.net/Issuecrawler/FAQ) and the Scenarios of Use site (at http://www.govcom.org/scenarios_use.htm), both designed for researchers.

Supplying the Issue Crawler with web sites (seed URLs) to act as initial starting points for a crawl enables the software to identify connections between organisations operating in online space. Seed URLs may be selected
in a number of ways, such as: from media coverage of the relevant issue; from identification of relevant URLs through search engine queries; from experts; or, from organisational web site link lists. Appropriate seed URLs for this study were identified through a series of Google searches (this process is outlined in more detail in the following section).

Two seed web sites would be the minimum for web crawling to enable a process of network analysis, as the crawler is searching for a common shared site to which both seeds hyperlink. For this study three seed URLs were used: those of the web sites of the Tasmanian Greens (a political party); The Wilderness Society (an environmental lobby group); and, Gunns Limited (a Tasmanian forestry company). There were a number of reasons for this selection. Each of these sites featured prominently in a series of Google searches that were undertaken to explore the online landscape around the issue on which the study is focused – i.e., the proposal to build a forestry pulp mill at Bell Bay in Tasmania. Gunns Limited is the forestry company behind the proposal. Both the Tasmanian Greens and The Wilderness Society were active in the campaign against the proposal. Each represented stakeholders across civil society: The Tasmanian Greens as an elected political party directly involved in the formulation of public policy and legislation; The Wilderness Society as a national environmental lobby group striving to influence policy on the issue; and, Gunns Limited as a significant company in Tasmania’s forestry industry and a major employer on the island. In line with the research
questions driving the study, each of these three reflects the stakeholders involved in negotiating public policy within the context of a democratic political process. These seeds for the web crawl thus provide a purposive sample (Lincoln & Guba, 1985, p. 102; Owen, 2008, p. 548) with the potential to assist in the generation of theory (Charmaz, 2010, p. 166; Williamson, 2002, p. 232). In line with the naturalistic methodological approach of the study, successive Google searches around the pulp mill debate produced these three organisational web sites high in their retrieval sets, demonstrating their online influence (links from other sites are a factor in Google search rankings) on the issue. Pilot web crawls using these three starting points produced interconnected networks of manageable proportion (50 sites) for a single researcher to follow through with further analysis (content analysis in this instance). This process of issue identification, seed selection and pilot web crawls is outlined more fully in sections 3.3.1.2 and 3.3.1.3 of this chapter.

The software begins its crawl by determining which links that point away from the sites (called ‘outlinks’) the seed URLs have in common, in order to construct a representation of these hyperlinked relationships. Each common outlink is incorporated into the crawl, becoming another point on the network. The depth of the crawl defaults to two cycles; these cycles refer to the number of times that the crawler works its way through each site looking for outlinks in common with others across the network. Crawls generally take several days to complete and must be queued, as an international community
of researchers uses the Issue Crawler. For this project, the crawl was completed over a period of twenty-four hours.

The web crawling process used in this study was refined over a series of exploratory crawls during a pilot phase, which offered the opportunity to investigate the relationships around specific Australian social and political issues.

### 3.3.1.2 Pilot crawls

A pilot crawl was conducted in order to test the approach to be used in this study and, more importantly, to select a topic that would be relatively stable and robust to analyse from a network analysis standpoint. In order to explore political issues of relevance to Australian society around which there might be online networks of political action, five issues were identified that had swung the voting decisions of undecided voters in the run up to the 2007 Australian Federal Election. Exit poll data from Ian Watson and Peter Brown (2008) were used to identify these issues – i.e., industrial relations, climate change, refugees, the Iraq war and petrol prices. Google searches were then undertaken to identify relevant starting points on each of these issues (seed URLs) from which to begin web crawls. Prominent positioning within Google search results was viewed as a useful and useable metaphor for online activity and influence, given that measures of popularity (in the sense of links from other web sites) are incorporated into the Google search ranking algorithm (Segev, 2010).
Through May and June of 2009 two web crawls on each issue were run using the Issue Crawler. This pilot phase of web crawls suggested a great deal of volatility around the online actors involved in these issues. The networks identified were not stable, in some instances dissolving from one crawl to the next. Rogers (2007) describes this phenomenon as “issue drift”. This is where online networks rapidly drift, shift and even dissolve due to the rapidity of digital communication and the impermanence of digital representation. For example, web sites are changed, updated, or removed; digital media are moved or deleted; and, civil society actors engaged in digitally-mediated political action rapidly shift focus to the changing political landscape.

3.3.1.3 Issue selection and network identification

The volatility and lack of consistency around the networks on these issues (industrial relations, climate change, refugees, the Iraq war and petrol prices) suggested that they could not provide sufficiently reliable data for the study. The project therefore took a fresh approach, searching for an issue of significant prominence in the media coverage of Australian politics, with appropriate characteristics to provide a setting in which to explore the relationship between digital communications networks and political action. There was significant coverage given to a long running conflict involving the environmental movement - i.e., the forestry industry and both State and Federal governments related to the proposed construction of a pulp mill by the (now bankrupt) Gunns Limited at Bell Bay on the island state of Tasmania.
Exploratory crawling to test the parameters of the web crawler software through January and February 2009 indicated that the issue offered potential for the project as it produced stable networks, involving a cross section of social actors: government; industry; political parties; and, community and environmental groups.

3.3.1.4 Sampling

With a constructivist grounded theory as one of the overarching methodological approaches framing the study, the approach to sampling was focused on the aim of supporting the generation of theory (Charmaz, 2010; Mills, et al., 2006). Lincoln and Guba (1985, p. 102) note that “naturalistic inquiry relies upon purposeful rather than representative sampling...and emergent rather than preordinate design”. The results of Google searches in late May 2009 around the pulp mill proposal indicated that multiple stakeholders were engaged consistently in online activity. The ‘links’ pages of organisational web sites communicate affiliation and association between actors and therefore provide fruitful seed URLs for the Issue Crawler to map out these relational networks. Following a cycle of Google searching to identify stakeholders of influence and exploratory crawls to verify the stability of the stakeholder network around this specific environmental conflict, three seed URLs were selected from which to undertake data collection. These three were selected as seeds for several reasons. Each of the three appeared consistently in the initial Google searching, suggesting that each had some
degree of online influence and that there was stability to that influence. This approach to sampling is supported by Owen (2008, p. 548) and Lincoln and Guba (1985, p. 40) who suggest ensuring the direct relevance to the naturalistic research setting of the study’s participants as key in purposive sampling. Given that the aim was to produce a network that would enable a depth of analysis through a phase of content analysis of each site, a limited number of seeds were used. There is no limit to the number of seeds however given the size of the web the potential for massive quantities of data rises with the number of starting points used for the crawl. A Google search on “Tasmanian pulp mill” for instance produces a retrieval set of 60,000 web sites (Google, 2014) and a 2005 CSIRO dataset of the Australian web domain (.au) collected by Australia’s national science agency – the Commonwealth Scientific and Industrial Research Organisation (CSIRO) - contains around 10 million web pages (Ackland, et al., 2007). Other studies (Ackland & Gibson, 2013; Ackland & O’Neil, 2011; Bruns, 2007; Caiani & Wagemann, 2009) have worked with larger seed groups, but these studies have not gone beyond the phase of network analysis. A smaller seed group allows for the potential of a more specific network, as was desired given the local nature of the issue on which this study has focused. Furthermore it offers the opportunity to explore that network in depth with a phase of content analysis at the level of the individual sites themselves. The URLs used as seeds for this study were:
- http://tas.greens.org.au/links - the links page of the Tasmanian Greens (political party);

- http://www.wilderness.org.au/articles/links - the links page of The Wilderness Society (environmental advocacy group);


These URLs were from the web sites of organisations with strong stakeholder interest on this issue. Importantly, their links pages provided a gateway for the web crawler to the extended networks of political affiliation and association of these organisations. The nature of these linked associations suggests the landscape of allegiance across the conflict; with Gunns Limited, for example, linked to Tasmanian Government sites, with The Wilderness Society linked to regional, national and international environmental groups and activist resources, these seed URLs point to some of the initial network links that emerged in this study. The stakeholder mix (political party, campaign group, industry representative) of these organisational web sites aligns well with the theoretical drive of the study in exploring how political campaigning and conflict takes place online.

Given that the project was designed to explore a specifically national and local context, the crawl was limited to the .au web domain; this was the
geographically identifiable segment of the potential population of sites that might be identified by the crawler. However, this step is not foolproof; sites with no geographic identifier (for example, simply .com or .org) are still picked up by the crawler. This is important, as web sites of Australian organisations are not necessarily registered with the .au identifier. In this study for instance, the site of the Save the Mary River campaign based in Queensland - http://www.savethemaryriver.com/ - was pulled into the network through hyperlinks from other environmental groups directly involved in the Tasmanian campaign. This is potentially valuable in terms of the analysis of how environmental groups campaigning on specific geographically local environmental conflicts use the web to mobilise mutual support, forming networked collectives. A key community organisation involved directly in the conflict around the construction of the Bell Bay Pulp Mill, TAP into a Better Tasmania (http://www.tapvision.info/) does not use the .au identifier, yet has nevertheless been pulled into the study’s network due to its significant interlinking with the web sites of other environmental groups focusing on this campaign. Addthis.com, the site of social media sharing widget has no .au identifier within its URL (http://www.addthis.com/), yet it is linked into the network through its usage by many of the environmental groups on the network to ensure that their content can be easily shared across multiple social media platforms. Again, these are valuable data in relation to the ways in which these groups use socio-technical functionality (through social media
in this instance) to engage with the public online. It is the focused nature of the seed selection (3 starting points for the crawl) that reduces the potential for superfluous data. In this study a network of 50 sites was identified by the crawler, the process of exploring the links that sites had in common ensuring that all sites on the network were of relevance. The crawler was set to complete two iterations; it identified common links between sites, incorporating these sites of common linkage into the crawl (and the resultant network), and then ran through this process twice. When the crawler can identify no additional sites of common linkage, the crawl ends; a point of saturation has been reached.

The crawl from these seeds was initiated on 29\textsuperscript{th} May 2009. The crawl was set to repeat each month over the next twelve months to ensure the consistent stability of this network and so that each crawl could produce a stable network from these seeds. This process, in the end, suggested that the seeds were reliable in identifying a consistent network of stakeholders active on the conflict around the proposed pulp mill; there was no issue drift (Rogers, 2007) here.

3.4 Data analysis

Having identified fifty interlinked organisational web sites constituting an online network of stakeholders in the conflict around the proposed Bell Bay pulp mill, the patterns of interconnection and modes of political campaigning within the sample were explored. The focus of this analysis was on the role
that information and communications technologies played in mediating these processes – i.e., how were the structures of digital communications affecting patterns of political association, relationship and conflict? Two methods proved invaluable in this analysis: visualisation of the network; and, coding of qualitative content of the web sites represented on the network.

### 3.4.1 Visualisation

The Issue Crawler can provide data identifying the sites crawled and their common linkages in tabular form. Much more useful, however, is the visual mapping of these relationships that can be generated from these data. Positioning within the network and node size is relative to, and representative of, the links into a site (i.e., ‘inlinks’) from other nodes. So, for example, the site of the Australian Conservation Foundation (acfonline.org.au) is drawn into a central position on the network and is represented by a larger node (see Figure 3.1) as, relative to the other sites on the network, it has a high inlink count. The largest and most central node (see Figure 3.1) is The Wilderness Society (wilderness.org.au), its positioning and size relative to a superior inlink count.
Commonality of hyperlinked associations is also clearly indicated by this graphical representation of the web crawl data. An example of this association within the issue network is illustrated by the cluster of Australian Greens’ sites (for the national and regional parties, as well for specific representatives) (see Figure 3.2). The node proximity of these sites indicates that they have many links in common (with each other). This commonality of hyperlinked association pulls them into a clustered position within the network.
Chapter 2 noted that this kind of visualisation has value in the analysis of political networks, for example in the work of Caiani and Wagemann (Caiani & Wagemann, 2009) on networks of far right politics in Germany and Italy. Graphical representations of networks facilitate the analysis of how groups interact online, through identification of:

- Those in strong central positions and those more loosely or weakly connected on the periphery;
- Coalitions and relationships between groupings; and,
- The composition of the network – homogeneous or heterogeneous, conflicting or consensual, segmented or centralized (Caiani & Wagemann, 2009, pp. 70-86).

In this study, the visualisation of web crawl data, through its identification of relative positioning of organisations within the network,
played an important role in the process of analysis. By following the
development of this environmental conflict through campaigning to some
degree of resolution with the signing of the Tasmanian Forestry Agreement in
2011 (Department of the Environment, 2014), this study has explored and
identified relationships between online positioning within networks of political
action and influence on the wider process of policy direction and formulation.
These relationships are highlighted in the analysis described in Chapter 4.

3.4.2 Coding of Content

Having identified this network of fifty web sites, qualitative content
analysis was conducted on those sites. Each web site within the network was
investigated, comparing across the network how each site incorporated the
communicative possibilities that the structures of digital communications
networks enable. Charmaz (2005, p. 517) notes the importance of this phase
of analysis in terms of the researcher’s interaction with data: “Coding is the
first step in taking an analytic stance toward the data”. As codes were
developed, iterative processes of comparison across the sample were
undertaken, sweeping through the data multiple times. Coding focused on the
active positioning towards networks and new media of organisations within
the data; the “theoretical potential” (Charmaz, 2010, p. 163) of the emerging
codes. The definition of three codes was informed by the three studies of
online democratic participation highlighted previously: new media (Australian
Centre for Public Communication, 2008); accessibility (Gerodimos, 2008); and,
community engagement (Burt & Taylor, 2008; Gerodimos, 2008). The remainder – design quality; findability; share potential; fundraising; and, personalization – emerged from the analysis of the data. As each web site was analysed data pertinent to each code was recorded in a coding sheet (initially in the spreadsheet software program Excel then in the qualitative data analysis software Nvivo). The active positioning of each organisational web site in relation to each code was described. This description explored how each site implemented web design features and functionality that responded to each code; noting what form those design features and functionality took and how they were being used in a context of political action. Table 3.3 presents an overview of these codes, along with their definitions and select examples; a more complete table of examples can be found in Appendix A.
Table 3.3. Codes used in the analysis of the study’s web site data with definition and examples of relevant web site content.

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Accessibility</strong></td>
<td>Design features that aim to ensure that the site’s content is accessible by the broadest possible audience and is inclusive of users who may have disabilities</td>
<td>W3C Web Content Accessibility Guidelines conformance logo (<a href="http://www.w3.org/WAI/WCAG1AA-Conformance">http://www.w3.org/WAI/WCAG1AA-Conformance</a>); alternate font options and text sizing; ALT image tags, additional language options</td>
</tr>
<tr>
<td><strong>Community engagement</strong></td>
<td>Facilities encouraging interaction, participation and engagement with a community of involved stakeholders through the web site</td>
<td>Mailing lists, online forums, comments facility, online forms for joining or volunteering</td>
</tr>
<tr>
<td><strong>Design quality</strong></td>
<td>Aesthetically pleasing design, attractive use of colour, layout, emotive images and graphics</td>
<td>A graded scale of 1-5 (where 5=very attractive). Dependent on a subjective user response (by the coder) to individual sites</td>
</tr>
<tr>
<td><strong>Findability</strong></td>
<td>Functionality providing access to organisation’s online content</td>
<td>User-generated categorization, search facility, site content taxonomy, site map</td>
</tr>
<tr>
<td><strong>Fundraising</strong></td>
<td>Functionality for fundraising, accepting donations, merchandise</td>
<td>Fundraising, donations, merchandise</td>
</tr>
<tr>
<td><strong>New media</strong></td>
<td>“digital communication channels and tools embracing both Web 1.0 and Web 2.0 technologies” (Australian Centre</td>
<td>Blogs, embedded video or audio content, use of new media or social networking platforms for hosting, embedding and re-distributing campaign images, text or audio-visual content</td>
</tr>
</tbody>
</table>
for Public Communication, 2008)

<table>
<thead>
<tr>
<th>Organisation type</th>
<th>Primary socio-political function of organisation</th>
<th>Categorisation of each site by sector, for example government, non-government, charity, political party, activist group, media, commercial</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personalisation</td>
<td>Functionality enabling the user to personalize the site to some degree</td>
<td>Member log-ins, individual accounts.</td>
</tr>
<tr>
<td>Share potential</td>
<td>Use of digital information networking applications to share content across alternative web platforms</td>
<td>RSS Social networking and booking marking services such as Delicious, Facebook, Reddit, Diigo, Twitter</td>
</tr>
</tbody>
</table>

Charmaz (2005, p. 517) suggests: “Coding gives a researcher analytic scaffolding on which to build”. This initial phase of coding provided a framework within which the data could be explored further. A second, more focused phase of comparative analysis within these coded data was then undertaken, producing a layer of sub-codes within each category (see Appendix B for detail of each code and its respective set of sub-codes). For example, new media is one of the initial codes. Each site on the network was explored in relation to its implementation and usage of new media. A detailed description of the new media functionality was recorded. Screen shot images of web sites with interesting, innovative or original usage of new media were saved as exemplars. Following this initial phase of coding a process of focused and comparative exploration of these coded data was undertaken in order to
develop further insight into how new media were being used in this specific setting. From comparison across the data coded around new media, three consistent elements emerged; new media usage within the dataset tended to be focused on social media, audio-visual media objects (digital images, audio, video and combinations of these) and embedded tools for content-sharing. The data coded as new media were then re-coded with three sub-codes: social media; multimedia; and, content sharing functionality. These sub-codes provide more detail on the specific nature of each code within the dataset and the setting of the study.

Each site was coded based on the URL recorded by the web crawler, i.e., the top-level index page of each site. Links were followed as part of the coding process only where they were of direct relevance to a specific code (for instance if the index page had a link titled “Accessibility” it was followed in order to capture more detail as to the nature of the organisation’s engagement with online accessibility issues). Coded data were documented initially within a Microsoft Excel spreadsheet, which served as coding sheet. These coded data were then exported into an Nvivo data analysis software project. The identification of sub-codes from within the initial set of coded data was undertaken manually, with printouts of the dataset used for initial coding and re-coding with sub-codes. Again the results of this re-coding were documented within the Nvivo project file.
An example (see Figure 3.3) of coding at the site of the marine environmental protection lobby group Save Our Marine Life illustrates this phase of content analysis. Areas of the site that have been the focus of attention during coding are circled in red.

**Figure 3.3. Coding the site of Save Our Marine Life**

Screen capture used with permission of Save Our Marine Life and Conservation Council of Western Australia.

Images were used to link through to Save Our Marine Life’s Facebook and Twitter channels. The language emphasizes the connective properties of these social networking sites: “Join us”; “Follow...”; etc. This approach was contrasted with other organisations within the sample that use social media in an active campaigning capacity, with linkages focused on specific campaigns across social media. For Save Our Marine Life the strategy in relation to social media appeared to be focused on the connective potential; these social media
environments were embedded within the site to facilitate informal linkages with the networked publics that these environments offer. In terms of social movement theory these linkages could be described as latent social movement structures (Diani, 1992, 2000; Malinick, Tindall, & Diani, 2012), which Save Our Marine Life might mobilise at a later stage through more active social media campaigning around specific issues. With networks of association in place across social media environments such as Facebook and Twitter, Save Our Marine Life is in a position to distribute campaigning digital content in new media formats across these channels. The informal networks that are created by joining/following then become campaign channels, with the personal networks of the sympathetic public (the joiners and followers) on social media (the latent social movement structures) extending the reach of such campaigns to their own networks of friends and followers. These personal networks might be powerful campaigning channels as friends of friends (in both the traditional and social media senses of the word) may be like-minded in leaning on environmental issues. Additional detail of this level of analysis is provided in Chapter 4.

The site also affords the potential for personal involvement and association with Save Our Marine, and the connective properties of the social media channels are one aspect of this. The site also displays graphical icons acting as links through to the sites of other environmental organisations. The prominent display of these linkages, on the main landing page for the site,
would appear an act of association, of affiliation. This is an additional layer of
social movement formation, at an intra-organisational level in this instance,
rather than with the networked public. It is linkages such as these that create
the issue networks identified in this study. The linkages on the site of Save
Our Marine Life are displayed as graphics, a visual branding of associative links,
which define their public display. This level of ‘publicness’ may add authority
or authenticity to the organisation, demonstrating their identity within a wider
environmental movement. Diani (2000) notes that the online environment
has the potential to act as a space for such displays of identification within
social movements, assisting in their formation and ultimate mobilisation. The
significance that Castells (2004, 2012) places on the politics of identity in his
analysis of political conflicts across networked societies highlights the
importance of political identification through symbolism.

This engagement with networked publics across social media and
environmental organisations across the web is extended by Save Our marine
Life’s site itself, which offers opportunities for both online and offline
involvement. There is a graphic link - “Join us” - encouraging the public to
become members of the organisation. There is a top-level menu option –
“News and events” – publicizing offline events that the public may attend in
person. Active engagement is offered through the site. Here the organisation
appears to be using online mobilisation to force a specific issue – an oil spill
from the Montara platform – into the realm of institutional politics, primarily
through the use of an online petition addressed specifically to the Prime Minister. The language is indicative of the drive to force the issue into the legislative arena: “Tell the PM”; and, “We need to tell our Prime Minister”.

Save Our Marine Life appeared to be using the potential of digital networks for civil society activity; the organisation was campaigning around a specific issue, encouraging public participation and channeling that participation into the sphere of institutional politics where political action, impact on the formulation of public policy and funding priorities, even legislative change, become tangible possibilities.

The design of the site was also explored. The symbolic graphical and hyperlinked association with a broad network of environmental organisations is one element of this. A significant visual aspect of the site is its use of emotive imagery. The images incorporated into the design appeal to a sense of symbiotic relationship between humans and the creatures of the ocean. Divers swim with and feed fish. The direct stare of a baby seal implores us not to destroy its home. The creature is anthropomorphized with the statement “Less than 1% of my home is protected”. A young boy charges, smiling, into the ocean with his bodyboard, while a father and his children stare out from the beach to the ocean; do we not wish to protect this marine environment for future generations? The imagery powerfully conveys the essence of the organisation’s mission and is overtly provocative and seductive at an emotional level, appealing to innate human responses.
3.4.3 From network analysis and coding to thematic analysis

The process of data analysis was iterative, allowing for immersion in the narrative that emerged from the web crawl data; this was achieved through visualisation and two phases of coding at the level of each web site identified by the crawler. A series of analysis memos were used to capture the narrative as it began to emerge and various media (e.g., Word documents for memo writing; whiteboards for diagramming the analysis; digital diagrams and photographs) were used to capture these ideas. The process of analysis and interpretation was done in an iterative fashion, reviewing digital notes, diagrams and images about the data and setting. The collection of images was extremely helpful in this process and the digital image collection has itself become its own narrative of the research study. Mills et al. (2006, p. 5), similarly, have noted the value of diagramming in constructivist grounded theory studies as an aid in the development of analytic themes. In order to review ideas and reflect on the process, from the Word document memos and more extensively analysed ideas around themes emerging from the data, parsing software was used to generate word clouds with frequently occurring terms appearing more prominently than others (see Figure 3.4). As throughout the study, the use of visualisation has proved valuable in the processes of both data analysis and interpretation.
Through this iterative process of interpretation four main themes emerged from the data, which are articulated in the following chapter. The dominant theme is described as Public Sphere 2.0. Six of the primary coding categories (accessibility, community engagement, design quality, findability, new media, share potential) feed the development of this concept. The next theme, emerging from four primary codes (fundraising, new media, share potential, organisation type) is described as Global Civil Society. With a similar level of coverage across the data set (four primary codes: community engagement; design quality; fundraising; and, personalization) is a third
theme: Changing Democratic Practice. The final theme is labeled Network Citizenship, which emerges from two of the primary codes (personalization and share potential). These results and findings related to these themes are detailed with illustrative data in the following chapter.
Chapter Four: Findings and discussion

4.1 Introduction

The web crawling phase of data collection identified a network of web sites representing organisations from across civil society, interconnected around the issues involved in native forests and forestry in Tasmania. The interconnections that bind these organisations together are their hyperlinking patterns, or the relational choices that these organisations make about who they link to from their web sites. Identifying these networked relationships allows for exploration of the inter-organisational dynamics of civil society as it takes shape online. The phase of content analysis at the level of the individual web sites on this network provides data about how these organisations use the affordances of digital communications networks to campaign, to encourage wider public participation in furthering these organisations’ aims, and to promote engagement with specific issues and causes.

In this chapter the main themes that have arisen from the data are articulated and discussed. There are four broad themes, labeled: Public Sphere 2.0; Global Civil Society; Changing Democratic Practice; and, Network Citizenship. Each theme is discussed with reference to its relationship to comparative studies and the broader research literature. The chapter draws to a close by pulling these themes into sharp focus in response to the research questions, specifically (as outlined in Chapters 1 and 3).
The first of these themes, which is referred to as Public Sphere 2.0, articulates an extension of the boundaries of the public sphere to incorporate the web, social media and social networks; this extension fragments the existing political discourse and at the same time creates multiple, contested discursive spaces. The second theme, Global Civil Society, articulates how the structures of digital communications networks facilitate the globalisation of civil society, where networks of social, environmental and political issues overlap. This globalized public sphere creates a complex media environment from within which network citizens endeavour to form and articulate their political identities. The third theme, Changing Democratic Practice, identifies resulting changes in the democratic practices of civil society organisations, exploring how the appropriation of digital communications networks alters modes of civic engagement. Network Citizenship is the fourth theme, articulating the embedding of digitally mediated practices of engagement with both social networks and the public sphere within the broader spectrum of political participation.

4.2 Public Sphere 2.0

This section explores how networked digital media extend the public sphere and afford increased immediacy to social movements. Public Sphere 2.0 is the extension of the media and communications realm available to civil society by ubiquitous computing, pervasive networks and digital media. Public Sphere 2.0 has a range of distinctive features and properties that are defined
by the convergence of its networked, multimedia and algorithmic characteristics. Data from this study indicate a number of ways in which the online strategies of the civil society organisations identified in the study extend the sphere of democratic practice into the digital realm, creating networked modes of political campaigning and social movement formation. Particular practices, in site design and, specifically, the use of hyperlinking between organisations, are employed to share or distribute campaign tools, to form collective movements, to cultivate shared identity and to acknowledge symbolic authority within the movement.

Community engagement is a significant element of the online strategy of the organisations that the study’s web crawling phase of data collection identified as a coherent network. This engagement happens at a number of levels:

1. Between an organisation and the user community that forms around its site;
2. Between organisations across the issue network;
3. Between an organisation and potential, yet unconnected, supporters across the wider networks of the web, who may locate and connect through search engines;
4. Between organisations and extended network publics through the personal networks of their supporters; and,

5. Between organisations and the wider offline public through the transfer of agenda setting practices into more mainstream media, which can result from identification through search engines or from attention generated by levels of social media influence.

This range of community engagement activities is afforded by different elements of functionality at the level of the site. In terms of facilitating the engagement between the organisation and its site’s user community, a number of digital strategies are employed. Twenty-nine (58%) of the nodes on the network provide online mechanisms that enable users of the site to become members of the group, to volunteer or to campaign on behalf of the organisation. Specific campaign action kits, tools and resources (such as guides to campaigning, tools to engage with electoral representatives, fact sheets, pamphlets, leaflets, and petitions) are available from seventeen (34%) of the network’s organisations. Many sites, such as that of the Australian Marine Conservation Society (see Figure 4.1), use email bulletins to maintain a relationship with site users.
A number of organisations use online mechanisms to foster this engagement in both online and offline forms. Data from the issue network indicate that the use of databases of email contacts to push out campaign updates is common practice. Functionality enabling this practice is present at nineteen sites on the network (38% of all the organisations identified). The Australian Marine Conservation Society (see Figure 4.1) offer subscription by email to regular campaign updates via its “e-action list”.

The internet is an environment where concerns over privacy and surveillance are commonplace (see for instance boyd & Crawford, 2012; Chen, 2008; Morozov, 2011). It is notable that in this study the organisations
identified as using email bulletins as a means of community engagement
require users to actively sign up for this form of digital engagement. This
approach is in alignment with the interpretation of civil society and the public
sphere as being built upon relationships of voluntary association (Castells,
2008; Habermas, 1989; Putnam, 2000). The demonstration of respect for this
principle is significant in a digital environment where a variety of technological
techniques may be employed to develop a relationship with web site users
through surreptitious means (e.g., the deployment of cookies or user profiling
through data mining). This appropriation of personal information is
sufficiently common in the digital economy as to appear banal. The online
retailer Amazon, for instance, has pioneered data mining techniques to
develop personalised recommendation systems (“you might also like….”) as a
significant element of its online shopping experience (Anders, 2013). There is
substantial debate around the extent to which users of online services have
given informed consent in relation to the use of personal data by commercial
interests (Marwick, 2013; Rayport, 2011; Rintel, 2014), governments (Ball, et
al., 2013; Greenwald, MacAskill, Poitras, et al., 2013) and researchers (boyd &
Crawford, 2012). Sean Rintel (2014) highlights Facebook’s analysis of the
content of posts that users of the site have deleted without posting as
stretching the boundaries of the informed consent implied in Facebook’s
(2014a) Data Use Policy. Marwick (2013, Social Media section, para. 5)
describes practices of “data discrimination” by online retailers who segment
customers according to the personal data they collect; providing preferential service and pricing to “high value” rather than all online customers.

Concerned about the lack of transparency around the commercial use of personal data, Rayport (2011, paras. 8-11) suggests a framework for ethical practice. For Rayport there are four fundamental elements that such a framework must consider: clarity and disclosure on when data are being collected; simplicity of privacy settings for the users of online environments; privacy as an aspect of design and functionality; and, transparency around the value to the customer of personal data collection. James Ball, Julian Borger and Glenn Greenwald (2013) and Greenwald, Ewan MacAskill, Laura Poitras, Spencer Ackerman and Dominic Rushe (2013) have revealed the internet data mining practices of US and British government security agencies; involving the collection of personal data and communications from Microsoft, Skype, Apple, Google, Facebook and Yahoo online platforms. Exploring the potential of the large data sets (“Big Data”) that are available from the digital tracks that we leave online, boyd and Crawford (2012, p. 671) note that: “Just because it is accessible doesn’t make it ethical”. boyd and Crawford suggest the need for researchers to consider power imbalances in studies of users’ interaction and communication across social media and other digital networks:

Their data were created in highly-context sensitive spaces, and it is entirely possible that some users would not give permission for their data to be used elsewhere. Many are not aware of the multiplicity of agents and algorithms currently gathering and storing their data for future use. Researchers are rarely in a user’s imagined audience.
In this context of data appropriation and commodification, mechanisms that enable the voluntary provision of personal information - as embedded in the functionality of 38% of the sites on the study’s network – demonstrate considerable restraint on the part of these environmental campaign groups.

The use of the web to facilitate engagement in, and the organisation of, offline participation is notable within the study’s data. Just over half the organisations on the network (i.e., twenty-six sites, 52% of all the identified organisations) included embedded mechanisms for the organisation of, and attendance at, offline events. This indicates that these organisations recognise the strategic importance of mobilising in both offline and online modes; there is an implicit relationship between political actions as they take shape in the digital and non-digital worlds, and to distinguish between them is in fact to obscure the nature of political action in pervasively networked, post-broadcast democracies. Garrett (2006, p. 212) notes the significance for social movements and activists of “opportunity structures” within political systems: “Opportunity structures are attributes of a social system that facilitate or constrain movement activity. They shape the environment in which activists operate, and activists must take them into account when crafting actions”. Digital media here act as opportunity structures, initially engaging the networked public with environmental issues, and then mobilising that engagement into a more sustained form of action. Burt and Taylor (2008) note similar findings in their analysis of the web sites of voluntary
organisations in the context of the British political system. They found that a range of voluntary organisations made use of web site functionality as a means “to engage members of the public that may be a first step toward exciting interest in longer term and more substantial forms of activism” (Burt & Taylor, 2008, p. 1060). Van Laer and Van Aelst (2010, pp. 1152-1153) suggest that the internet is a valuable activist tool in this context; first, the internet makes it easier, more straightforward for the public to engage with these groups in political actions such as meetings and demonstrations; and second, the internet provides the activist groups themselves with a suite of tools to assist in the coordination these events. The study’s data (for instance in the example of the Cairns and Far North Environment Centre) illustrate how the political strategy of Australian environmental activist groups become incorporated in their web design practices.

The Cairns and Far North Environment Centre (see Figure 4.2) makes use of the affordances of the cloud computing environment by employing the versatility of the Google calendar application to store and promote event listings online. The calendar application itself is embedded within the Cairns and Far North Environment Centre site, providing an event listing, as well as hyperlinked access to further information about each event and to the full calendar itself. This data example demonstrates the application of digital media to create an opportunity structure that may lead to more sustained involvement in the group’s campaigning. The calendar solicits public
engagement in materially co-present events and gatherings. The engagement opportunities appear unthreatening in terms of commitment to environmentalism; for example, engagement might include meeting for a bike ride or for drinks or to learn about sustainable gardening.

**Figure 4.2. Cairns and Far North Environment Centre’s Google calendar**

Screen capture image used with permission of Cairns and Far North Environment Centre.

The hyperlinks within the calendar offer further information so that potential new attendees know what they are getting themselves into when engaging with the organisation. The group appropriates and embeds web 2.0 tools – in this instance the Google calendar – for strategic purposes. Use of online tools to generate offline engagement suggests that the Cairns and Far North Environment Centre acknowledges the importance of: 1) the transfer of engagement with digital media into broader forms of involvement; and, 2) the value of sustaining engagement beyond what Van Laer and Van Aelst (2010, p. 1149) describe as “low threshold” forms of activism. Activist groups and social
movements need to be sustainable if they are to undertake the longer term campaigning required to bring about political change (Diani, 1992, 2000). Simple forms of engagement with online activism have been described as “clicktivism” (White, 2010, para. 4) due to their ease of engagement (‘liking’ a cause on Facebook, for instance) but limited sustainability. The Cairns and Far North Environment Centre move beyond this low threshold approach by using digital media as a component of their strategy; i.e., engaging online whilst encouraging more sustainable forms of committed and embodied action.

Data of this nature from the study demonstrate how communications networks offer affordances that connect fragmented individuals and communities into both networked publics (boyd, 2010; Maireder & Schwarzenegger, 2011) and materially co-present collectives that may sustain political campaigning. Digital media offer new ways of soliciting engagement with social and political issues. The digital environment becomes a public sphere of contested space, existing beyond, and potentially challenging, traditional state-based democratic institutions.

Whilst Habermas’ (1989) original concept of the public sphere as the space of rational debate in civil society has been critiqued as idealised (Flyvbjerg, 1998), many scholars (Boeder, 2005; Burt & Taylor, 2008; Castells, 2008; Hansen, Berente, & Lyytinen, 2009; Iosifidis, 2011; Papacharissi, 2002) continue to find it a useful construct for exploring the space in which the
interplay of pluralist interests, power structures and symbolic culture takes place. In Public Sphere 2.0 symbolic power finds new structures and iterations. In *Wired* magazine, Michael Goldhaber (1997, para. 2) suggested that “the economy of attention – not information – is the natural economy of cyberspace”. In a digital economy, visibility is strategically important. Activist groups compete for attention with a multitude of online services and retailers so must find creative ways of using digital media to capture public engagement. The sites that dominate global web traffic (Alexa, 2014) are: (1) Google (www.google.com); (2) Facebook (www.facebook.com); and, (3) YouTube (www.youtube.com). This is the context, the new media landscape in which environmental activists must operate. To capture the attention of networked publics the content of activist groups must be visible to Google searches, it must flow across social networks, and must be in digital content formats that capture attention on social media platforms like YouTube. Visibility in this competitive attention economy can produce value, as it does to Google (who also owns YouTube) and Facebook. For activist groups, visibility in the digital economy is important to generate support, membership, funding, and to sustain political engagement and media coverage. A web site becomes visible when another site incorporates a hyperlink to it. Hyperlinks enhance visibility; measures of the hyperlinks to a site are a feature of the algorithm that Google uses to rank sites in its retrieval sets (Brin & Page, 1998; Segev, 2010). Hyperlinks in this context become a conveyor of value and a measure
of online reputation. Hyperlinks gain a symbolic status in an attention economy.

4.2.1 Hyperlinks as symbols

Significant affordances in networked environments are provided by the connective and navigational properties of the hyperlink. Originally conceived as a non-linear navigation structure for the novel information organisation structure (as far back as Bush, 1945) that has evolved into the web, hyperlinking has evolved to become more than a tool of navigation. As the affordances and concomitant social practices of the digital environment have evolved, the application of the hyperlink has become increasingly significant; yet, as Pilny and Shumate (2011, p. 260) suggest, “what hyperlinks represent remains an area of significant debate”. The web has become a web of (hyperlinked) connections, a space of online communities, and a network of networks.

In this context the hyperlink becomes the prevailing metaphor of connection and belonging, of identity and community. On the social web, who we link to, and who links to us, becomes significant. The web crawl data from this study illustrate how the strategic practice of hyperlinking is used to form not just an online community but a networked political movement. Hyperlinking patterns delineate the boundaries of social movement networks, demarcating belonging and identity. The pulp mill project web site of Gunns
Limited, whilst used as one of the seed URLs (starting points) for the web crawl, does not feature on the identified network identified as it has no hyperlinks in common with the environmental groups who dominate the network. A similar disdain for the corporate natural resources sector by the environmental movement has been identified by Rogers and Marres (2000) in their hyperlink analysis of the online debate around climate change. They sum up the situation succinctly; “Greenpeace does not link to Shell, but Shell does link to Greenpeace” (p. 157). The hyperlink pattern data from this study suggests that the unreciprocated hyperlink here acts as a rejection device, denying Gunns Limited any claim to affiliation with the environmental groups campaigning against the company. Such exclusionary tactics assist in the online formation of a collective identity and sense of solidarity across the diverse environmental groups involved in the campaign. Diani (1992, 2000) has noted the importance of collective identity in solidifying the formation of social movements. Castells (2004, 2012) has emphasized the significant role that digital networks can play in this formation of collective identity, suggesting that the decentralized nature of digital networks reflect the loose, non-hierarchical organisational structures of social movements. Digital networks provide these movements with: a viable and effective communications infrastructure, as well as a means of displaying collective identity and shared aims at regional, national and international levels.
The significance of the hyperlink and, perhaps more importantly, patterns of hyperlinking have become paradigmatic in understanding the web as representing something more than a mass of Digitised documents. The incorporation of hyperlink analysis is a notable element of the Google search algorithm (Brin & Page, 1998; Segev, 2010) that has proved so successful in providing access points to highly relevant web sites. For Sergey Brin and Lawrence Page – the creators, founders and now Chief Executive Officers of Google – this was a novel approach to information retrieval on the massive and exponentially growing scale required by the web. In a publication they wrote together as graduate students on the Computer Science PhD program at Stanford University, Brin and Page (1998, p. 109) note:

The citation (link) graph of the Web is an important resource that has largely gone unused in existing Web search engines...These maps allow rapid calculation of a web page’s “PageRank”, an objective measure of its citation importance that corresponds well with people’s subjective idea of importance. Because of this correspondence, PageRank is an excellent way to prioritize the results of Web keyword searches.

A significant factor in the ranking of Google search results is the quantity of links that a web site receives from others (its in-links), as measured by Brin and Page’s PageRank algorithm. Thus relevance, according to Google, is to some degree defined by the recognition that a site receives from others through in-links.

Appendix C displays the full network of interlinked sites identified by the web crawler in this study (with the full listing of site URLs and
organisations on the network detailed in Appendix D). The graphical
representation of these hyperlinks maps the pattern of interconnections that
collectively identify the network of organisations involved in online debate and
campaigning around the proposed Bell Bay pulp mill. It identifies how the
organisations present on the network relate to one another and the
positioning of the organisation within the context of the network as a whole.
It is hyperlinking that creates and shapes this network. Organisations use
hyperlinks as strategic resources, indicating affiliation to, identification with,
and symbolic authority within, the group. The hyperlink is a fundamental
metaphor of relationship, of engagement and of identification for online social
movements.

The sites of The Wilderness Society (wilderness.org.au) and Australian
Conservation Foundation (acfonline.org.au) are positioned as the central
nodes within the network identified through web crawling. Both organisations
have this central positioning due to their in-link count, receiving the most links
from other organisations within this network. This in-link count and the
resultant positioning suggest that both Australian Conservation Foundation
and The Wilderness Society are held in high regard by the organisations which
comprise the network. Ackland and Gibson (2013) note that whilst hyperlinks
can imply a negative relational affect, their study of political web sites
suggested that this practice was less common than the practice of hyperlinking
to reinforce collective identity and amplify shared political agendas. Here the
importance placed on naturalistic setting in the study’s research design become significant. The use of a phase of context analysis to move beyond network analysis and investigate the setting in further depth ensures that the hyperlinking practices in the study are described in relation to their context. It is this depth of investigation that ensures hyperlinking as a practice denoting symbolic affiliation – as suggested by the in-link counts and central network positioning of Australian Conservation Society and The Wilderness Society - rather than just critical rejection, is recognised and described. Furthermore this finding supports the studies of Ackland and O’Neil (2011) and Ackland and Gibson (2013) who have found support for the suggestion that for a diffuse political actor such as the environmental movement, hyperlinking practices tend towards the communication of collective identity, the augmenting of online presence and the amplification of a shared narrative. This positioning (through high in-link counts as a measure of esteem) is significant for these organisations in a political sense, enabling them to influence and direct the collective. There is a direct comparison to the significance of central positioning within social networks here where “individual actors holding more valued resources, and therefore higher standings, tend to be given the opportunity to make decisions on behalf of or in the name of the collectivity” (Lin, 2001, p. 31).

The network identified in this study provides data indicating that social and organisational relationships are significant online. Affiliation and
allegiance are identifiable through close-knit patterns of mutual hyperlinks. The network, for instance, includes a cluster of Green party sites (see Figure 4.3). The site of the Tasmanian Greens (tas.greens.org.au) is the bridge that links this cluster on the periphery into the network.

**Figure 4.3. Clustered Australian Greens sites**

The site of the national office of the Australian Greens (greens.org.au) is at the centre of the cluster, surrounded by its regional counterparts. Further out, on the edge of the network is the site of Global Greens. The positioning is indicative of the involvement of each to the primary concern of the network, campaigning against the pulp mill project proposed by Gunns Limited. For the Tasmanian Greens this is an issue of local relevance and high importance. The Tasmanian Greens represent the environmental movement’s link into representative politics where the formulation of policy and legislation occur. Links into this sphere of influence are of significance to lobby groups such as Friends of the Earth Australia – Figure 4.3 illustrates the proximity of Friends of
the Earth Australia (foe.org.au) to the Tasmanian Greens (tas.greens.org.au).

This subsection of the network also illustrates how a campaign of local, regional environmental conflict gains solidarity and support through regional and international linkages. This solidarity draws local issues into a broader framework, amplifying the significance of regional concerns within an international agenda for environmental politics.

The clustered positioning and node proximity are representative of the substantial commonality of hyperlinks between these Green politics sites. The peripheral positioning of non-Australian organisations on the network (such as Global Greens, Rainforest Action Network, UNESCO World Heritage Centre) also identifies an element of transnationalisation of the movement (see Figure 4.4).

**Figure 4.4. Peripheral global civil society actors**
Global Greens (globalgreens.org) are brought into the network through hyperlinks from a number of sites in the cluster of Australian Greens sites: the national site (greens.org.au); the Queensland Greens, (qld.greens.au); and, Bob Brown’s (who was leader of the Australian Greens from 2005-2012) official site, (bobbrown.org). Hyperlinks from Australian Conservation Foundation (acfonline.org.au), Save the Tarkine (tarkine.org), The Wilderness Society (wilderness.org.au) and Victorian Greens (vic.greeens.org.au) pull the US-based Rainforest Action Network (ran.org) onto the edge of the network. UNESCO World Heritage Centre receives links from The Wilderness Society and Save the Tarkine. Each of these peripheral international groups has an interest in this local environmental conflict. For the Global Greens, the identification of Tasmania as the first location in the world to have a Green political party is a strong connection to environmental politics on the island (Global Greens, 2014). Supporting the campaign against the Bell Bay pulp mill in Tasmania is a strand of Rainforest Action Network’s broader international campaign on the protection of native forest (Rainforest Action Network, 2009). One million hectares of Tasmanian forest have been designated as a World Heritage site by UNESCO since 1982 (UNESCO World Heritage Centre, 2014). Here, it is the study’s phase of content analysis at the level of the individual sites of these organisations (Global Greens, Rainforest Action Network, UNESCO World Heritage Centre) that has enabled the exploration and description of the contextual relevance of these international groups to the networked
environmental movement that has emerged around a local conflict. These data – the hyperlink patterns that draw Global Greens, Rainforest Action Network and UNESCO World Heritage Centre into the network - illustrate the practice of using hyperlinks as symbolic signifiers of solidarity and collective identity. Furthermore, these data provide examples of the ways in which the environmental movement use digital networks as amplifiers of local issues within the broader agendas of loose coalitions of environmental politics. With Tasmania’s inclusion on the World Heritage listing, the UNESCO World Heritage Centre has an interest in the conflict. The hyperlinking pattern that pulls the UNESCO World Heritage Centre into the network draws the significant symbolic authority and influence of this United Nations agency into the conflict in support of the environmental narrative. Castells (2008) has suggested that, as a result of globalisation, global civil society actors – such as UNESCO - are increasingly influential over dispute resolution at a regional level within broader processes of global governance. Influence can be applied through the articulation of universal standards, such as *The Universal Declaration of Human Rights* (United Nations, 1948), or as in this instance, the inclusion of sites of environmental significance in the UNESCO World Heritage List (UNESCO World Heritage Centre, 2014). The data from this study are supportive of Castells (2008) on this point, illustrating how a supra-national agency such as UNESCO can influence the resolution of political conflict and the formulation of environmental policy at a regional level.
Further support for the suggestion that the environmental movement uses hyperlink practices to build collective identity is offered by the network analysis data. Figure 4.5 illustrates two Tasmanian Government web sites that are linked to by the environmental group TAP into a Better Tasmania (tapvision.info). These are: the Tasmanian Government’s site for information relating to the assessment of the pulp mill proposal (pulpmill.tas.gov.au); and, the site of the Tasmanian Government’s Resource Planning and Development Commission (rpdc.tas.gov.au).

Figure 4.5. Peripheral placing and non-reciprocal linking of Tasmanian Government sites

Neither site is linked to by any environmental group on the network other than TAP into a Better Tasmania and neither reciprocates the hyperlink; as a result, neither site is pulled into the network. This data provides further support for the assertion (Ackland & O’Neil, 2011; Castells, 2004, 2012) that
hyperlink practices from within the environmental movement are selective and exclusionary; they are designed to emphasise the formation of collective identity, solidarity and a shared political agenda.

A key finding of the study is that there is social, organisational and political significance to the hyperlinking patterns of the environmental organisations of which the study’s network is comprised. The data suggest that hyperlinks are used as political organisational and communication devices: forming collective identity; building international solidarity; amplifying the significance of local conflicts within a broader shared narrative and agenda of environmental politics; excluding those perceived not to share this agenda; and, appealing to the authority of global governance bodies that might influence conflict resolution. This study builds on the work of Rogers (2002, 2004; Rogers & Marres, 2000) in the application of digital research methods, such as hyperlink analysis, to the study of digitally mediated social practices and political participation. Studies from Rogers and Marres (2000), Gonzalez-Bailon (2009) and Ackland and O’Neil (2011) have used hyperlink analysis to highlight the social significance of organisational patterns of hyperlinking. Collectively, these studies emphasize that social structures underlie the configuration of the web. They suggest that hyperlink patterns and in-links are reflective of more than informational value; they are markers of organisational and social capital.
In this sense, hyperlink analysis is reflective of the analysis of social networks in that both methods identify the negotiated positioning of individual actors within fluid yet aligned collectives. The network of organisations identified through web crawling and hyperlink analysis in this study aligns well with Lin’s (2001, p. 38) definition of a social network (as contrasted to hierarchical structures):

Social networks represent a less formal social structure in that there is little or no formality in delineating positions and rules and in allocating authority to participants. In social networks, fluidity characterizes the occupants, positions, resources, and rules and procedures. Mutual agreement through persuasion rather than authority or coercion dictates the actors’ participation and interaction and defines the boundary and locations (positions) and participants (nodes). A particular network may evolve naturally or may be socially constructed for a particular shared focus or interest regarding a resource (e.g., protection of the environment, women’s rights).

It is reasonable to suggest then that the positioning, the bounding and the participants of the network identified through hyperlink analysis are elements of a social structure, one which underlies the interactions of these environmental organisations in a space that is public yet digitally-mediated.

The intersection of social network analysis and digital communications networks has been made explicit through the work of Wellman et al (2003) in articulating the ways by which the internet transforms our understanding of community, by extending and adding to the repertoire of social communication in network societies. This linkage of social networks and digital communications can be a powerful factor in the mobilisation of political
action. Zhuo, Wellman and Yu (2011) make an explicit link between the extended networks of digital communications (the internet, social media and mobile telephones) and the public mobilisation of Egypt’s Arab Spring:

The success of the revolt should be credited to Egyptian people, but the impact of social media is undeniable. Social media played an important role in the mobilisation and organisation of the Egyptian revolt. It intertwined with the development of formal organisations, informal networks, and external linkages, provoking a growing sense of modernity and community, and globalizing support for the revolt. However, the impact of social media should not be overestimated....only about one-fifth of Egyptians acquired news and information through social media—and this may well be an overestimate. Yet, these Egyptians had friends, relatives, and friends of friends, and the news spread quickly via mobile phone texting, old-fashioned phoning, and even more old-fashioned face-to-face conversations. Strong ties convinced friends and family to join the demonstration; the more abundant and diverse weak ties bridged communities and spread the news widely even in the face of government manipulation of mass media and shutdown of the internet and mobile phone networks.

Lotan et al (2011) explore this inter-relationship between digital media, social networks and political action more specifically in the context of social media. In relation to the Arab Spring uprisings in both Tunisia and Egypt, Lotan and his colleagues have identified the micro-blogging site Twitter as a significant channel where current events are reported and interpreted (essentially co-constructed) by journalists, bloggers and activists. This process of co-construction in turn informs the mainstream media presentation of events, providing a sense of authenticity to the coverage. The extensive analysis of Twitter feeds, YouTube channels and web sites leads Howard et al (2011) to conclude that social media has played a critical role in the events of
the Arab Spring, generating a public sphere that was lacking in authoritarian regimes.

These studies, alongside this study’s investigation of the online strategies of the environmental movement, are helpful in identifying how social and organisational networks intersect with the structures of digital communications to create opportunities for political mobilisation and action. The data from this study confirm the findings of studies on online social movement formation and mobilisation in a number of international contexts in terms of how social and political movements form a collective identity and organizing structure across digital networks. This point is explored further in the following section.

4.2.2 Collective identity and index authority

Figure 4.6 illustrates link listing by the Tasmanian Greens, a practice that organisations use strategically to self-identify within networks. Note that the Tasmanian Greens categorise their link listing (Education, Environment – General, Forests etc.) as a strategy to identify with and participate in networks across this range of social issues.
The hyperlink analysis in this study provides evidence that this practice of link listing is more than informational. It is a strategic practice that enables organisations to interconnect with networks of aligned organisations (collectives) formed around specific issues. In their link list (Figure 4.6), the

Screen capture image used with permission of the Tasmanian Greens.
Tasmanian Greens identify a range of issues on which they are active in Public Sphere 2.0.

Furthermore, the network analysis data helps us to identify how hyperlinking practices across the network also provide symbolic acknowledgement of authority within the emerging movement. Features of the network of environmental organisations in this study are indicative of these aspects of emergent social movement networks. Figure 4.7 illustrates the symbolic authority that is conferred upon The Wilderness Society and the Australian Conservation Foundation as they are positioned at the centre of the network.

**Figure 4.7. Central positioning of The Wilderness Society and Australian Conservation Foundation**
This positioning is reflective of the number of hyperlinks (the strength of affiliation) to them from the sites of other organisations across the network and positions them to influence the collective as well as to drive the agenda of the collective across other networks. The study’s data on the positioning of The Wilderness Society and Australian Conservation Foundation both within the network of environmental groups campaigning on forest protection as well as in the negotiations around policy that flow from this campaign highlight the relationship between online and offline authority. The data from the study suggest that such positioning is significant in channeling the agenda of the environmental movement in this specific context through mobilisation and campaigning to, ultimately, influencing the political process through the formulation of policy and legislation. Towards the end of 2012, representatives from government, the forestry industry and the environmental movement signed the Tasmanian Forestry Agreement (Tasmanian Government, 2012), bringing some resolution to the long-running conflict around the balance between forestry and the protection of native forest on the island. Figure 4.8 illustrates the positioning of the Australian Conservation Foundation and The Wilderness Society within the process of policy formulation, as representatives of the environmental movement within the process and signatories on the agreement.
These data suggest that online positioning within networks of political action are significant, and indicate organisational features of social movement collectives and the capacity of specific actors to drive forward agendas of political action within both Public Sphere 2.0 and the sphere of institutionalised political power.

Pilny and Shumate (2011, p. 263) suggest that for online social movement actors the hyperlink is “a public acknowledgement of another and symbol of representational communication”. Patterns of hyperlinking provide
an organic practice by which the network, as a collective, takes shape. These patterns position particular organisations within the network, enabling their identification with (and within) the broader network. For Lin (2001, p. 39) homophily is a fundamental element of all social networks as “individuals whose positions are situated closer to each other in social structures are more likely to interact”. In her work on the structure of online relationships between non-government organisations, using hyperlink analysis Gonzalez-Bailon (2009, p. 273) suggests that “identity and homophily are, as in other social networks, a crucial factor to explain the structure of the web”.

Practices of connection and hyperlinking have particular significance in the context of networked social movements. In their study of political activist networks across the United States, Colombia and Guatemala, Harlow and Harp (2011, p. 208) find that social networks are “important for organizing, mobilizing, informing, and promoting debate, in other words, serving as a mode of alternative media and a counter public sphere where collective identities can form”. Patterns of hyperlinking across the sample network in this study confirm the findings of Rogers and Marres (2000), Gonzalez-Bailon (2009) and Harlow and Harp (2011) relating to the intense usage of hyperlinked networking by civil society and non-government organisations. Gonzalez-Bailon (2009, p. 273) notes the different linking patterns of different sectors of society, stating “NGOs in the .org domain generate the densest networks, with most of their links going to other NGOs and government sites,
in turn, barely ever send links to other domains outside .gov, whilst corporate sites do just the opposite: most of their links are targeted outside their own .com domain”. Diani (2000) and Ackland and O’Neil (2011) suggest that patterns of hyperlinking reflect the exchange of both symbolic and practical resources in the context of networked social movements. Hyperlinking to symbolize alignment is a practice in self-identification with, and the formation of, collectivity. Ackland and O’Neil (2011) go beyond this to suggest that the giving and receiving of hyperlinks are resources in a hyperlink economy, an organizing system within self-identifying networks. As sites with more in-links are generally more highly ranked in the indexing processes of search engines such as Google, Ackland and O’Neil (2011, p. 178) describe as “index authority” the status that is created through the in-links that a site receives. Pilny and Shumate (2011, p. 264) discuss the same concept as “hyperlink capital”. The hyperlink patterns identified in the study of the environmental movement’s campaigning around the Bell Bay pulp mill confirms the findings of Ackland and O’Neil (on “index authority”) and Pilny and Shumate (on “hyperlink capital”) in articulating the social significance of hyperlinking patterns and the relationship of these patterns to networks of social and organisational capital more broadly.

Analyses of social movement networks have suggested that those organisations most central within the network receive the most publicity and are the most visible to the media (Ackland & O’Neil, 2011; Gonzalez-Bailon,
In their study of Canadian environmental protest networks campaigning against logging in Clayoquot Sound, British Columbia, Malinick, Tindall and Diani (2012) identified a correlation between central network positioning and media influence. Those activists at the centre of activist networks were more likely to appear in media coverage of the protests. Network centrality is valuable to environmental organisations in terms of the capacity it provides for shaping the coverage of issues in the mainstream broadcast media, as well as influencing the shaping of policy.

Actors within social movement collectives are conscious of the resources upon which different organisations within the movement can draw (Diani, 1992). An awareness across the network of the significance of media visibility in transferring digital activism into an articulate political agenda that can influence public policy – i.e., shifting the issue from the network into mainstream politics where the possibility of real, substantive change exists – may be a significant factor in the hyperlink patterns represented (for instance, in the ‘link listing’ pages that many civil society organisations provide online). In this sense, link listing is a strategic practice, not simply to create an informational resource but to assign hyperlink capital to organisations across the network in recognition of the status and resource attributes of those resources with a view to furthering the collective aims of the movement through media visibility and political influence.
The self-contained network identified through web crawling in this study reflects these hyperlinking practices and organizing principles. It is the very practice of hyperlinking to symbolise affiliation that identifies the network itself; it is these patterns of hyperlinks that the web crawler uses to identify the network. Index authority is made clear by the visual representation of the network (displayed in full as Appendix A), which locates and sizes site nodes according to the number of in-links that they receive. Centrality and larger node size signify a high proportion of hyperlinks from other organisations on the network. The positioning of the Australian Conservation Foundation and The Wilderness Society at the centre of, and as the largest nodes on, the issue network indicates that, within the context of this issue, they are considered by those on the network as the civil society organisations best placed to articulate and coordinate the issue within the structure of the political process. Bekkers et al (2011) note that the organisations more traditionally placed as the intermediaries in civil society (e.g., trade unions, charities, political parties, churches) are needed to channel the momentum of digital activism and issue framing from the sphere of media and communications into that of policy formulation, describing this phase of activism as mesomobilisation. These data suggest that in the context of action on the protection of native forest in Tasmania, the organisations on the network confer this “index authority” on The Wilderness Society and the Australian Conservation Foundation. These two organisations are best placed to undertake the layer of mesomobilisation
required to channel the activism of the network and the networked citizenship engagement that it generates into an articulate political agenda that can be transferred into the structures of institutional politics. To this extent the hyperlink pattern data from this study supports and connects the work of Ackland and O’Neil (2011), Gonzalez-Bailon (2009) and Pilny and Shumate (2011) on hyperlink capital in relation to the collective formation of social movements, with the analysis of Bekkers et al (2011) on the significance of actors to undertake mesomobilisation in the transfer of social activism from the online to the offline domains.

Two points emerge from these findings: (1) patterns of hyperlinking are not simply related to informational quality but also to status defined by offline social structures; and, (2) for digital campaigning to produce successful democratic outcomes civil society must co-exist in the offline context in order to absorb and channel the democratic potentiality afforded by the online formation of social movement collectives and practices of networked citizenship.

4.2.3 New media and digital activism

Twenty-eight of the fifty organisations on the network (56%) integrate new media into their web sites, creating affordances for this form of viral multimedia digital campaigning. This functionality embeds this strategy of digital activism (e.g., networking, relationship building, campaigning, framing
the public perception of issues) within site design and user practices around both site and content. In this study, digital activism is defined as the designed and strategic integration by online civil society actors of affordances for relationship building using social networking combined with campaigning, issue framing and agenda setting through the sharing of digital content across social media environments and the personal networks of supporters.

These organisations on the network make frequent use of digital video. Figure 4.9 illustrates this point, with a screen capture from the site of the Australian Conservation Foundation (ACF, http://www.acfonline.org.au/).
Screen capture image used with permission of the Australian Conservation Foundation.

ACF provides a graphic linking through to the organisation’s YouTube channel where it uploads a range of campaign videos. Popular digital video hosting platforms such as YouTube (http://www.youtube.com/) and Vimeo (http://vimeo.com/) provide the functionality to share and embed video content stored on the platform across multiple alternative environments. In the boundary-less and global context of networked civil society, this functionality is valuable for organisations involved in forms of digital activism where campaign content can be circulated to the significant audiences available across social media and networking environments. The sharable
qualities of new media content are inherently valuable to the campaign tactics of civil society organisations; these qualities are used to encourage micromobilisation around an issue, to encourage specific framing on an issue and, ultimately, to create moments of opportunity to set the agenda around policy on the issue.

The data from this study demonstrate that the affordances of digital networks are exploited by environmental groups through the strategic use of social media to deliver campaign content across a broad range of social networking sites. The multimodal nature of these media enables organisations to make use of high-impact emotive content, designed to generate an emotional response in order to create empathy with particular causes and campaigns. In the context of Dutch social movements, Bekkers et al (2011) note the strategic use by campaigning organisations of new media content with visceral impact. The immediacy of delivery across networks and emotional impact of such content can be sufficient to create a critical mass of alignment in terms of issue framing, enabling opportunities for agenda setting and the influence of policy.

The Kony2012 campaign by the organisation Invisible Children is a prominent illustration of this strategy. A campaign video produced by the organisation was distributed via Invisible Children’s channels on the YouTube and Vimeo digital video hosting platforms, as well as being embedded in the
web site of the organisation itself. The video displays high production value and highly emotive imagery. It presents a simple narrative and an unequivocal agenda. Invisible Children strategically leveraged the potential for viral distribution afforded by these online distribution channels. Within days the content had been viewed more than one hundred million times, had provoked fierce discussion of the nature of the organisation and the campaign in the media and had received comment from the White House press office (Curtis, 2012).

Bekkers et al (2011) note that new media provide potent campaign tools for civil society organisations in that these media enable organisations to circulate multimedia content with visceral impact. In post-broadcast democracies, this content moves across social media, circulating beyond the bounded, limited audiences of traditional broadcast media. These data from my study confirm this aspect of the analysis of Bekkers et al.

Invisible Children’s Kony2012 campaign is also a powerful example of a strategy aimed at a digitally literate and predominantly younger audience who share content of sensory or emotive appeal across their own personal networks. These personal networks become the distribution channel. Rather than traditional (mass broadcast or publication) media, Invisible Children’s campaign was initially promoted and gained critical mass across the social networks of its young, Christian supporters in the United States. It is across
these connections that content (and the hashtags that allow it to be tracked) flowed, before bleeding out into global networks and international attention (Lotan, 2012). A significant feature of networked publics, according to boyd (2010, pp. 39-49), are the “imagined collectives” that can emerge from intersecting flows of communications across the online environment, where a message may be heard by those other than for whom it was intended due to the collapsing of spatial, temporal and cultural boundaries.

This digital campaign strategy created an alignment of public and political awareness that provided an opportunity to influence the development of policy in the area with which it was concerned. The campaign illustrates the powerful potential of new media when combined with an awareness of the critical mass of public attention that is available across the network of personal interconnections, which have evolved from pervasive computing. These personal networks have become opportunity structures for those who wish to influence public opinion and assert influence on the direction of policy agendas (Bekkers, et al., 2011).

The data from this study of the Tasmanian network provide evidence of a similar strategic approach to that of Invisible Children in terms of how the environmental groups on the network leverage the potential of new media and digital networks. The Wilderness Society, for example, has its own channel (http://www.youtube.com/user/TheWildernessSociety) on the video
hosting site YouTube. A link to this YouTube channel is prominently displayed on the organisation’s web site (www.wilderness.org.au). Within The Wilderness Society YouTube channel is a specific playlist – an amalgamated set of digital videos – related to the Tasmanian campaign. The use of social media is integrated into The Wilderness Society site. Prominent graphical links on the site’s main page invite users to “follow” the organisation on the social networking platforms Facebook and Twitter. Content related to the Tasmanian campaign within The Wilderness Society web site has social media graphics integrated into its display so that it can be easily shared by users across their own Facebook and Twitter networks. Videos on The Wilderness Society YouTube channel can easily be shared across social media networks or embedded within other web sites (such as blogs) using the straightforward functionality that YouTube makes available. Some of this digital video content has high production value and contains powerful, emotive imagery of Tasmanian native forest (and of its destruction through logging). High production video such as *Tasmania’s Clean Green Future: Too Precious to Pulp* (http://www.youtube.com/watch?v=btePjTYkiKs) acts as key campaign material. The viewing statistics for this video (6,916 on 21 January 2014) in particular are significantly higher than others in the playlist. These features of The Wilderness Society digital campaigning – i.e., encouragement of connection and engagement with The Wilderness Society via popular social networking platforms such as Facebook and Twitter; web design features that
enable sharable campaign content; and, the use of popular social media channels such as YouTube to disseminate high quality production campaign multimedia content containing emotive imagery – have much in common with the approach taken by Invisible Children with its Kony2012 campaign. By exploring the digital activism of an organisation such as The Wilderness Society within its naturalistic setting this study is able to move beyond analysis of the informational flows of campaign content. This study investigates digital activism within its broader context, describing the role of this form of activism within the conflict and, ultimately, the role of these environmental actors in its resolution through the Tasmanian Forests Agreement (Tasmanian Government, 2012).

However, as is explored more fully in the following section, digital activism has its limitations. Where the costs of engagement are minimal (for example likes, retweets, shares), the sustainability of action may be diminished (Van Laer & Van Aelst, 2010). Strong ties are necessary to maintain an agenda of social change. Online engagement has to transfer offline to continue the thread of political action. The social media use amongst the environmental groups on this study’s network demonstrates that committed political activists using social media and the web more generally are conscious of this, given the prevalence of online functionality (such as social media, Google calendar and digital campaign resources) for offline mobilisation. Here the study confirms the findings of Pilny and Shumate (2011) and Harlow and
Harp (2011) in indicating that as strategic environments, the significance of digital communication networks for activist groups is in their capacity to encourage engagement that translates from online to offline participation.

A hindrance in the process of sustainable engagement may be the shift in narrative around the internet landscape, from utopian “frontier” (Barlow, 1996) to monopoly-dominated communications marketplace (Foster & McChesney, 2011). A parallel development to the networked individualism noted by Wellman et al. (2003) is a concomitant personalization of online interactions. This personalization of online experience (through closed rather than open environments, or through data mining and user profiling for example) threatens the democratic communicative potential of the internet by fragmenting engagement and re-structuring the range of possible interactions:

The Internet is being transformed into a few dominant spaces that are thereby able to exploit their scarcity value. The effective “closure” (or displacement) of much of the free public space on the Internet, which now seems to be occurring, means that what was once clearly a form of public wealth in new communicative possibilities, as measured by use values—that is, in the new, universal human capacities it seemed to promise—is giving way to a very different type of system. Here exchange value dominates, and the disappearance of those use values associated with relatively free communication comes to be registered as a gain in wealth (Foster & McChesney, 2011, The Paradox of the Internet section, para. 2).

That such structural tendencies should draw public comment over “walled gardens” from Google co-founder Sergey Brin (Katz, 2012) is indicative of a changing perception of the internet. Marshall McLuhan (1968; 1967) suggested that electronic (pre-digital) communications would change the
nature of democracy. McLuhan (1968, p. 17) foresaw a “global village” in which direct democracy would be possible through communications media, enabling individuals to engage more fully in distributed governance. As Foster and McChesney (2011) suggest, the communicative possibilities of digital networks may be, to some degree, limited by the exchange value underlying access to online spaces.

4.2.3.1 The limits of digital activism

boyd (2010, p. 39) identifies specific media effects on the public sphere: “Networked publics are publics that are restructured by networked technologies. As such, they are simultaneously (1) the space constructed through networked technologies and (2) the imagined collective that emerges as a result of the intersection of people, technology, and practice”. The environmental network identified in this study illustrates the ways in which civil society organisations facilitate the creation of civic network structures (YouTube channels, social and organisational networks, shareable media content). The imagined collective is created through the shared issue framing generated by new media, in combination with the network structures which connect its transfer and facilitate online engagement around that issue.

Such collectives can emerge with rapidity given the immediacy of networked communications. This rapidity is problematic for institutionalised political structures to respond to; so, for example, a common comment (from both the Right for instance Ferguson, 2012; and the Left, for example Žižek,
on the global Occupy movement is that it has no clear political agenda, in part due to its devolved, networked organisational structure (Bennett & Segerberg, 2012). Commenting on *Los Indignados*, the Spanish incarnation of the Occupy movement, Žižek (2011b) observes that “they express an authentic rage which is not able to transform itself into a positive programme of sociopolitical change. They express a spirit of revolt without revolution”.

As a movement, Occupy struggles to move beyond mobilisation. The fundamental issue has been framed, communicated and transferred via networked communications that position the global financial crisis as a symptom of corporate profiteering and unsustainable financial systems. Momentum has been generated across networks using high-impact emotionally charged media content, so the Occupy Wall Street protest becomes an international Occupy movement. The movement emerges rapidly and organically across networks, however a political agenda does not. There is a clash here between the structures of digital activism and those of institutionalised politics. Before the emergence of pervasive computing networks, social movements could not mobilise with such immediacy, nor could they find supportive allies beyond their immediate social context. The alternative public spaces afforded by networks could not exist, limiting the contestation of hegemonic discourses. Network structures change not only the architecture of formation but also its inherent potentiality; “Networked publics are not just publics networked together, but they are publics that have
been transformed by networked media, its properties, and its potential” (boyd, 2010, p. 42). Whilst political protest arises in an historical context, it is the rapidity and immediacy of mobilisation that is a significant feature of how social movement action occurs when facilitated by digital communications technologies (Zuckerman, 2011). The data from this study suggest that in a local context social movements can mobilise with sufficient cohesion to sustain a campaign that can influence change. The network analysis data locate at the centre of the study’s network of environmental groups the two organisations from the environmental movement who were ultimately signatories to the *Tasmanian Forests Agreement* (Tasmanian Government, 2012); Australian Conservation Foundation and The Wilderness Society. Network analysis data also illustrates how civil society actors such as these two organisations can draw on global governance agencies such as UNESCO to influence policy outcomes. Occupy may find its place by defining itself as an ongoing protest movement, however the environmental groups in this study have mobilised with sufficient cohesion to create the opportunity to have an impact on the formulation of legislation around forestry and forest protection through the *Tasmanian Forest Agreement*.

Another of boyd’s concepts - “collapsed contexts” (boyd, 2010, p. 10) – is relevant here. Autonomous cultural boundaries are weakened by the diminished temporal, spatial and social properties of networked communications. Digital media content, even communicative interchanges, in
this context have the capacity to become de-contextualised as internet memes, or fast-spreading, viral units of networked culture. A meme is a cultural container in digital format which transfers and replicates (often remixed through the creative application of digital media) across personal networks. The intersection of various personal networks generates a viral capacity to this transfer, enabling the meme to be rhetorically appropriated and re-used beyond the context of its original creation (Johnson, 2007). For boyd (2010, p. 49) this potential for cultural content and communicative interaction to seep across online contexts is one of the fundamental dynamics of networked spaces; online publics comprise both imagined collectives and invisible audiences.

It is these collapsed contexts that are a factor in the volatility of online social movements and their transfer offline. Messages conveyed from person to person in digital media formats across the internet as memes – what Johnson (2007, p. 29) describes as units of cultural transmission – can have far reach across personal networks. Memes can be light-hearted, such as Texts from Hillary (http://textsfromhillaryclinton.tumblr.com/) a blog set up by two US political communications strategists featuring spoof mobile phone text message exchanges between the then-US Secretary of State Hillary Clinton and various colleagues, politicians and celebrities. The blog gained sufficient online attention to come to Secretary Clinton’s attention. The creators were invited to meet Secretary Clinton and the blog bowed out on a high note with
a final post that included a genuine text message from the Secretary of State (Garber, 2012). The significance of the meme in the political communication of Public Sphere 2.0 becomes important here. Digital networks collapse the geographical and spatial contexts then have contained cultural messages within socio-cultural limits. For example, whilst working on this study, the researcher noted an example of the potential reach of an internet meme (see Figure 4.10). Figure 4.10 is a digital image of graffiti inspired by Invisible Children’s Kony2012 campaign on a road-sign in the Riverina region of New South Wales, Australia.

**Figure 4.10. Kony2012 meme graffiti**

Image captured 5 November 2012.

In a culture of ubiquitous digital technologies memes can be transmitted in multimedia formats across the social networks that new media sustains. Political memes that are spread proactively as the rhetoric of protest can generate substantial momentum given the low resource cost of
mobilisation (actions such as a simple click of a mouse to “share” or “like”).

The process of campaigning on defined policy, the development of a coherent agenda, the drafting of legislation and influencing of elected representatives, in essence, the activities required to shift from political message to social change, are time-consuming and resource intensive political processes.

Successful campaigns of digital activism require a strategy that incorporates an extended range of social and political action if they are to be more than internet memes. These data from this study suggest that the environmental movement campaigning against the Bell Bay pulp mill have been effective in using the meme-like capacity of digital media within a focused context.

Elements of campaign content from The Wilderness Society for example have significant usage measures. *Tasmania’s Clean Green Future: Too Precious to Pulp*, a high production quality video on The Wilderness Society’s “Tasmania” YouTube playlist has 6,916 views (on 21 January 2014). The study demonstrates that this strand of digital activism is an element of a broader strategy of lobbying, which culminated with The Wilderness Society and Australian Conservation Foundation taking part in the formulation of legislation, and ultimately, signing, the Tasmanian Forests Agreement.

Some of this digital video content has high production value and contains powerful, emotive imagery of Tasmanian native forest (and of its destruction through logging). High production video such as *Tasmania’s Clean Green Future: Too Precious to Pulp*
(http://www.youtube.com/watch?v=btePjTYkiKs) acts as key campaign material. As mentioned above (Section 4.2.3) the viewing statistics for this video (6,916 on 21 January 2014) in particular are significantly higher than others in the playlist. Serious political activists are conscious of the importance of online/offline transfer. In their study of the usage of social networking sites by activists in the United States, Colombia and Guatemala, Harlow and Harp (2011, p. 207) found that activists across these geographic and cultural contexts “tended to consider online activism to be successful when it prompted offline activism”. Petray’s (2011, p. 925) study of the adoption of web 2.0 tools by Aboriginal activists in Australia found that digital activism “is most effective as just one component of activism, as an enhancement to offline activism, rather than the main tactic”. The actors on the network of environmental organisations identified in this study demonstrate this awareness, an understanding that digital activism does not exist in a separate online realm, but is a strand of action in an intertwined media and material context. The data from the network is clear on this point. Forty-five of the fifty organisations on the network (90%) incorporate some form of strategy to engage participation beyond what Petray (2011, p. 935) describes as “push-button activism”.

What is significant here is that the digital activism can inform, it can create awareness, it can mobilise but it can also empower individual offline micromobilisation by providing tools, resources and guidance. Organisations
can, and do in the studied network, provide, in digital form, fact sheets, campaign guides, action kits (pamphlets and posters), pre-drafted campaign letters and email templates to send to elected representatives. Digital communication tools such as calendars, email lists and e-newsletters can be used to organize offline meetings, rallies and protests. Easy to complete online sign-up mechanisms can facilitate an on-going relationship with individuals, promoting campaign issues, campaign involvement and organisational membership or volunteering.

4.2.4 Entrance to the debating chamber: search engines

As activism around the proposed pulp mill and broader forest protection issues moved into a phase of negotiation the online landscape reflected this shift in campaign mode. Searching using Google (search terms: “Tasmania”, “environment”, “protection”) found that the online landscape had shifted towards the government policy agenda and legal framework around which stakeholders (including The Wilderness Society and Australian Conservation Foundation as representatives of the environmental movement) were negotiating through 2011-2012. The first page ranked results (Google, 2012b) are:

- Environment Protection Authority Tasmania
- Environment Tasmania (http://www.et.org.au/) – peak body for Tasmania’s environmental groups


- The Environmental Law Handbook (http://www.edohandbook.org/) – provided by a network of Australian environmental law centres


- Tasmanian Conservation Trust (http://www.tct.org.au/) – environmental lobby group

This shift in the information landscape – from environmental campaigning to policy and legislation – is significant, reflecting the evolution
and transfer of the campaigning into the policy and legislative domains. In
2011, an agreement on forestry and the protection of native forests in
Tasmania – the Tasmanian Intergovernmental Forestry Agreement – was
reached by the Australian and Tasmanian Governments, the forestry industry
and the environmental movement. The outcome of this process was a policy
on forestry and forest protection - the *Tasmanian Forest Agreement 2012* –
negotiated and signed by key stakeholders from the forestry industry,
community groups and the environmental movement (Tasmanian
Government, 2012). The signatories to the agreement representing the
environmental movement were those found at the centre of the network of
organisations identified in this study: the Australian Conservation Foundation;
and, The Wilderness Society (Tasmanian Government, 2012). This evidence
(their central network positioning as well as their signing of the policy
agreement arising from their lobbying) indicates a thread of influence, from
the dominance of these two organisations in terms of their hyperlink capital
on the issue of environmental protection in Tasmania through to their
influence over the policy agenda as it has developed. As these data suggest,
these organisations are positioned with sufficient political capital to influence
policy on behalf of the collective as a whole.

Turning from the macro to micro levels, information access and
retrieval are important aspects of design at the level of the individual site in
order to maximize the ease of interaction with relevant campaign content.
Search functionality and/or categorized access to information (through topic/issue/campaign headings, site maps) was a feature of thirty-eight of the fifty (76%) sites on the network of environmental organisations that this study has identified. Figure 4.11 provides an example of these design features from the site of Friends of the Earth Australia, where a text box is available for keyword searching via the site’s search engine.
Screen capture image used with permission of Friends of the Earth Australia.

Access points to categorized information are provided via a list of campaign areas (such as climate justice, nano-technology, sustainable food, indigenous land and rights, environment and population). The use of tagging, the application of informal descriptive terms to units of digital content, is another mode of information access employed by sites on the network.
These examples from the data collected for this study show that the de-contextualised flow of digital content (such as the memes discussed in section 4.2.3.1) is not limited to social media. As boyd (2010, p. 48) suggests, “the introduction of search engines has radically reworked the ways in which information can be accessed”. Hyperlink capital, the number of in-links a site has from others, is a significant feature of Google’s indexing and ranking algorithms (Segev, 2010). The network of environmental organisations identified in this study provides a strong indication of which sites will be prioritized in providing relevant information on the campaign in the context of Google indexing and searching (the Australian Conservation Foundation and The Wilderness Society), due to the index authority assigned to them from the other sites across the issue network (see Figure 4.7, Section 4.2.2, p. 203).

4.2.5 A universal medium?

Only twelve of the fifty sites (24%) on the network identified in this study incorporate features that enhance the accessibility of site content. Adherence to W3C principles of universal design to ensure accessibility of content by users of different physical and cognitive abilities, and by a variety of devices, was not prominent within this subset of the data. Where sites did adhere to the guidelines, this was demonstrated by incorporation of icons or an accessibility statement indicating the extent to which site content can be measured against the W3C design standards around accessibility (World Wide
Web Consortium, 2011). In some instances the hypertext markup coding underlying the design of the site had been validated against W3C criteria.

That roughly only a quarter of the organisations on the network make overt acknowledgement of accessibility may be due to the legislative environment surrounding the issue. Whilst the delivery of information and services online is covered by Australia’s Disability Discrimination Act (Australian Government, 1992), more formal policy around the accessibility standard required by web sites did not come into force until 2009. In late 2009 the Government’s Online and Communications Council (a body now absorbed by the Department of Broadband, Communications and the Digital Economy) endorsed the requirement for Government web sites to meet the W3C’s accessibility standard (Australian Government, 2011). This formalizing of accessibility standards may filter through to the non-governmental and community groups that make up the majority of organisations in the environmental network identified by this study.

The Australian Greens note that accessibility is a key performance measure in ensuring that their online content is publically accessible: “We are committed to making GreensMPs fully accessible to the public, including people with disabilities or technical constraints. GreensMPs is regularly tested for accessibility and all new features include accessibility as a key performance measure” (coded at http://greensmps.org.au/). The Australian Greens also
incorporate Google’s translation widget (http://translate.google.com/) into their site design to offer translation into multiple languages. The other two dominant forces in Australian electoral politics, the Australian Labor Party and the Liberal Party of Australia, have no accessibility statements on their sites (at 22 January 2014).

This comparison is compelling. The data from this study indicate that of the three major parties in Australian politics, the Australian Greens demonstrate a conscious and deliberately democratic strategy in their use of technology. The Tasmanian Greens provide a set of links to open source software on their site. The Australian Greens’ site specifically dedicated to its elected representatives in the Australian parliament (greensmps.org.au) offers its content for re-use under a flexible copyright Creative Commons licence and notes that the site itself is built on the Drupal open source content management system. It seems that in exploring the democratic possibilities of technology, the Australian Greens are prepared to ‘walk the walk’.

There is constant tension between the principles of universality that underlie Tim Berners-Lee’s original conception of the web and the proprietary developments that fuel its expansion. The organisation of which Berners-Lee is the director, the World Wide Web Consortium (W3C, http://www.w3.org/), works to develop underlying universal principles for the architecture of the web: “the social value of the Web is that it enables human communication,
commerce, and opportunities to share knowledge. One of W3C's primary goals is to make these benefits available to all people, whatever their hardware, software, network infrastructure, native language, culture, geographical location, or physical or mental ability” (World Wide Web Consortium, 2012).

Morozov (2011) describes as cyber-utopianism the prominent early narrative of universality around the web (good examples are Barlow, 1996; Dyson, et al., 1996; Rheingold, 2000). This narrative presents the internet as inherently democratic, a space of individual and community freedoms. The language of this narrative is enthusiastic, and even euphoric: “A Declaration of the Independence of Cyberspace” (Barlow, 1996), “Cyberspace and the American Dream; A Magna Carta for the Knowledge Age” (Dyson, et al., 1996), “The Virtual Community; Homesteading on the Electronic Frontier” (Rheingold, 2000). These titles define an optimistic vision of the potential of digital networks as socially beneficial. The grandiosity of language used (in particular, that of Barlow and Dyson et al.) is in measure with the aspiration for the immense – even revolutionary - communicative potential that networked technologies were perceived as offering.

This is a narrative that, without critical reflection on more than two decades of internet development, can drift into a deterministic approach to technology as enabler of more democratic societies. It is a narrative that has re-surfaced in some analyses of the Arab Spring, as well, leading prominent
journalist Malcolm Gladwell (2010) to write the piece “Small change: why the revolution will not be tweeted” in The New Yorker. The piece stimulated significant online debate about the role that social media has played in political protest and social unrest. Clay Shirky (2011) asserted the value of social media in protest against authoritarian regimes in The Political Power of Social Media, a piece for Foreign Affairs. As noted in Chapter 2, for Shirky, there is ample evidence that social media creates a public sphere for dissenting voices where, in authoritarian states, none may have existed previously. He notes the capacity of social media and mobile phones for organising diffuse groups of protesters and potential protestors into a more visible and politically coherent movement. Unconvinced, Gladwell followed with Does Egypt Need Twitter?, again for The New Yorker, noting: “People protested and brought down governments before Facebook was invented...How they choose to do it is less interesting, in the end, than why they were driven to do it in the first place”. The debate continued in Foreign Policy, with a joint piece by Gladwell and Shirky (2011); From Innovation to Revolution: Do Social Media Make Protests Possible? (Gladwell & Shirky, 2011) Policy. With neither conceding his position to the other it was left to Bill Wasik in Wired to assess the outcome in his piece Gladwell vs Shirky: A Year Later, Scoring the Debate Over Social-Media Revolutions. For Wasik the debate was a score draw, with both Gladwell and Shirky offering valid (and valuable)
perspectives. Social media may not explain why protest occurs but it can be an important factor in how it happens.

The findings of this study temper this emancipatory narrative, noting the limited adherence to accessibility standards from its sample of web sites. Hyperlink analysis such as that of Gonzalez-Bailon (2009) provides further balance with the finding that hyperlink capital reflects pre-existing material inequalities. Access to the internet does extend our communicative possibilities, however this access is, of course, limited; “the democratic aspects of Web 2.0 only apply to those with access to the related infrastructure – about 1.6 billion people worldwide, or 25 percent of the global population” (Petray, 2011, p. 924).

4.3 Global civil society

4.3.1 The ‘glocalization’ of Tasmanian environmental protest

There is evidence from the web crawl data of an internationalization of civil society formation and action with network data indicating the positioning of three international organisations on the periphery of the environmental activist network identified in this study:

- Global Greens (http://www.globalgreens.org/) – a coalition of international environmental political parties
• Rainforest Action Network (http://ran.org/) – a North American environmental campaign group

• UNESCO World Heritage Centre (http://whc.unesco.org/) – United Nations Educational, Scientific and Cultural Organisation body responsible for the protection of sites designated as being of international cultural or environmental significance

These data demonstrate the role of digital communications in generating an increasingly global form of civil society. The local forest protection conflict in Tasmania becomes an instance of a broader environmental conflict at an international level. Here the data provide support to the study of Hutchins and Lester (Lester & Hutchins, 2009) in exploring the capacity of digital communications networks to bridge space and time thus enabling environmental protestors in remote Tasmanian locations, such as tree-top camps, to engage with the mainstream media discourse around the environment. In addition, the evidence from this study suggests that another advantage to this collapsing of time and space through the appropriation of digital communications technologies by environmental protestors is that it enables activist political action to align at an international level. Van Aelst and Van Laer (2010) see this as significant. As political and economic power shifts to an international level, the political action of civil society organisations can follow suit.
The data indicate that limiting the domain (to .au for example) does not reflect the dynamics and online practices of civil society organisations, nor the realities of Public Sphere 2.0. The use of strategic hyperlink practices by these environmental groups creates overlapping international networks of civil society organisations. Local sites of social and political conflict become connected and inter-related at the points at which networks of civil society organisations overlap. This forces a global social perspective as social and political issues from different international contexts become enmeshed in the mediated flow of cultural symbols and signifiers that digital media present.

The convergence of global and local political actors on the network identified in this study illustrates the collapsing of geo-social and cultural boundaries enabled by digital networks. boyd (2010) views these “collapsed contexts” as inherent to networked communications. For Giuliantotti and Robertson (2004, p. 546) the duality of the local and the global (“glocalization”) is a juxtaposition implicit in globalisation:

Social actors possess greater senses of ‘globality’: that is, globalisation is marked by increasing subjective consciousness of the world as a whole; or, in other words, it involves heightened awareness of the world as a ‘single place’…characterized by a global intensification of social and cultural ‘connectivity’, such as through telecommunications…globalisation is marked culturally by processes of ‘glocalization’, whereby local cultures adapt and redefine any global cultural product to suit their particular needs, beliefs and customs.

The presence of three non-Australian sites (Rainforest Action Network, Global Greens and the UNESCO World Heritage Centre) on the network is due
to the lack of international identifier (for example .au for Australia, .uk for the United Kingdom, .ca for Canada) in their domain names, which would have forced the web crawler to ignore hyperlinks to them during data collection (as discussed in Chapter 3). Their presence on the network represents more than this, however, highlighting the significance of three ideas. The first of these is the impact of globalisation; Castells (2000) identifies the emergence of networked societies as a fundamental element of globalisation. The second (and related) idea is that of the globalisation of the public sphere in which civil society, non-government organisations and supra-national organisations (such as the United Nations for instance) operate (Castells, 2008). The third idea is that the mediated interaction that citizens have with their culture increasingly pivots around the local and the global, rather than the national. Whilst Lyotard (1984) suggests that technology contributes to the decline of grand narratives, in fact the converse may be true. Technology may contribute to the decline to the grand narratives of twentieth century nationalism, whilst promoting a fresh overarching narrative of globalisation.

Analysis of the network indicates that the properties of networks and social media provide the infrastructure of, and channels for, the globalisation of political culture and the public sphere. Twenty-eight sites on the network (56%) integrate new media, which is significantly less constrained by geographical location than traditional (print and broadcast) media. These sites incorporate audio-visual digital content and integrated access points to
popular social media environments where content may be shared, embedded into sites or interacted with through comment streams. Environment Victoria, for example, embeds digital video content from both the Vimeo and YouTube platforms, creating a digital narrative which may be interacted and engaged with (for instance through commenting and sharing). The Huon Valley Environmental Centre embeds YouTube video content and provides links to its own channels on MySpace, Twitter, Facebook and YouTube; multimedia content combined with interactive social media. These data provide confirmation of boyd (2010), Castells (2000) and Lyotard (1984) in their assessments of the capacity of networks to collapse geo-spatial, socio-cultural and temporal boundaries. Protest from remote tree-top camps in the Tasmanian wilderness can become real-time engagement with mainstream media. Digitised footage of such protest can flow across social networks and through social media channels regardless of the location of the audience. Specific environmental conflicts such as that over the protection of Tasmanian native forest can become an illustration for a broader, more international campaign of environmental protection for organisations such as the Global Greens, Rainforest Action Network and the UNESCO World Heritage Centre.

4.3.2 The unintended consequences of globalised digital media

The study provides evidence of an internationalization of the public sphere, identified by the peripheral positioning of international organisations
Global Greens, Rainforest Action Network and UNESCO World Heritage Centre on a network of actors campaigning on a specific, localized environmental conflict. The evidence from the study of designed integration of access points to social media environments, including access to multiple (including non-English language) social networking platforms is indicative of information and communication flows across geo-spatial and socio-cultural contexts. This flow – across what boyd (2010, p. 10) describes as “collapsed contexts” – creates potential challenges for democracy. The digital space across which this content flows is bounded only by the networks that are its carrier. It is a trans-national cultural space and this creates some complexity in terms of how we make meaning from the culture that surrounds us. One reaction is to reassert the boundaries of the nation-state within the digital environment. This approach is taken by China, which blocks selected internet sites from retrieval via search engines such as Google (Drezner & Farrell, 2004). Despite China’s state-sponsored internet censorship, social networking in China thrives on the micro-blogging site Weibo, where users employ disguised and guarded language to comment on controversial matters in Chinese social and political life (Pu & Scanlan, 2012; Tang & Sampson, 2012). The Iranian government limits access to the internet, a strategy it is extending in order to provide Iranians with what it describes as a “Halal internet” (Meo, 2012). Turkey has been filtering internet content since 2011 (Keating, 2014). This study illustrates the challenge that digital communications networks can create for
state authorities. Network analysis demonstrates how a civil society actor with regional influence such as The Wilderness Society can draw on the authority of global governance agencies such as UNESCO in order to influence conflict resolution and policy development in a local context. Such strategic practices become harder for civil society actors to employ when isolated from the digital communications networks that make these tactics possible.

The study identifies how the environmental movement in Tasmania makes use of the capacity of new media to create a powerful narrative, exploiting the potential of digital communications tools and networks to create and circulate audio-visual campaign material that frames specific issues in alignment with their philosophy and aims. The complexity of making meaning, of developing a political identity within these digital spaces is highlighted through comparison with the ways in which other political actors appropriate the tactics of digital activism. Breen (2012) suggests that here we are faced with the “unintended consequences“ of the internet; the global flows of cultural objects in trans-national cultural space challenges the processes of meaning creation that have evolved within the context of national cultures. For Breen, the free flow and accessibility of content such as video footage of acts of extreme violence, is problematic for a conceptualization of a public sphere bounded by Enlightenment values of reasoned and rational discourse. Breen cites seeing, in 2004, the execution of Nick Berg as a factor in his coming to this position. Nick Berg was an American
A businessman who travelled to Iraq in order to secure contracts to rebuild the country’s communications infrastructure (Neville, 2004). Berg went missing during the visit in mysterious circumstances. Eventually video footage of his staged execution appeared on militant Islamic web sites. The video footage of the beheading of Nick Berg continues to appear within the first page of retrieved sites using Google as search engine and searching on the victim’s name (Google, 2012a).

The environmental organisations on the network use new media and social networking platforms to create a narrative that counters a discourse of economic rationalism around native forests and forestry in Tasmania. Gunns Limited presents a case for the development of the Bell Bay pulp mill using a specific web site at http://www.gunnspulpmill.com.au/. Gunns publishes multiple economic modelling reports related to their proposal. The site uses an online form to offer the opportunity of registering for employment opportunities that might arise from the construction of the pulp mill. The site is however relatively static. Reports are made available in Portable Document Format and no multimedia content is included. Employment and economic development are strong themes through the site’s content. The argument in favour of the pulp mill builds on a rationale of economic development for the Tasmanian economy: “Economic modeling shows that the proposed pulp mill will have a very substantial positive impact on Tasmania and Australia in the form of greater economic activity and employment” (Gunns Limited, 2010).
contrast through the use of digital media containing evocative imagery, audio and video, environmental groups appeal to the senses and emotions, whilst presenting arguments based around biodiversity and sustainability. The section of the Australian Conservation Foundation’s web site on Tasmania (http://www.acfonline.org.au/be-informed/land-forests/tasmanian-forest-protection) features mixed media to present this narrative. An embedded YouTube video notes the extension of the area of native forest protected by the UNESCO World Heritage Listing. The backdrop is the beautiful forest scenery. The opening and closing audio amplifies the calls of native species that inhabit this ecosystem. This element of the site provides a sensory experience, whilst the extended textual commentary builds an argument for forest protection based on the unique nature of Tasmanian native forest, its inclusion in the UNESCO World Heritage Centre Listing and the sustainability of the forestry industry based on the *Tasmanian Forest Agreement*. This counter-narrative re-frames the issues, creating an opportunity for political action driven by the environmental agenda. Here the study confirms findings from China and Holland on the role that social media play in the political process. There are obvious instances of states attempting to limit their (and, perhaps more significantly, their populations’) engagement with this space of global culture; China (Tang & Sampson, 2012) and Iran (Meo, 2012) are two prominent examples. A study of the Chinese situation from Tang and Sampson (2012), however, indicates that this approach is less than successful. Despite
state censorship of the internet, their study of the relationship between the expression of Chinese public opinion online around controversial issues and the presentation of those issues in the media indicates that access to and interaction on the internet has begun to influence coverage within mainstream Chinese media. Tang and Sampson (2012, p. 460) demonstrate that the strategic practices of issue framing and agenda setting using digital media, also identified by Bekkers, Beunders, Edwards and Moody (2011) in the context of a Dutch social movement, have influence over mainstream media issue presentation, even in a context where coded language and anonymity amongst a critical mass of online commentators are required in order to comment whilst avoiding repercussions from the state. The network identified by this study illustrates how the media can be drawn into the narrative presented by the environmental movement. The study’s network analysis shows that *The Tasmanian Times* links to The Wilderness Society. Multiple in-links such as those received by The Wilderness Society and Australian Conservation Foundation push these groups higher in Google search rankings, drawing them to the attention of journalists who commonly use the web for research (Meraz & Papacharissi, 2013). The Wilderness Society, for example, features in media coverage of UNESCO’s involvement in forest protection in Tasmania (Darby, 2013).
4.3.3 Global social movements, local issues

Within the network of organisations, more than half demonstrated a strategic awareness of this global audience as a feature of campaigning in Public Sphere 2.0. Twenty-eight sites (56% of the network) leverage the capacity of new media to disseminate campaign and issue framing content. They do so in a number of ways. One approach is to embed functionality that enables single-click sharing of web site content across multiple social networking sites (the Wilderness Society and Rainforest Action Network use this strategy across their sites). Another approach is to use the connective properties of the social networking platforms to engage with site users. Save Our Marine Life (as mentioned in Chapter 3) embeds single-click access to its Facebook and Twitter presences on its site. By engaging site users in this way environmental organisations exploit the audiences available across the personal networks (those on their ‘friend’ list in Facebook for instance) of their supporters. When the users of the Save Our Marine Life site engage with the organisation on social networking platforms like Facebook and Twitter, those connected to these supporters across these environments see this public engagement. Environmental groups can also use low cost digital tools to create user-generated campaign content. Relatively easy-to-use tools such as mobile phones can capture, photographs, video and audio. This content can be embedded with the sites of the environmental organisations themselves or uploaded to social media platforms such as Flickr (for digital photographs and
video) or YouTube (for digital video). User-generated content on these social media platforms is often published with flexible copyright permissions and can be re-used across other network channels (such as blogs). The Australian Conservation Foundation (ACF) makes strategic use of this affordance. ACF has its own channel on YouTube where it uploads digital video campaign materials. A prominent graph linking to this channel is embedded on the ACF web site. The production of such digital campaign content enables these environmental groups to create their narrative, rather than deferring to the framing employed by the mainstream corporate media.

In addition, twenty-six sites (52% of the network) embed functionality that enables users of their sites to play an active role in that process of distribution. These sites use features such as RSS feeds or “share” icons to distribute chunks of content across users’ own (multiple and multi-lingual) digitally-mediated social networks. Users themselves can thus become engaged in the process of mobilisation. At this individualized level, this is the layer of “micromobilisation” that Bekkers et al. (2011) suggest is a feature of the role that new media plays in social movement mobilisation in Public Sphere 2.0.

The Australian Greens demonstrate an awareness of this global political context, embedding a widget (AddThis) that allows site users to share content across a plethora of social media environments, including Japanese,
Dutch and Spanish language networks. The Rainforest Action Network employs similar functionality; the organisation uses a blog, integrated into the site, to deliver content of currency. Individual blog postings have a “share” icon as a design feature, which enables users to share the posting content across a range of social media, social networking and social bookmarking sites (Digg, del.icio.us, Facebook, Mixx, Google, Ma.gnolia, NewsVine, Reddit, StumbleUpon, Technorati, TwitThis). The blog itself offers RSS feeds that can integrate with personalised content aggregators. This is significant in terms of how individual citizens engage with Public Sphere 2.0. Individuals can tailor the nature of their engagement using these tools to personalize the channels that provide their news and current affairs. This personalized engagement with the public sphere is a feature of post-broadcast democracies such as Australia (Wilson, 2011), where household computer usage and internet penetration is high (Australian Bureau of Statistics, 2009). This is particularly important as the Australian Government is rolling out a National Broadband Network (Department of Broadband Communications and the Digital Economy, 2010) and mobile devices are increasingly being used to access the web (Australian Bureau of Statistics, 2012). In such an environment the public sphere is no longer a mass-mediated environment, but consists of segments and niches for multiple publics. For Hutchins and Lester (2009, pp. 591-592), this is a media sphere that creates opportunity for the environmental movement to detach itself from a dependence on corporate media; at a time
when environmental issues are no longer on the fringe but firmly within the
focus of public policy, a shift in communications strategy may be required:

environmental politics and issues are no longer the preserve of 'sectional' or 'special interest' lobby groups, but are increasingly and more appropriately located within the broad domain of contemporary citizenship....This growing awareness of pressing environmental problems suggests that a reduced reliance on news media to relay or mediate messages and actions is not only possible, but strategically and politically desirable as increasing numbers of concerned citizens independently seek out information that is not mediated or diluted by the interests of the state, capital and/or corporate media....the environmental movement, at the very least, needs to re-evaluate its dominant communications strategy of attracting news media coverage in order to properly leverage the tactical and participatory potential of the internet and web as modes of communication.

Stein (2011) has studied the extent to which organisational processes, priorities and resources constrain web site development within environmental activist organisations. Interviewing twenty-eight webmasters, Stein notes that many were keen to engage with the strategic and communicative possibilities of new media. She identifies (p. 380) a wish-list of features and functionality that these web developers sought to introduce: “interactive blogs, games, publication forums, social networking, syndicated email feeds, online petitions, online donations, online membership databases, web analytics, maps, and multimedia”. The resourcing and communications strategies of these organisations were constraining factors in implanting the interactive possibilities of new media. The findings of this study of the environmental organisations campaigning around Tasmania’s native forests are divergent
from those of Stein. By and large, the wish-list of functionality is implemented on many of the sites engaged in the campaign.

Civil society organisations may be particularly conscious of their strategic linking and sharing practices. In her work on the dynamics of online issue networks, Marres (2006) notes that civil society organisations have a natural affinity for social and organisational networking, as this is a feature of the large projects of social change with which such organisations are often involved. Broad social movements require such practices in order to form coalitions capable of driving forward the social change agendas (Diani, 1992, 2000).

Patterns of linking identified across the sample of sites in this study indicate that an element of the hyperlink practices of civil society organisations is driven by an awareness of the importance of networking (in the social and organisational senses) in order to form coalitions around specific issues, in order to form a movement. An example of this is the Global Greens node on the periphery of the network of organisations. Global Greens is a supra-national organisation, a partnership of international environmental political parties. The organisation is on the edge of the network, on the periphery of the cluster of regional Australian Greens nodes and linked into the network by the sites of the Australian Greens and the Tasmanian Greens. Figure 4.12 illustrates the ‘glocal’ nature of the network, dominated by civil
society organisations focused on local politics with three international actors – Global Greens, Rainforest Action Network and the UNESCO World Heritage Centre – drawn into the network and, therefore, providing global exposure.

**Figure 4.12. Global civil society actors as peripheral network nodes**

The United States based organisation Rainforest Action Network is one of these peripheral nodes, which is linked into the network by the Australian Conservation Foundation, The Wilderness Society, the Victorian Greens and the Tarkine National Coalition. The cross-section of these organisations (national campaign groups, regional political party and local lobby group) suggests that the awareness of a global context for campaigning around issue-based politics is present across civil society in terms of hyperlinking practices. At local, regional and national levels, civil society organisations employ linking to identify with issue-based politics in a global, rather than national context.
result of this is that social movement mobilisation and digital activism are enacted in this global context. For the civil society actors that are involved, broad global coalitions may be valuable in issue-framing activities, the potential of online fund-raising, the lobbying of media, elected representatives and international policy-formulating bodies.

A large proportion of the sites identified by this study employed online functionality for fundraising. This suggests that fundraising is a significant feature of how civil society organisations use the web. Thirty-seven organisations on the network (74%) employ online functionality to undertake fundraising activities. This may be through functionality that facilitates online financial transactions (such as that provided by the Tasmanian Greens) or it might be through the provision of online shopping and merchandising (such as that provided by Huon Valley Environmental Centre). Their not-for-profit remit means that financial support and donations from the public are essential to their on-going operation. The potential of the web to source funding continues to evolve across the spheres of both business and civil society, with this affordance of the network being developed to crowdsource funding for charities (for example http://www.donations.com.au) and projects of all types (for instance http://www.kickstarter.com/).

The UNESCO World Heritage Centre, an organisation with an international remit, is connected into the study’s sample network through
linkages with the Wilderness Society and the Tarkine National Coalition. These linkages and the presence of this supra-national policy making organisation within a network with a specific local focus supports the analysis of both Marres (2006) and Diani (1992, 2000) in relation to the strategic coalition building networking practices of civil society organisations and social movements.

4.3.4 Political literacy and global civil society

In this increasingly global, interlinked public sphere the processes by which we create meaning from digital media become increasingly complex. Again, the Kony2012 campaign by Invisible Children illustrates this complexity. The viral success of the campaign revolved around a simple and strongly emotive narrative. It did not rely upon, or even draw on, an understanding amongst those to whom it was appealing, of the realities of political conflict overlapping Uganda, South Sudan and the Democratic Republic of Congo. The properties of social media, the opportunity structures of digital activism, enabled Invisible Children to frame the situation in a very specific and strategic way to an audience with potentially no broader contextual appreciation of the situation in central Africa. The transfer of the campaign video across personal networks and the rate at which the video was viewed on the YouTube and Vimeo hosting platforms gives rise to conclusions as to the nature of digital activism in Public Sphere 2.0, which feels contradictory. On the one hand, the initial phase of the campaign would appear to be an immediate success; on
the other, it highlights the complex negotiation of meaning creation and social awareness that political engagement mediated through social media requires in networked societies. “The young today cannot follow narrative but they are alert to drama”, as key media theorist Marshall McLuhan wrote to Harold Innis in a letter dated 1951 (E. McLuhan & Zingrone, 1997, p. 74). Sixty years on McLuhan’s comments on the impact and intensity of electronic media as mediator of experience seem just as relevant when extended to digital networks of new media. This study illustrates how this sense of “drama” is of strategic importance to the environmental groups engaged in campaigns of digital activism. Content analysis suggests that environmental groups such as The Wilderness Society and Australian Conservation Foundation make use of digital media production to present imagery and audio-visual content in campaign digital media that are designed to stimulate emotional responses. Appeal to emotional responses is supported by arguments for an approach to native forests and forestry that recognises the importance of sustainability and biodiversity.

The sample of networked environmental organisations identified in this study display a coherent political agenda, clearly aligned with the protection of native forest in Tasmania. The pattern of linking delimits the boundaries of political alignment. Social networking and new media are employed to create and disseminate a narrative of environmental protection around native forest in Tasmania. The Kony2012 campaign likewise illustrates that online sharing
behaviours can propel digital activist content – such as that created by these environmental groups – to networked publics beyond the geo-spatial and socio-cultural context of the local dispute.

This creates complexity in terms of how citizens make meaning and form a political identity in Public Sphere 2.0. This is what Breen (2012, 4.08-5.23 minutes) refers to when he notes that the internet is having “unintended consequences” for democracy. The capacity for digital content to seep across network spaces to audiences for whom it had not been intended creates significant challenges for the notion of reasoned discourse that underlies democracy. For Breen himself this became all too apparent when he viewed online the beheading by Islamic jihadists of US business man Nick Berg. This challenge to established practices of democratic exchange (rational discourse) necessitates a shift in conceptualizations of citizenship to incorporate a holistic perspective on the presence of the local within the global.

Gradually, government institutions will have to respond to this challenge. This study identifies a gap in terms of a lack of engagement between government and online civil society. Hyperlink analysis identifies that community groups link to the two sites of the Tasmanian government that appear on the network; however, the web crawler also identifies that the government sites do not link back. There is an absence of engagement in the digitally-mediated process of civil society. In other contexts digital
communications technologies are being used to bridge this gap. Following the
global financial crisis, the Icelandic government made use of social media to
engage with the nation’s citizens in a process of re-drafting the constitution
(Siddique, 2011). Through their participation within these social media
environments, Icelandic citizens were directly involved with their democratic
institutions and constitutional practices. The European Union (EU) is
experimenting with innovative digital projects to incorporate citizen
participation into the process of policy formulation. Puzzled by Policy
(http://www.puzzledbypolicy.eu/), for instance, is an EU funded project that
provides an online platform designed to inform and, significantly, engage the
participation of citizens of selected European nations into the discussions
around policy formulation on immigration. The project site has a social media
‘feel’ to it, with graphics linking to the project’s channels on Facebook,
LinkedIn, Twitter, YouTube and Flickr. There’s a real-time Twitter feed
embedded, discussion groups and a widget that allows site users to compare
their own views on immigration with the legislation of specific countries.
Participants can feed their views on policy, along with impact statements,
directly to EU officials. Citizen involvement is sustained through responses on
their submissions and how they have fed into policy formulation. These
examples from Iceland and the European Union indicate how innovation in
governance, policy development and participative citizenship can be
implemented through the creative application of digital communications
technologies. These developments are of interest to this study of activity by
the environmental movement, in the context of the limited engagement with
government that is observable from the network data. Projects such as the
crowdsourcing of the Icelandic constitution and the EU’s Puzzled by Policy
initiative indicate that governments can implement online engagement with
civil society in ways that create opportunities for meaningful democratic
participation.

4.4 Changing democratic practice

This section explores how the affordances of the social web
(particularly networked publics and discourses of contestation) impact upon
democratic practices in post-broadcast democracies. Analysis of the sample of
web sites from this study identifies a range of design practices that afford and
shape practices of civic engagement and participation. These shifts in
democratic practice are reflected in the dynamics of civic protest across a
variety of international contexts, each of which features devolved, loosely
connected protest movements with digital activism as a core strategic
platform.

4.4.1 International Cases of Digital Activism

The 2012 summer of protest in the province of Quebec in Canada
evolved from a protest over proposed rises in student tuition fees to a broader
coalition of protest around civil liberties and the very right to protest itself. In
response to the original student protests, the Quebec government introduced legislation (Bill 78) to criminalise spontaneous public demonstrations near or around educational institutions. The move back-fired, generating wider support for the student demonstrations and broadening the protest movement to include those concerned over the diminishing of civil liberty and the right to protest in the province (Gabbat, 2012). In a fascinating blend of online/offline tactical mobilisation, networked organisation and social media were used in strategic alignment with nightly “casserole” pot banging street protests (Hallward, 2012) (see Figure 4.13).

Figure 4.13. Casserole street protest in Montreal 2012

Image distributed via WikiMedia (at http://commons.wikimedia.org/wiki/File:CasserolesRosemont1.jpg) under a creative commons license permitting non-commercial re-use.
This study of the environmental movement’s campaigning around forest protection in Tasmania draws on two further international comparisons (protest movements in Mexico and Spain) in order to explore the commonalities across these movements in terms of the networked structures underlying their mobilisation.

In Mexico student protests through 2012 arose from concerns about corruption and media bias in the run up to the Presidential election (Ocaranza & Wilkinson, 2012). When student protest at a visit of the leading candidate in the presidential election campaign, Enrique Pena Nieto, to Iberoamerican University was denounced as stage-managed by his opponents, the 131 students involved produced and released on YouTube a video (http://www.youtube.com/watch?v=P7XbocXsFkI) in which they identified themselves by name and student identification number. The video, which at the time of writing has been viewed more than one million times, became the catalyst for a wider civil protest around the banner “Yo Soy 132” (translated as ‘I am number 132’) in recognition of the original student activists.

Los Indignados (The Indignant Ones) is a similarly amorphous movement in Spain. The movement is without clear agenda, nor organisational affiliation nor identifiable leadership, yet it has managed to mobilise thousands on the streets of Spain’s regional urban centres through 2011 and 2012. In mid-May 2012 more than 100,000 people demonstrated in
public across Spain to mark the anniversary of the movement’s initial anti-austerity protests (Tremlett, 2012).

4.4.2 Digital activism and devolved protest movements

This section explores the emerging practices of digital activism in order to identify ways in which digital communications networks impact on the process of democracy. Evidence from the networked environmental collective identified in this study has much in common with other protest movements (such as those described in Quebec, Spain and Mexico). These instances of civic protest have attributes in common in terms of their use of the structures of digital communications to provide a foundation for mobilisation and protest. Each evolves from a loosely defined political position that owes more to issue-based politics than ideology. A common theme is the formation of a broad protest-based consensus formed from across social groups (for instance students, the middle-class, trade-unions, charities) evolving from a specific catalyst. In the context of Egypt’s Arab Spring, Zhuo, Wellman and Yu (Zhuo, et al., 2011) observe: “The Egyptians in Tahrir Square.....were able to use social media and mobile technologies to access large and diversified networks, reach beyond physical and social boundaries, and exploit more resources to potentially bring about social change”. Digital media have become fundamental to mobilisation. Digital platforms provide the ongoing presence for these movements during periods of latency between offline mobilisation. Another common theme here is the presence of a central online campaign hub
during periods of both offline mobilisation and latency, with devolved campaigns of individualized activism around the creation/recording and sharing of digital content across social media environments of critical mass (primarily Facebook, Twitter and YouTube). The network itself becomes the devolved organisational structure in addition to its role as (internal and external) communications medium and mechanism of mobilisation. Bennett and Segerberg (2012, p. 739) describe this structure as forming around a “logic of connective action”.

The Quebec protests have been loosely coordinated by CLASSE (Coalition Large de l’Association pour une Solidarite Syndicale Etudiante). However the CLASSE web site (http://www.stopthehike.ca/), effectively the digital campaign hub, emphasizes the devolved, ad hoc nature of the organisation itself, describing itself as a “temporary” national student body. This hub site is used to coordinate mobilisation around specific protest events, to provide campaign material (such as leaflets and posters) and to disseminate campaign newsletters. CLASSE use of digital communications to mobilise both online and offline participation in the movement’s activities. Access to the group’s social media channels (across Twitter, Facebook and YouTube) are made available.

The broader campaign around civil liberties and Bill 78 (the specific legislation restricting protest around educational institutions) is supported
online by the site Arretez-moi Quelqu’un (Stop me Someone) at
http://www.arretezmoiquelquun.com/. The site is presented as a collage of
digital photographs of individuals each expressing their opposition to Bill 78.
Each photograph is overlaid with the name and location of the individual
featured. Symbolic opposition to the Bill is expressed in a multitude of ways.
Many are holding hand-written signs acknowledging that they will break the
law through civil disobedience should the Bill be passed, some have their
mouths gagged, some raise their middle finger, many of the younger people
are wearing squares of red cloth pinned to their clothing symbolizing their
support for the original student protestors. The functionality of the site is
minimal, yet straightforward and, in terms of political participation, effective.
The site enables individuals to upload a photograph of themselves, along with
their name and location. The result is a range of individual responses to the
proposed bill, a range of creative expressions of protest. The site is the
platform; the functionality creates the affordance for networked protest at an
individual level. The campaign itself is effectively anonymous (i.e., there is no
organisational affiliation acknowledged on the site).

Figure 4.14 displays a CLASSE campaign poster disseminated online to
promote offline mobilisation. Note the similarity to the Cairns and Far North
Environment Centre’s strategic use of digital functionality (an embedded
Google calendar) within its web site to solicit offline engagement with the
organisation’s events and gatherings (see Figure 4.2, Section 4.2, p.185).
Figure 4.14. CLASSE campaign poster

Available from www.stopthehike.ca on a creative commons licence permitting non-commercial re-use.

The campaign hub for the Mexican protests revolves around #Yo Soy 132 (at http://yosoymx132.mx/). The symbolic identification with social media as integral components of the movement is noticeable from the incorporation of a hashtag into the campaign title. The site makes use of embedded multimedia campaign material and promotes offline activities, whilst (similar to CLASSE) making available access points to the campaign’s social media channels. The Spanish campaign of Los Indignados is supported online by
similar functionality on the Democracia Real Ya (‘Real Democracy Now’) site at http://www.democraciarealya.es/.

The functionality of these sites (those of CLASSE, Arretez-moi Quel’qu’un, #YoSoy132, Democracia Real Ya) reflects that of many campaign sites on the environmental network identified by this study. In particular, there is an emphasis on individualized engagement with the issue (rather than, for example, membership of the organisation). This draws comparison between the behaviours and practices which this environmental network affords in terms of the web site and social media functionality, and the practices of political engagement which the digital media strategies of the Quebec student and anti-Bill 78, #YoSoy132 and Los Indignados movements promote.

4.4.3 The medium as message: contesting the web 2.0 discourse

It is interesting to note that key strands of digital activism reflect the theory and practices of web 2.0, ironically, as defined by the gurus of internet entrepreneurialism. For many business strategists, technology entrepreneurs and internet commentators, web 2.0 was the marker of a new phase of development in how society would use the web. The phrase carries with it connotations of interactivity, creativity and the flexibility of intellectual property around digital content, a strong strand of user participation in the on-going development of online services. The origin of the term is commonly
attributed to technology and innovation publisher Tim O’Reilly and, as a concept, is fleshed out in his exposition *What is Web 2.0: Design patterns and business models for the next generation* (O'Reilly, 2005).

As a disruptive technology – a technological innovation that disturbs the status quo - the internet has an impact across business models and organisations. It is having a similar impact on the practice and processes of politics. In essence, a classic web 2.0 model – i.e., the web as a platform with sites (as environments) providing tools users can adapt for content creation, population and re-use – has been appropriated for political action. The evidence from this study identifies this appropriation: the adoption of web 2.0 tools, technologies and environments to promote counter-hegemonic narratives, to organize offline engagement with environmental action, and to mobilise protest and political action.

Many instances of this theme emerge from the data. The Australian Conservation Foundation uses a YouTube channel to create a new media-driven emotive narrative around environmental protection. The Cairns and Far North Environment Centre embeds a Google calendar within its web site to promote offline events, meetings and protests. Save our Marine Life provides access from its web site to its Facebook presence and Twitter feed to enable site users to have an on-going engagement with the organisation through social media. The Wilderness Society provides single-click sharing of its
campaign content across more than three hundred social networking sites by embedding a sharing widget (Addthis.com) within its site design. In these ways, environmental organisations campaigning around the protection of the Tasmanian wilderness appropriate the tools of web 2.0 into their own activist toolkits. For Van Aelst and Van Laer (Van Laer & Van Aelst, 2010), these tools expand the possible “action repertoires” of activist groups.

The reliance of the web 2.0 model on the free labour of users has been critiqued as an “informatics of domination” (Terranova, 2000). The business model of web 2.0 services often relies on significant content population by user communities, or the “free labour” to which Terranova refers. So, for example, we might use this analytic lens to critique the user-generated content that populates dominant social media environments, ultimately contributing substantially to their value (as in the public sale of stock in Facebook). By appropriating these environments as counter-hegemonic spaces, activist groups subvert the dominant economic rationale of web 2.0.

There is significant alignment here with the groundbreaking media and communications theories of Marshall McLuhan (M. McLuhan, et al., 1967) and Harold Innis (1986). In their respective studies of communications media both Innis and McLuhan suggested that the medium of communication itself carries significant meaning. The form of the media dictates the message that is conveyed. Beyond this, the medium itself shapes the process of political
engagement. Drawing on the analytic perspective to communications media suggests that digital media reflect a dominance of speed over time, and immediacy over distance and reflection. For McLuhan, the medium is of pre-eminent importance in the process of communication (M. McLuhan, et al., 1967). In an age of digital media, for democratic protest to lack presence in this media space is to be effectively voiceless, disenfranchised. Hutchins and Lester (2009) have explored the role of digital communications and this compression of time and space in the context of environmental activism in Tasmania. They note that digital communications have enabled protestors to engage with mainstream media from tree-top protest camps in remote regions of the island. This compression of distance and time enabled real-time coverage of direct action by environmental protestors and transferred their framing of the forest protection agenda successfully into mainstream media. For Hutchins and Lester (2009, p. 591), low cost digital communications tools and networked public spaces provide the environmental movement with an “informational sustainability” that affords less reliance on the agenda of corporate media.

The tinge of consumerism that Gerodimos (2011) identifies in emerging modes of political participation is an element of an increasingly commodified media and communications sphere. Investigating the ways in which civil society organisations in the UK attempt to engage young people in their campaigns Gerodimos (2011, p. 227) notes that civic participation is presented
“as a choice that has to be marketed in appealing and beneficial terms to the consumer (citizen), rather than as a duty or ritual within a broader democratic community”. In the sense of McLuhan’s medium as message, civic consumerism is an element of political engagement when it is mediated by a digital media environment in which the infrastructure is dominated by the advertising monopolies of an attention economy, such as Google and Facebook.

Yet the reflexive relationship between digital activism and democratic protest in the material world suggests a meaningful engagement with political participation through networked technologies. There has been significant physical protest against the proposed Bell Bay pulp mill. The digital activism underpinning protest movements in Quebec, Mexico and Spain has, in each case, mobilised large physical presences at street demonstrations across each of these contexts (and continues to do so).

This suggests that a spectrum of participation is made available by digital activism. Each moment of engagement online is a moment of opportunity for civil society organisations. In the notable examples where digital activism has manifested as physical and material protest, the issue framing activities of civil society actors has had sufficient alignment with public opinion to mobilise significant numbers of engaged citizens.
4.4.4 Which democracy? Whose public sphere?

The Internet presents challenges as well as opportunities for the practice of democracy. The structural properties of networked communications, and the affordances that they create, can be seen to be in conflict with established Enlightenment principles – i.e., reason, the rule of law, national sovereignty – from which the democratic project has historically evolved. The “collapsed contexts”, which boyd (2010) has identified, are of significance here in breaking down socio-cultural values defined by geography. The mass surveillance of social media metadata by the US National Security Agency (Ball, et al., 2013) challenges the assertion of article 19 of the UN Declaration of Human Rights: “Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers” (United Nations, 1948). The viral transmission via social media and indexing by automated search engines of highly emotive content and viscerally disturbing imagery disrupts notions of rational discourse. Having viewed online, from the safety of his office work-space, the beheading in Iraq by Islamic fundamentalist jihadists of American businessman Nick Berg, Breen (2012) suggests that something has changed, that the web is having “unintended consequences” on political culture.

The affordances of the network can be a double-edged sword for those who appropriate them. The US Secretary of State, Hillary Clinton, incorporates
the (vaguely Habermasian) language of the web as public sphere in speeches in which US foreign policy and internet freedom are increasingly intertwined. Clinton describes the internet as the world’s “town square, classroom, marketplace, coffee house” (Ghattas, 2011). By its own admission the US Department of State (2011) “works to advance Internet freedom as an aspect of the universal rights of freedom of expression and the free flow of information” and supports this aim with a budget of roughly 25 million US dollars earmarked to fund “tools that allow online activists, dissidents and ordinary citizens to circumvent internet censorship” (Ackerman, 2011). The United States, the US Department of State (2011) proclaims, “stands for a single internet where all of humanity has access to knowledge”.

At the same time, Wikileaks (a not-for-profit media organisation) challenges the limits of both democracy and the US Department of State’s version of the internet by publishing online substantial quantities of classified US diplomatic and intelligence documents (as well as those of other national governments), highlighting breaches of human rights such as the deaths of a number of Iraqi citizens, including two Reuters news staff, in the infamous Collateral Murder video (Wikileaks, 2010). The actions of Wikileaks illustrate the contested nature of “internet freedom” (US Department of State, 2011) and the freedom of information – to “impart information and ideas through any media and regardless of frontiers” - enshrined in Article 19 of The Universal Declaration of Human Rights (United Nations, 1948).
Which of these versions of the public sphere is more democratic?

Democracy as practiced by Wikileaks is costly in organisational and human terms. Wikileaks, the organisation itself, has difficulty sustaining funding following a financial blockade imposed by several institutions (Bank of America, Visa, MasterCard, Paypal and Western Union) (Addley & Deans, 2011). The US army intelligence officer, Bradley Manning, who released the Collateral Murder video footage is serving 35 years imprisonment for the leaking of classified files (Lewis, 2013). Edward Snowden, the whistleblower who leaked documents to *The Guardian* and *The Washington Post* exposing the US National Security Agency’s mass internet surveillance program, continues to reside in Russia, whilst seeking political asylum (Greenwald, MacAskill, & Poitras, 2013).

Both Wikileaks (2013) and the US Department of State (2011) make explicit reference to article 19 of the United Nations Declaration on Human Rights in providing a rationale for their respective strategic approaches to the internet. Article 19 in full states that “Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers” (United Nations, 1948).

However, the divergent narratives of the US Department of State and Wikileaks - around access to information, the internet and human rights -
highlights the contested nature of the communicative spaces created by digital networks. The breaking down of socio-cultural, temporal and geographical boundaries identified as a feature of globalisation arising from networked societies by Castells (2000, 2008) and as an inherent property of social media by boyd (2010) facilitates such collapsed contexts; where the intelligence, classified information and secrets of governments seep across networks. In this contested space hegemonic political narratives may be questioned, countered, scrutinized. There is inescapable irony in the US government’s opposition to the Wikileaks project and its leveraging of state power to this end on the one hand, and the funding by the US Department of State of projects to support dissident internet activity within repressive regimes on the other.

4.5 Network citizenship

This theme articulates the ways in which the evolving technological functionality of digital media can be strategically employed within web sites to shape online and offline debate around specific social and political issues. The term ‘network citizenship’ is used to capture the agency of individuals engaging in digitally mediated citizenship practices within this context. By leveraging the potential of the web’s capacity for content sharing and aligning this with the linked connections created by extended personal networks, civil society organisations can campaign strategically across the digital environment. By embedding functionality to these ends within the design of
their web sites, civil society organisations invite individual site users to participate in these activities on behalf of the organisation, co-creating digital media campaigns with user communities and their extended networks.

### 4.5.1 Social media as spaces for political discourse

The analysis of web site functionality across the sites located through web crawling around the Tasmanian environmental movement draws on the work of boyd (2010) in articulating “affordances,” the distinct features of social interactions as shaped by the structures of digital networks. The social spaces that have gradually emerged across digital networks are made possible, whilst at the same time being confined by the structures of networked architectures. These spaces offer opportunities for new and emerging forms of social and civic participation. For boyd, the distinctive features and functionality of these networked environments are significant in understanding the social and cultural practices that emerge.

The usage of the term “affordance” in relation to the dynamics of human/environmental perception has a legacy prior to its usage by boyd, in the context of environmental psychology (Gibson, 1977, 1979) and design theory (Norman, 1988). Wellman et al (2003) appropriated the term to investigate the effects of internet penetration on social capital and civic engagement, whilst Dahlberg (2011) has explored the “democratic affordances” of networked technologies. In analyzing the mobilisation of
environmental organisations across and through digital networks in campaigning on issues related to forestry and native forests in Tasmania, and the resulting socio-political implications for citizenship practice, “affordance” is an important analytic concept. In the context of this study “affordance” is used in alignment with the spin that boyd (2010) has put on the term to explain the structural factors impacting upon emerging modes of social interaction in those digital spaces created by the pervasive usage of networked technologies.

The data suggest a strong level of affordance within the networked environment for individualized practices in the context of political engagement. The fundamental structures of the networked environment, however, do provide mechanisms by which individualized practices intersect, mesh and enhance the capacity for collectivity and collective action. This section will focus initially on the technological affordances of the web for facilitating modes of engagement with political culture which are evolving away from mass-mediated to more individualized interactions, or the concept of network citizenship defined previously.

The content analysis of the design (in particular the techno-social) functionality of crawled sites interconnected on the network of organisations campaigning around forestry and native forests in Tasmania identifies how these civil society organisations enable modes of network citizenship. Their
promotion of this paradigm of engagement is both structural and strategic. Frequently, specific tools and functionality are embedded into site design in order to empower its user community to become individual promoters of, and conduits for, the organisation’s political content and overarching agenda. In this way the civil society organisations on the issue network leverage both the communications channels (the structural element) of the supportive user communities around their sites and the personal networks of those supporters (the strategic element).

Social networking web sites provide communicative spaces where those organisations campaigning on environmental issues relating to Tasmania can engage a broader public. Social media provide effective tools for connecting, communicating and disseminating across networks of personal relationships (such as Facebook ‘friends’). The data from this study provide evidence that many civil society organisations recognise this potential. 24 sites (just under 50% of all the organisations present on the network identified in this study) have incorporated some form of social media channel as a feature. Those organisations that do incorporate social media in their web sites for campaigning, do so with strategic intention as the following instances from the data highlight.

There is a range across these sites in terms of the extent to which they integrate the capacity to distribute content across the social networks of their
user communities. Different outcomes are intended, depending on how these organisations integrate social media into their site designs. Broadly speaking the social media offer two strategies. One of these focuses on connection and relationship building using social media, the other on campaigning across social networks through the distribution of digital media.

Rainforest Action Network incorporates functionality that allows its user community to share elements of site content (from information on topics of environmental focus and specific campaigns, to interviews, blog postings and multimedia content). The design integration of this functionality is embedded into the site through graphical icons enabling users to share the organisation’s digital content across their own personal networks on the social media environments Facebook, Twitter, StumbleUpon, Delicious, Digg, Reddit, Technorati, even email as well as offering an RSS feed, which can enable further sharing of ideas. This design is consistent across the site, indicating a clear strategy in terms of how the organisation uses the web. Integration with social networking sites in order to facilitate sharing of RAN’s digital content across the personal networks of supporters is a strategic feature of the organisation’s approach to digital media.

The Wilderness Society (see Figure 4.15) integrates a range of social content sharing tools into its site by embedding a third-party widget, AddThis (see Appendix G for the full range of social media and networking
environments to which AddThis provides single-click access). As a consistent design feature, content postings within the site include icons providing the functionality to repackage and distribute site content within and across this extensive range of social networking sites. This functionality embeds this strategy of digital activism (networking, relationship building, campaigning, issue framing) within site design and user practices around both site and content. Although the data for this study were collected in 2009, this practice remains a consistent design feature on The Wilderness Society site.

Figure 4.15. Social networking icons on The Wilderness Society web site illustrating the integration of AddThis social bookmarking functionality.

Screen capture used with permission of The Wilderness Society.
The strategic use of social media by Rainforest Action Network and The Wilderness Society illustrates how civil society organisations can engage in a practice of using digital media to shape the presentation of contested issues. Packaging this digital media in such a way as to make for easy sharing across a variety of social networking sites, far beyond the confines of their own sites, allows these organisations to proactively influence wider public understanding and perception of the issue. This practice Marres (2006) describes as “issue framing” and Bekkers, Beunders, Edwards and Moody (2011) as “agenda setting”. Issue framing and agenda setting practice at the level of the individual site is strategic in terms of indexing by a key access point to the web like Google. Yet Rainforest Action Network and The Wilderness Society illustrate that the practice can have wider impact when channeled via social media. The packaging of content at the level of the individual site in such a way as to enable ease of dissemination across social networking sites broadens the potential impact of digital campaigning.

Web crawling identifies the various sites of the Australian Greens (from the national, state and territory levels of the party, as well as those of specific Senators) as featuring prominently as a strongly associated grouping within the network of organisations actively campaigning online around Tasmanian native forests. Coding the socio-technical affordances of these sites identifies that they make significant use of functionality enabling the sharing of content across social media. This integration of access points to social networking sites
makes possible the linked relationships of digital forms of collective homophily, as well as the sharing of issue framing site content from the Australian Greens. Figure 4.16 illustrates the use of social media access points to create opportunities for linked relationships in social networking sites like Facebook, MySpace and Twitter, as well as for the dissemination and sharing of media content (digital video on the social media video hosting environment YouTube), which itself can be embedded within, and shared across, the social networks sustained by new media. The integration of social media across the various regional sites of the Australian Greens is sufficiently consistent to suggest a conscious strategy.

Figure 4.16. Social media integration on the Tasmanian Greens web site
Other organisations acknowledge the importance of this strategic incorporation of the functionality offered by social networking, even whilst implementing connections to social media environments less comprehensively in their site designs. Where the linkages are to Facebook and MySpace, in terms of digital activism, the strategy focuses on generating community and mobilisation around the organisation through networked relationships. In
these instances the strategy appears to be one of connection, more than content sharing. Where connection to Twitter is incorporated into site design both mobilisation (through social networking) and issue framing (through content sharing) are facilitated, given the affordances of the environment.

The site of Save Our Marine Life (Figure 4.17) provides an illustration of a strategy that is more focused on mobilisation through hyperlinked connection rather than issue framing via content dissemination. The language on the graphical Facebook and Twitter icons is indicative of this (“Join”/“Follow”).

Figure 4.17. The incorporation of Twitter and Facebook icons on the site of Save Our Marine Life

![Screen capture image used with permission of Save Our Marine Life and Conservation Council of Western Australian.](image)

Figure 4.18 illustrates the incorporation of a prominent graphic into the design of the site of the Australian Conservation Foundation, providing a hyperlink through to the organisation’s feed on the social networking platform, Twitter.
Figure 4.18. Twitter incorporated into the site of Australian Conservation Foundation

Screen capture used with permission of Australian Conservation Foundation.

Similarly the Australian Marine Conservation Society (Figure 4.19) and Trees for Life (Figure 4.20) each incorporate prominent graphical links through to specific social networking sites (Facebook and MySpace respectively).
Content feeds from sites through the use of RSS feature across a large proportion of the issue network. 19 sites (38% of the total number of organisations identified through web crawling) incorporate an RSS feed from their content postings. This is significant in the context of issue framing activity, providing another mechanism by which campaign content can be
distributed. Interestingly email continues to be acknowledged as a viable content distribution channel, in some instances grouped as an option alongside web 2.0 forms of social networking (see Figures 4.15 and 4.16).

4.5.2 Personalising political engagement

Almost half of the organisations located on the network identified by the web crawler offer some form of more personalized relationship to their used communities. The opportunity to register and log-in is a feature of 23 sites on the network (46% of all organisations identified through web crawling, such as the Australian Conservation Foundation, see Figure 4.21). Data around this aspect of digital strategy is limited, however, in that it is not possible to explore the environments, privileges, tools and functionality made available to those users who do formalize this individualized relationship with both site (and by association) organisation.

Figure 4.21. Log-in options on Australian Conservation Foundation’s web site

Screen capture image used with permission of Australian Conservation Foundation.

The presence, across almost half of the sites identified through web crawling, of functionality enabling users to log-in and authenticate as registered members, indicates that the practice of providing an experience of
the site tailored to the individual is relatively widespread amongst the organisations that constitute the sample for this study. Further research in the context of online networks of Australian environmental organisations would be required to establish the nature of personalized forms of digital interaction by registered site users.

A number of international studies of online political engagement provide comparison with the theme of individualized processes of engagement that arise from the authentication functionality identified on many of the sites that the web crawler located for this study. The 2008 Barack Obama US Presidential election campaign made significant use of personalized online interaction to mobilise bottom-up involvement (both financial and practical) (Luo, 2008; Miller, 2008). Bekkers et al (2011) explore the role of social media in mobilising Dutch student protests; Maireder and Schwarzenegger (2011) in those of Austrian students. Situated in the United Kingdom, two studies from Gerodimos (2008, 2011) investigate the relationship between civil society web sites and youth political engagement. In the Australian context, Vromen (2011) explores evolving online modes of youth political engagement. What these studies in combination suggest is that an evolving mode of citizenship is emerging (this concept is explored more fully in the following section 4.5.3). A significant feature of this emergent mode of citizenship is that it is mediated through interaction and engagement with social media across digital networks. The data from this study illustrate the ways in which civil society actors - such
as the environmental groups that comprise the study’s network – encourage and facilitate this form of citizenship practice through their creation of political narratives in new media formats and their appropriation of social networks as spaces for political discourse, participation and identity.

4.5.2.1 The power of micromobilisation

Bekkers et al (2011) note the significance of individualized practices enabled by digital media within the broad, overarching spectrum of campaigning around social issues. Describing these practices as a layer of “micromobilisation” Bekkers et al suggest that “Micromobilisation occurs when individuals and small groups, often using communications networks to achieve the type of political mobilisation that was traditionally owned by organisations in the centre of the political system” (2011, p. 210). For Bekkers et al it is networked social media that change the opportunity structure of the political process by affording individuals and small groups the capacity to mobilise rapidly in response to evolving social structures. The role for civil society organisations then becomes that of shaping this momentum into a coherent political agenda, which can be sustained within society’s political structure. Micromobilisation thus becomes a viable and valuable feedback loop into the policy-making process. Exploration of the sites on this study’s network indicates that a similar layer of micromobilisation activity is made available by strategically embedded access points to social media.
environments across the site designs of many of the campaigning organisations featuring on the network.

Massive audiences are available for these flows of digital content within social networking web sites. Facebook alone had 1.19 billion monthly active users at 30th September 2013 (Facebook, 2014b), with the Asia Pacific region projected to have 906.6 million users of social networking sites by the end of 2014 (eMarketer, 2014). It is significant in the context of digital activism that relationships (linkages) within these environments are often based on homophily (the association of like with like). The study’s data suggest that leveraging this capacity is a significant strategy in the context of digital activism due to the potential to mobilise members of the public through engagement via their individual personal networks. These networks of linked relationships become powerful channels to these massive international audiences enabling civil society actors, such as the environmental groups represented in this study, to extend their limited access to mainstream broadcast media with the communicative possibilities of afforded by social media. The data suggest that the environmental groups engaged in campaigning against the Bell Bay pulp mill are conscious of this potential. This is demonstrated by their strategic use of social media. 28 of the 50 sites on the study’s network (56%) use new media content within their sites. All of these 28 are sites of environmental organisations involved in active campaigning on the pulp mill issue. Facebook, Twitter and YouTube are the
primary channels that these groups employ to engage with networked publics and disseminate sharable new media content. The Wilderness Society, for instance, has graphical links to its channels on each of these sites displayed as a consistent design feature across its web site. The use of social networking sites such as Facebook, Twitter and YouTube enables these groups to engage with networked publics and potential audiences, however the digital campaign content that these groups create must be easily sharable for network publics to participate with the distribution of that content across their networks. Again, the data suggest that the environmental groups represented in the study are conscious of this strategic potential. 26 of the sites on the network (52%) embed design functionality within their digital content strategy that makes their content sharable across the personal networks of their supporters. The Australian Greens, The Wilderness Society and Save Our Marine Life, for example, all embed the AddThis social bookmarking service within the design of their sites. AddThis is a service that web designers can integrate into their sites as a consistent feature, which enables users of the site to embed and share content from the site on and across their own personal networks on numerous international social media platforms (Facebook, Twitter, LinkedIn, the Chinese social community Baidu amongst them, for the full set of platforms see Appendix G). For these environmental organisations, embedding AddThis in their site designs enables their
supporters to disseminate campaign content across their own networks on platforms such as Facebook with a single click of a mouse.

Studies of the use of new media in social activism across a range of diverse international contexts are supportive of these findings in relation to the capacity of social media to generate loosely connected networks of campaign support. Bekkers et al (2011) explored the use of social networking and new media in a Dutch campaign around school hours. Their study found that the use of new media by engaged individual activists enabled them to set the agenda, framing the issue in a manner sympathetic to their cause from the outset. New media in this instance presented a particular narrative, which was disseminated by individuals across social networks, mobilizing wider public support. This wider public mobilisation transferred the campaign from the digital into the material domain. Civil society organisations, such as trade unions, then carried the issue into the institutional structures of Dutch politics, with beneficial outcomes for the campaign. Their analysis of this particular campaign leads Bekkers and his co-authors to suggest (p. 211) that new media provide an “opportunity structure” for political mobilisation within the democratic process.

Two studies of new media in China present relevant findings in this context. Tang and Sampson (2012) find that new media usage for communication and debate around topical political issues has significant
impact on how those issues are reported in the mainstream Chinese media.

Pu and Scanlan (2012) present similar findings on the transfer from internet debate into the framing of issues in mainstream Chinese media and note that this is becoming a conscious tactic of grassroots activists in China. Exploring the use of social networking by activists in Colombia, Guatemala and the United States, Harlow and Harp (2011) find that it is this capacity for offline transfer and mobilisation that is valued by activists who use social networking sites in their campaigning.

Van Aelst and Van Laer (2010) build on analysis of the use of digital communications networks by the Zapatista guerilla movement in Mexico, in the mobilisations against the Seattle meeting of the World Trade Organisation that became broadly known as the Battle of Seattle and by the British anti-Iraq war movement. Their analysis leads them to suggest that these networks are significant in terms of broadening the tactics or “action repertoire” (Van Laer & Van Aelst, 2010, p. 1147) available to social movements; however they identify the looseness of social connection as problematic in sustaining sufficient collectivity to carry forward a coherent agenda of social change. The variability of internet access limits the application of digital activism in many contexts, leading Van Aelst and Van Laer (2010, p. 1160) to note that the digital divide will continue to be a significant factor in limiting networked protest. According to the latest available World Development Indicators on internet penetration from The World Bank (2014a), internet penetration in
Australia is comparatively high; 82 people per 100 are internet users, compared for instance with a regional neighbor such as Indonesia at 15 internet users per 100 people or the US at 87 per 100. In this context the capacity for Australian environmental groups to establish a campaign strategy that is enhanced through digital activism is high. The larger environmental organisations such as The Wilderness Society and Australian Conservation Foundation have sufficient resources to produce high quality digital campaign media. The Australian Bureau of Statistics (2013a) notes the growth of internet subscription from mobile devices to 19.6 million in a population of 23 million. In this context, at an individual level the average environmental activist is able to capture digital video footage and images of events, rallies, even the breaching of environmental boundaries by the forestry industry using a mobile phone. This content can easily be uploaded to the internet. In terms of the finding of Van Laer and Van Aelst (2010) – that the digital divide can limit activism – the data from this study offer some support. Rainforest Action Network, a US-based environmental organisation, is drawn into the study’s network yet there is no organisation representative of Australia’s most populated neighbour, Indonesia. Internet penetration in Indonesia is 15 people per 100 according to The World Bank’s Development Indicators (2014a), in a nation with a population more than ten times that of Australia at almost 247 million people (The World Bank, 2014b). What these data from the study’s network analysis in combination with The World Bank’s
Development Indicators suggests is that the digital divide is likely to inhibit the growth of solidarity, shared narratives and political agendas between activists in regions with low internet penetration with those in regions of high internet penetration.

Despite these limitations, for Van Aelst and Van Laer (2010, p. 1164), the appropriation of networked spaces by activist and social movement groups is positive, on balance. Network structures suit the devolved, non-hierarchical organisational structures of these groupings. As economic and political power becomes internationalized through the favouring of neoliberal policies by dominant nation blocks (such as the G8), the internet provides a platform for transnational modes of political activism. The hyperlinking patterns identified through web crawling around the environmental movement’s activism on Tasmanian forestry confirms this trans-nationalization of political action. International organisations such as Global Greens, Rainforest Action Network and UNESCO World Heritage Centre feature at the periphery of the network of environmental organisations identified by the web crawler. This indicates a trans-nationalization of action around environmental protection in Tasmania, which is facilitated by the structures of digital networks.

This enabling of mobile, viral political content within the broader media sphere recognises the web as more than a computer network; rather, it is a network of digitally-mediated social networks. Civil society organisations can
embed, within the structure of their web sites, tools that allow for modules of informational or campaign content to be shared, even re-packaged, across the communications channels and social networks of user communities. Within the context of the broader media sphere of competing narratives around political and social issues, this practice communicates specific issues in ways that are conducive or sympathetic to the agendas of these campaign organisations.

4.5.3 Emerging citizenship models

The sites located through web crawling around the Tasmanian environmental movement display elements of the digital information environment (i.e., social media and networking environments; practices of content sharing; and, hyperlink relationships), which promote this de-contextualised information culture and assist in processes of personalized narrative construction. The capacity offered by social media applications and environments to share digital information across a range of online locations enhances this element of Lyotard’s postmodern condition, enabling a complex process of information filtering to create and re-assert knowledge positions, where “Knowledge is transformed to fit the patterns of the machine, and the fractured social experience becomes a by-product of this structural change to the dissemination of information” (Tredinnick, 2007, p. 100). A social media service like AddThis.com (see Appendix G) enables digital content from the web sites of the Australian Green Party to be easily, almost instantaneously,
embedded into digital environments designed and structured for people in Italy, Holland, Spain and Japan as well across the English language digital world, potentially fragmenting the pre-digital cultural authenticity of these locations. At the same time, this offers a process by which networked ICT enables those with access to it to create their own understanding of the world.

The data from this study suggest that civil society organisations recognise the strategic significance of the perception of the web as an environment that can empower individual socially conscious citizens to participate, to make a difference, to self-actualise. The sites do so by providing tools enabling individuals to share social and political campaign content across their preferred social networking and media environments. In this way civil society organisations provide their user communities with media and communications tools that empower self-actualising citizens to create and shape their own online political identities. Civil society organisations themselves use a range of social networking sites to build hyperlinked relationships, embedding the mechanisms to facilitate these hyperlinked connections into the design of their web sites. In terms of moving beyond the individual, it is this leveraging of the capacity of the personal communications networks of individuals that broadens campaigning around social issues into more collective forms of mobilisation to build what Maireder and Schwarzenegger (2011, p. 171) suggest are movements of connected individuals.
Both Gerodimos (2011) and Vromen (2011) note a new citizenship paradigm emerging from the increasingly close relationship between digital communications technologies and youth political participation. In his studies of youth engagement with civil society web sites in the United Kingdom, Gerodimos describes the emergence of a consumerist paradigm of online civic engagement. Rather than feeling a values-based sense of responsibility to participate in civil society, the participants in Gerodimos’ study focus on the web as an environment that could empower them, as individuals, to “make a tangible difference” (2011, p. 231) by providing tools to facilitate such participation. In terms of the efficacy of political engagement for the participants in Gerodimos’ study the focus was on the individual rather than the collective: “If there is one major contrast between the participants’ narratives and the established norms of democratic participation, then that would be the absolute lack of any reference to collective action” (2011, p. 224).

Vromen’s study of Australian online youth political engagement notes the emergence of a similar paradigm to the “civic consumerism” that Gerodimos (2011, p. 217) identifies. Vromen suggests a shift from “dutiful” to what she describes as “self-actualising” citizenship. The nature of web site functionality present across sites identified by web crawling around the Tasmanian environmental movement is relevant here. Vromen proposes that the online environment provides Australian youth with communicative spaces
where they may express their political identities in their own terms, outside the institutionalised structures of normative forms of Australian politics. In similar terms to Gerodimos, Vromen (2011, p. 976) cautions against “the potential commercialization of youth citizenship experiences”. The concern here is that in exploring the new possibilities of communicative space for emergent forms of political participation outside the confines of formalized and traditional institutionalised structures, young people may find their desire to participate and make a difference confined within new and equally constraining hegemonic structures (those of neoliberal globalisation, for example).

Lyotard (1984) presents the possibility of new communicative spaces as emancipatory, with the resulting fragmented construction of identity as a positive element of the “postmodern condition”. In a globalised information environment autonomous culture is fractured by the direct dissemination of digital information. Dominant cultural narratives (for example political ideology) that reflect and legitimize social power are frequently threatened by the creation and communication of information and ideas; “Information distribution systems are flattened, and data, theories, news, and stories often travel at an inter-personal level, rather than being mediated by any agency or authority” (Finn, 2011, p. 410) This flow is global, across borderless communications networks and increasingly pervasive, given the ubiquity of networked communications.
Social identity becomes increasingly individually constructed through the capacity of networked communications technologies to personalize the information that we receive and to interact with others. Tredinnick (2007, p. 97) notes the cultural impact of these flows of information, ideas and knowledge, stating that “we are moving away from an individualizing objectivist view of truth and knowledge, secured against the authenticity invested in cultural objects themselves, towards a pragmatic constructivist idea of knowledge creation and transmission”. Vromen (2011, p. 977) herself echoes Lyotard’s postmodern condition when she suggests that “we are no longer duty-bound to the state, or to grand narratives of mass social and political change; so we network, we DIY, we personalize the political”. An interesting comparison here comes from the international study of the practice of community in the context of pervasive networks in Canada, the United States, Spain and Japan by Wellman, Quan-Haase, Boase, Chen, Hampton, Isla de Diaz and Miyata (2003). In each international context of the study the authors identified a similar mode of digitally-mediated community interaction and the generation of social capital, which they describe as “networked individualism”. The study demonstrates how this networked individualism morphes into network citizenship in a political context. The study’s content analysis data suggest that civil society actors such as the environmental movement are responding to the personalisation of the political that is emerging in nations such as Australia with comparatively high
internet penetration and mobile phone diffusion related to population size

Environmental groups disseminate their own narrative in digital media
formats; one of sensory and emotional appeal supported by arguments
around sustainability, compromise and biodiversity. These groups respond to
the emerging behaviours of network citizens in their digital strategies and web
design practices. They engage with networked individuals on social media;
create political narratives as digital media with sensory appeal; provide simple
mechanisms to allow supporters to share their campaign content across their
own individual networks and with their online communities; form global
networks that synthesise local and regional environmental protest within global
campaigns. The environmental groups in this study facilitate this networked
mode of political identity and engagement. The final chapter of the thesis
explores the implications of these changes in democratic practice for state
actors and institutions. Furthermore, Chapter 5 discusses the potential of the
methodological approach used in the study and further directions in the
research of digital activism.
Chapter 5: Conclusion

5.1 Introduction

This study has identified practices of digital activism by the environmental movement in the context of the conflict over the protection of Tasmania’s native forests. The study has identified four major themes from the web crawl and online content analysis data – (1) the emergence of network citizenship; (2) the development of Public Sphere 2.0; (3) significant changes in democratic practices; and (4) the globalisation of civil society. This chapter begins by reviewing the study’s research questions, then summarises the major findings. In addition to this, the chapter discusses two significant areas of potential further exploration that arise in conclusion. The first of these relates to the challenges for democratic practice in Australia from these themes, each representative of a shift in the practice of democratic politics with implications beyond Australian society. The second deals with the role of internet research in articulating social phenomena; here I comment on certain specificities of internet research whilst arguing against the application of rigid dualism in investigating the relationship of the online (digital) to the offline (material). This concluding chapter situates the study and its findings within the literature by articulating its overarching theoretical contribution. Furthermore it identifies the implications of this study for the practice of digital activism by civil society organisations, as well as for innovation in the delivery of government and the promotion of active citizenship. Finally, the
chapter suggests potential future directions in research around the relationship between digital networks and political participation.

5.2 Mapping political participation across network space

Digital communications networks are gradually extending the public sphere by creating spaces for social interaction, opinion formation and political engagement. The intangible nature of the digital environment creates some complexity in researching the dynamics of political practice in this milieu. Digital content is highly volatile. Much of the web is hidden, inaccessible behind authentication systems. One of the major challenges for this study has been to identify a methodology that can make visible the nature of online interactions and relationships, in a meaningful way. To this end the study has explored the underlying structures of the web, examining the mechanisms that facilitate networked participation. It is in uncovering these relational structures that the study has responded to this first research question by initiating web crawling and visualising the resulting data to identify patterns and meaning in the ways in which environmental groups connect with one another.

Network structures provide a road map here. The properties of networked communications structures and their overlap into the public spheres of political culture require researchers to incorporate digital media into their analysis of the practice and process of politics. A concomitant
requirement here is that researchers incorporate these structures into their own research practice. The structures, algorithms and analytics of the web then become valuable data in exploring the relationships, practices and structures of society increasingly mediated by digital technology.

The fundamental organisational structure of the web – the hyperlink – does more than facilitate navigation. It mirrors the connective and reciprocal function of the social relationship. In essence the hyperlink represents a relationship between two digital documents. In this study this relational metaphor has been extended to investigate how organisations relate to one another online. Using the links embedded in the web sites of environmental groups active around forest protection in Tasmania, this study has used these links as a road-map. The network diagrams the study has produced from web crawl data provide a cartographic representation of the relationships and social capital of these organisations. In this sense the hyperlink provides a powerful element for internet research into social movements and political participation online. It is in taking this perspective on the application of technologically-mediated practices around the use of the hyperlink that the social movement capacity and potential for participation of the web may be articulated.

5.2.1 Links as political statements

This metaphor of social value has been harnessed by the dominant access points to the web; for example the search engine Google and the social
networking environment Facebook. Each applies the metaphor in slightly
different ways; however, both recognise that the connective (essentially
linked) nature of online interactions, derived from the inherent structural
properties of the web, is the feature that offers social (and increasingly
economic) value in the digital environment. The Google search ranking
algorithm famously incorporates hyperlink capital (the in-links that a site has
from others) in addition to semantic relevance (Segev, 2010). Facebook
emphasizes the socially connective properties of the network structure to an
even greater extent, with the environmental unit of connection as ‘friend’.
Data from this study demonstrate that researchers can use this same
significance in the connective, relational properties of the web to investigate
social interactions. In relation to the organisational interactions of civil society
the study shows not simply that organisations relate to each other, but how
they relate to each other. We can identify the political undertones to these
relationships; for instance the Tasmanian government receives links from the
network of environmental groups, however the Tasmanian government does
not link back. In this instance some conclusions can be drawn. The lack of
reciprocity represents a gap, an absence of engagement. Perhaps there is
an absence of governmental practice in digitally-mediated political
engagement. Such threads of analysis can become evidence for innovation in
the practice of policy development as I have noted with examples from Iceland
(i.e., social media to crowdsource the re-drafting of the constitution) and the
European Union (i.e., a digital platform for feeding public opinion into the development of policy on immigration) where digital technologies are being deployed in order to create opportunities for civic engagement.

The identification of a network of political actors connecting online around the issue of native forests and forestry in Tasmania confirms the potential of digital research methods, particularly hyperlink analysis, in exploring socio-political dimensions of the web using its own structures. With their study of the nature of the climate change debate between organisations on the web, Rogers and Marres (2000) have demonstrated that hyperlinking patterns and the relational capital that they create can be mapped to “landscape” socio-political debates as they take shape online. The mapping of a network of civil society organisations who are connecting, debating and campaigning around the proposed development of the Gunns pulp mill confirms the validity of this approach, illustrating the value of using hyperlink patterns to map the positioning in relation to one.

In the context of digital research methods, a challenge to this ontology of the hyperlink comes from evolutions in the social culture of the web. As the popularity of social media grows, these environments (such as Facebook) become gateways to, and even filters of, web content. Within social environments content (digital media and artifacts) is ‘liked’, ‘shared’, ‘retweeted’ across personal networks, creating a collage of interactions with the objects of digital culture. Each of these categories of interaction has its
own analytics, each recorded and displayed (‘14 people like this’). These categories of interaction present new opportunities for analysis as they suggest a further iteration of online interaction, from linking to ‘liking’.

These forms of online interaction provide a further layer to engagement with the culture of Public Sphere 2.0. Organisational relationships across online civil society can be mapped by exploring hyperlinking patterns of reciprocity (Global Greens link to the Australian Greens and vice versa), acknowledgement (Environment Tasmania links to the UNESCO World Heritage Centre), allegiance (The Wilderness Society links to the Australian Greens) and indifference (the Australian Government’s Great Barrier Reef Marine Park Authority receives links from Australian Conservation Foundation and The Wilderness Society but does not link out). The increased capacity for interaction facilitated by social media (comment, share, like, retweet) overlays a layer of individual interactions that become politically significant given their micromobilisation capacity. These interactions and their mediation - the underlying technological structures and the shaping of affordances from them, levels of digital participation, engagement and the demands of an attention economy – have become important aspects of research into the nature of digitally enhanced civil society.

Content analysis of the digital functionality embedded into the web sites of those actors engaged in campaigning around Tasmanian native forests and forestry illustrates the ways in which civil society organisations encourage
both digital and material political participation. Studies of digitally mediated user participation in the political process enrich this picture with descriptions of the popular engagement that these organisations encourage. The ways in which those social actors campaigning on native forests in Tasmania make use of the social media, multimedia campaign content, the potential of the web for soliciting membership and for distributing campaign materials provides some clarity on the meso-level of political action (that which is coordinated by organisations within civil society) whilst studies of user engagement with social media (see for instance Lotan, et al., 2011 on flows of information across Twitter during the Tunisian and Egyptian revolutions of 2011), or with the web more broadly (such as the work of Tang & Sampson, 2012 on the relationship between online participation and the media agenda in China) flesh out patterns of online political participation at the micro-level where individuals (in addition to organisations) demonstrate agency in political action.

This growth of engagement and interactivity presents challenges in exploring the socio-political relevance of the web, particularly in the context of social media environments. Hyperlink structures have provided insights into organisational use of the web (to form networked allegiances, to frame issues), as well as into dominance and networked positioning within online debate (for example ranking in Google search retrieval). Social media analytics (shares, likes, retweets) and location identification information can provide alternative sources of data in exploring the impacts of networked
communications and digital activism within the political processes by offering thick descriptions of engagement at the micro-level.

The study demonstrates that hyperlink analysis provides a viable methodology for mapping the inter-relationships of affiliation, allegiance, deference and acknowledgement between activist groups and across social movements. The visualisation of the hyperlink analysis undertaken during the web-crawling phase of data collection provides a map of the environmental movement as it engages in digital activism around the issue of forest protection in Tasmania. The visual representation of this data is of significant analytic value; articulating the positioning of organisations in relationship with one another and their relative dominance within the network through hyperlink capital.

The secondary phase of data collection – content analysis at the level of the organisational web sites identified through web crawling – provides a further layer to the analysis, producing a richer description of digital activism practices. Whilst the hyperlink analysis offers valuable data around how organisations interact across digital networks, the content analysis of the individual organisational web sites provides evidence of the practices that these organisations use to engage individuals in specific campaigns. This secondary phase of data demonstrates that digital tools are distributed by organisational web sites in order to transfer participation offline. Furthermore social media and the social networks that they sustain are employed by the
environmental groups identified by this study to engage individuals in the practice of environmental politics. The connective properties of the digital networks are an important structural affordance in this. By using social media environmental groups can form connections with individuals, creating loosely networked social movement structures. By promoting online sharing behaviours, environmental organisations can leverage the capacity of individuals’ social networks as campaign channels; encouraging the sharing of their online content in order to shape public perception of specific issues.

5.3 The mobilisation of political movements in network space

The environmental movement that has emerged in opposition to the forestry industry in Tasmania is a broad based coalition. It encompasses the full spectrum of political campaigning, from electoral politics through to direct action. Another key question driving the study has been around such a diverse movement identifies itself online, with sufficient coherence and collectivity to drive forward an agenda of forest protection. The evidence from the study demonstrates that digital communications networks provide organizing, campaigning and mobilizing functions, shaping a fluid network of disparate groups into a coherent collective. Social movements are typically loose networks of broadly aligned groups, defined by their oppositional identity and a shared agenda of social change (Castells, 2004; Diani, 1992). In this section, in answering the question, “how do political movements emerge, self-identify
and mobilise in networked space?”, I explore the ways in which digital networks impact upon the organisational structures of the environmental movement in Tasmania, and reflexively, how the movement engages with these structures to assert its social change agenda.

The data produced by the web crawling phase of the study indicate that the patterns of hyperlinking employed by civil society organisations are not random. Across the network of environmental organisations identified through the phase of web crawling, hyperlinking practices illustrate how links are used to demonstrate positioning in relation to others. This may be a reciprocal relationship (Global Greens and the Australian Greens) or simple acknowledgement (Environment Tasmania’s linking to UNESCO World Heritage Centre), allegiance (The Wilderness Society links the Australian Greens) or indifference (the Tasmanian Government’s pulp mill specific site does not link out, see Figure 5.1).
Figure 5.1. Peripheral positioning and non-reciprocal linking of Tasmanian Government web sites

The evidence suggests that the organisational networking of the material world extends into digital space where selective and strategic hyperlinking patterns are employed to create networked allegiances. The ubiquitous nature of networked computing in Australia enables such networks to form quickly in response to environmental stimuli. The volatility of the networks identified through the pilot phase of web crawling (as discussed in Chapter 3) - around refugees, petrol prices, industrial relations and the war in Iraq – is illustrative. These networks were identifiable initially but regular crawling demonstrated that they were not sustained. Rogers (2007) describes the ebb and flow of spontaneous network formation and disintegration as “issue drift”. The network of environmental organisations present and active online around
the issue of native forests and forestry in Tasmania became the focus of this study because of the durability of the network, consistently identifiable through web crawling.

The work of Bekkers et al (2011) notes that one of the significant aspects of digitally mediated societies is that political mobilisation happens through processes of individual engagement with social media. With 28 of the environmental organisations (56% of the organisations making up the dataset) active and interconnected around forestry and Tasmanian native forests incorporating social media channels and engagement within their web sites, there is supporting evidence of the findings of Bekkers et al. Many of the environmental organisations digitally active around the protection of native forests in Tasmania channel political mobilisation using social media; this happens both through engaging users to participate (connecting or following within social networking sites such as Facebook and Twitter) and encouraging active engagement with digital campaign media (through embedded functionality for re-distribution and sharing across individual’s preferred social media networks).

The practices employed by civil society organisations create networks of both organisations and individuals across digital space that may lie dormant until required to mobilise in response to environmental stimulus. The data identify two levels at which this happens: at the level of the hyperlink; and, within social media environments. Strategic
hyperlinking patterns reflect a practice that relates predominantly to organisational connection. Within the sample of sites in this study, for example, the Tasmanian Greens hyperlink to a range of organisations active on social issues. These links enable the Tasmanian Greens to engage with these organisations, to form networked collectives and to campaign online.

The potential afforded by networking with individuals across social media environments can include organisational interconnection but, importantly, broadens out the connective properties inherent in the structure of the web to incorporate connection with publics through social networking sites. The formation of hyperlinked campaign networks as identified by the web crawling through the first data collection phase is one level; creating a broad organisational coalition with sufficient mutual interest to drive forward an agenda of social change. As evidenced in the hyperlink patterns of reciprocation, allegiance, acknowledgement and disdain, the organisations involved in campaigning on forest protection in Tasmania acknowledge the importance of these networks of identity through their strategic, targeted use of hyperlinks.

The web facilitates this latent social movement formation, allowing these movements to retain a core, networked structure with a capacity for speedy mobilisation using the opportunity structures of new media (for example social networking and the persuasive value of personal networks;
high-impact multimedia content; crowdsourced distribution of campaign material). In relation to social movements within broader society, these are significant affordances. Bennett and Segerberg (2011, 2012), however, go further in exploring the personalization of political engagement with social movements. Their studies suggest the evolution from the collective to the connective, such that it is a “logic of connective action” (Bennett & Segerberg, 2012, p. 748) that underlies social movements in networked societies. In support of this claim Bennett and Segerberg examine the international Occupy movement, in Mexico and los indignados in Spain. What they find in common across these movements is a lack of material structures. These organisations are, in their very essence, networked. Castells (2004, p. 155) suggests that these network structures enable the formation of supportive global social movement collectives; “It is through the Internet that relatively isolated movements have succeeded in building their networks of global solidarity and support, and have been able to post their information in real time, becoming less vulnerable to repression in their localities”. The data in this study support Castells on this point, the peripheral network positioning of international organisations Global Greens, Rainforest Action Network and UNESCO World Heritage Centre indicative of an internationalization of the protest, strengthened through solidarity with these political actors.
The campaigning around native forests in Tasmania has similarities to the networked social movements identified by Bennett and Segerberg in that a network of activist and civil society organisations interconnected around this issue is clearly identifiable, in tandem with evidence of strategies of social media engagement encouraging personalized forms of participation with the campaign issue. There is, however, a strong and consistent element of material campaigning (tree camps and other forms of public protest), as well as evidence of interconnection with the processes of policy (through the presence of an organisation such as Environment Tasmania within the network) and representative politics (through the presence of the Tasmanian and Australian Greens on the network). On this point there is scope for further research in comparing the structures (material and digital) of social movements. Such investigation would identify the nature of specific movements and provide evidence upon which to explore engagement with material and institutional democratic processes, providing a more holistic understanding of social movements and political action in networked societies. This will be discussed in more detail later in this chapter.

The study identifies how political actors appropriate the structures of digital communications networks to mobilise in response to specific stimulus in their political environment, as well as in reaction to the evolving nature of the public sphere in post-broadcast democracies. The layer of social
interactivity across the web encouraged by web 2.0 social technologies and the evolving nature of pervasive and mobile computing produce a web that is incredibly dynamic. The web sites of the environmental organisations identified in this study offer interactivity and access points to further participation across social media and networking environments. For these organisations, web sites are not static, one-way information channels; rather they are interactive and strategic tools of political engagement, and gateways to the disparate networked publics that interact in Public Sphere 2.0.

The hyperlink patterns identified by this study indicate that the hyperlink is employed as a relational structure by environmental groups and as such the hyperlink practices of these organisations are political. The self-contained network that the study has identified suggests that the selective and strategic incorporation of hyperlinks within the web sites of these environmental organisations is a practice that creates, identifies and delineates political movements. The visualisation of the network that this study has identified shows that these hyperlink patterns identify who is, and who is not, included in the collective.

The delegation of authority within the movement is identifiable through the dominant hyperlink capital of the Australian Conservation Foundation and The Wilderness Society. The consistent positioning of these two organisations as leaders, shapers of action and direction in this specific
environmental conflict, is demonstrated by their ultimate involvement in the formulation of policy around forestry protection in Tasmania with their signing of the Tasmanian Forestry Agreement (alongside the Australian and Tasmanian governments and the forestry industry) in 2011. The study shows that these two organisations have strong, dominant positions with the movement from a campaigning position (when the data for the study was collected in 2009) through to policy formulation and legislation in 2011.

5.4 The facilitation of wider public participation by political actors

This third research question explored in this study was concerned with the mobilisation of broader public participation around the social change agenda driven by networked social movements. How do the environmental organisations identified through web crawling in this study draw upon the affordances of digital communications to mobilise a broader public into action around a narrative of forestry protection?

Environmental organisations involved in campaigning, political action and debate around native forests and forestry in Tasmania use the web as a channel to a broader public. Of the 50 organisations identified through web crawling for this study, 45 use the online environment to facilitate forms of engagement with either the organisation, or the campaign specifically. The engagement encouraged by this 90% of the sample is both digital and material. This is significant as it illustrates
processes of online/offline transfer in terms of political participation.

Whilst engagement with a cause or campaign may be solicited online, in
many instances the forms of this engagement are material and embodied;
attendance at local events or meetings, volunteering, and creating
materials for offline campaigning at an individual or group level are just
some of the relevant activities.

Using the web to facilitate public engagement in both online and
offline spaces enables civil society actors to undertake strategic practices
of digital activism which shift issue framing activities into broader public
mobilisation. For example, the Cairns and Far North Environment Centre
embeds a Google calendar within its site to promote attendance at local
events. The Wilderness Society offers online functionality for becoming a
member, whilst also making available for download leaflets, pamphlets
and letter templates to send to Members of Parliament. Environment
Tasmania uses its web site to solicit cross-sectoral support and inter-group
collaboration by providing sections where businesses and other
environmental organisations may make a formal connection; the
traditional networking and relationship building of the civil society
organisation here are enacted via the digital medium.

Social networks and new media become tactical tools in this
context. These strategies enable civil society organisations to build both
active and passive connections using the affordances of digital media.
Active connections are the joiners and volunteers, the passive connections are those who use the low-resource cost properties of social media to assert association (by ‘friending’ or ‘liking’ an environmental organisation). Social networking thus provides the opportunity structure for latent and loosely connected movements, which may be mobilised through more intensive processes of digital activism.

The evidence from the study identifies ways in which environmental groups campaigning around the protection of native forest in Tasmania employ networked communications within a strategy of public awareness, engagement and mobilisation. The socially interactive nature of communications networks and new media creates the opportunity for a two way process of political engagement, in contrast to one-to-many broadcast media.

Engagement with the public (inclusive of network publics) is the strongest theme to emerge from the analysis of the socio-technical functionality of the environmental movement web sites identified through web crawling. These groups make use of both online and offline spaces to encourage the potential association that the public may have with their campaigns. The engagement that these groups encourage is both digital and material.
Here the study identifies an important point, to which I shall return later in the chapter, that to draw a dichotomy between online and offline can create unhelpful distinctions at a conceptual level, whilst providing nuance when exploring the specific. So, in this instance, the data in this study strongly emphasise the appropriation of digital communications networks and social media environments to encourage and facilitate engagement with the politics of environmentalism. This engagement may be online across these same networks, however it may also be material, physical, embodied (attendance at meetings, rallies, volunteering, leafleting). In short, engagement is engagement in whatever form. All forms are encouraged and facilitated through the use of digital content and networks. What this point indicates is that a duality in perspectives around political identity and action online and offline is increasingly tenuous given the reflexive and increasingly pervasive interaction between the two. Where the nuance of how these identities and actions take shape and emerge in public spaces is important, specific exploration of the affordances and social practices of these public spaces is of significance.

5.5 Impacts on the practices of political engagement and participation by the structures of digital networks

The prevalence of social media integration on the sites of organisations campaigning around the issue of native forests and forestry
indicates that civil society organisations are using these channels and their interactive capacity to create new modes of political engagement. The data from this study indicate that a mode of individualized political engagement with civil society is encouraged through the shift of citizenship practices into networks of digital communications (such as the internet, social media environments, mobile telecommunications). The web sites that this study has investigated suggest that the environmental movement is broadly conscious of this shift, as evidenced by the designed integration into these sites of socio-technical functionality enabling these individualized citizenship practices. Social networking and new media are the platforms by which the environmental groups in this study channel emergent practices of individualized citizenship in Public Sphere 2.0. In alignment with the functionality of social media are the online behaviours that become features of this self-assembled political identity: content sharing, the connective patterns of association (‘liking’, ‘retweeting’, ‘bookmarking’), and mixed media as narrative.

When asked, in a 1969 interview, his view on the place of democracy as political system in the age of the interconnected global village, McLuhan responded:

The day of political democracy as we know it is finished...In our software world of instant communications movement, politics is shifting from the old patterns of political representation by electoral delegation to a new form of spontaneous and instantaneous communal involvement in all areas of decision-making....The electric media open
up totally new means of registering popular opinion (in E. McLuhan & Zingrone, 1997, pp. 260-261)

As the data from this study suggest, McLuhan may have been right. Data mining of personal information and preferences is an increasingly prevalent feature of access points to the web, particularly social networking sites. Demographics, opinions and preferences are collated, stored and manipulated to tailor the online environments that are presented to us. The rise of social media analytics (likes, tweets, shares) presents new measures of impact and influence in Public Sphere 2.0. In the broad field of internet research these analytics are being used to explore flows of information related to political conflicts (see for instance Lotan, et al., 2011). Participation in the networked spaces opened up by digital communications presents opportunities to explore political engagement in the age of new media. A holistic approach is required to investigate the impact and efficacy of digital activism within the context of broad social structures and agendas of social change. What is clear from this study is that civil society actors such as environmental groups are engaging with the very functionality of social networking and new media in ways which encourages the public broadcasting across these channels of the social preferences and identity politics of individual citizens.

Whilst this emergent mode of digital citizenship may offer mechanisms to re-engage younger people with civil society, this is not the only potential outcome. The pre-dominant corporate nature of the public
spaces of Public Sphere 2.0 enables forms of surveillance through the
capture of personal data and algorithmic re-construction (profiling,
tailoring) of the digital spaces we inhabit. Fuchs (2009, pp. 369, 374 and
393) notes that McLuhan did not synthesize a reading of political economy
in his optimistic analyses of electronic media. The opportunities for
engagement through the affordances of new media are multiple across the
web sites of organisations such as The Wilderness Society, the Australian
Conservation Foundation, the Australian Greens and Friends of the Earth
Australia. These organisations clearly perceive the potential for
personalized engagement via new media as significant, given the extent to
which they have embedded this capacity consistently across their online
presence. Critiques of new media (see for instance Foster & McChesney,
2011; Terranova, 2000) suggest that the internet is inherently intertwined
with the extension of the structures of capital. The accumulation of value
(see for instance the Facebook share offering) from the free labour of
those thousands of users who interact with and upload content to social
media environments points to a compelling argument that analysis of the
democratic potential of digital communications must incorporate an
assessment of the political economy of new media. Given the data in this
project, such analysis indicates that the emergence of alternative modes of
political participation (such as those encouraged online by the
environmental movement) offer opportunities for a turn towards more
direct democracy, however, the dominance of corporate control over the public spaces of digitally-mediated democracy creates challenging limitations for such a project. In the following sections of this chapter I touch on some of the potential implications of digitally-mediated citizenship for the practice of politics in the context of regional and national democratic institutions that are historically grounded in time and space, and less sure of themselves as actors on the network.

The study indicates that digital networks provide interactive media channels across networked publics that enable marginalized political groupings, such as the environmental movement, to communicate and campaign without the confining channels and discourse of mainstream media. The environmental groups identified in this study create web sites and employ new media broadcast channels on digital video platforms such as YouTube and Vimeo. They are active on social media platforms such as Facebook and Twitter. The study identifies how access points to these new media and social networking sites are consciously embedded into the design and functionality of these environmental groups, demonstrating an awareness of the strategic value of access to networked publics.

These practices by the environmental movement in turn facilitate emergent modes of political engagement shaped by the affordances and dominant social behaviours of online participation. Socio-technical functionality embedded into the web sites of many environmental groups
encourages both digital and material engagement with the politics of environmentalism. The positioning of these environmental groups within the social spaces of the web – for instance interactive media environments such as YouTube or social networking platforms such as Facebook – enables the appropriation of the functionality of the social web as political strategy. Not only does the presence of environmental groups in these spaces make available their digital campaign content to massive global audiences, it allows them to leverage the personal networks of sympathetic supporters as extended campaign channels. The interactive nature of new media platforms allows for engagement (commenting, sharing, bookmarking) with and across networked publics. The connective properties of social networking platforms make possible forms of networked association, building latent social movement structures that may be activated and exploited at strategic moments. As civil society organisations such as the environmental groups identified in this study employ these techniques and tactics, emergent modes of digitally-mediated political identity and action become possible.

5.6 Summary of major findings

5.6.1 The emergence of network citizenship

The study identifies an increasing spectrum of agency in the expression of political identity and action. These digitally-mediated possibilities become increasingly concrete when exploited by civil society organisations such as
those represented by the sample of environmental groups identified in this study. These groups make use of web sites, social networking and new media to extend the public sphere; creating networked public spaces within which to stimulate narratives and political engagement counter-acting the hegemonic discourse of economic rationalism around native forests and forestry in Tasmania. Using the affordances of digital networks – access to the public, online presence, new media campaign narratives, social networking – these environmental groups create spaces and discourses with which the public may engage.

The process of engagement is an active one, across a spectrum of intensity. Commitment can be low or high cost in terms of personal resource and energy, it may digitally or materially enacted. This individual agency in the practice of political identity formation, expression and action I describe as network citizenship. This emergent layer of democratic engagement enables a range of digitally-mediated citizenship practices extending the possibilities of the public sphere. The sample of environmental groups in this study use web design to incorporate functionality that facilitates this spectrum of engagement practices. The embedding of social functionality within the web sites of these groups creates possibilities in terms of the agency of the site users. In this study the data highlight the potential for the development of a strong relationship with site users through the tailoring of the online experience (often structured through the creation of a personal account within
the organisational web site). The tailoring and personalization of the online experience is a strong trend given the collection of personal information across many online environments (boyd & Crawford, 2012; Morozov, 2011, 2012a). Association with a group may be publically signaled using the connective properties (‘liking’, ‘joining’, ‘following’) of social networking platforms. Functionality such as that offered by the third-party widget Addthis used by the Australian Greens and The Wilderness Society allows campaign content with an overtly political message to be shared across the multiple and diverse social media spaces that constitute the personal networks of site users. Such practices create alternative political narratives, networked publics and in turn may stimulate further instances of digital, material or even financial engagement. More sophisticated modes of engagement are made possible through the incorporation of online or downloadable campaign tools (petitions, pre-formatted template email and letters to elected representatives or ministers, fact sheets, leaflets). In these ways the individual agency inherent in network citizenship allows for the possibility of emergent forms of digitally-mediated political collective action. International examples of evolving forms of digitally-mediated political movement in China, Colombia, Guatemala, Holland, the United States, Spain, Mexico and Canada are noted in Chapter 4 to provide comparison, and together with this study, indicate the potential of networked social movement structures for collective action.
This agency is dependent upon, and structured by, the affordances of
digital networks and the social interactivity of online spaces. The increasingly
pervasive usage of networked communications technologies by the Australian
population provides a foundation upon which these forms of political
engagement (and their future extensions) can grow. This growth in access to
and engagement with digital networks is clearly indicated by household usage
of information and communications technologies (Australian Bureau of
Statistics, 2009), the rising uptake of broadband connectivity, in particular the
growth of mobile broadband services (Australian Bureau of Statistics, 2010,
2012) and the investment in and potential attributed to the National
Broadband Network (Department of Broadband Communications and the
Digital Economy, 2010).

5.6.2 The Development of Public Sphere 2.0

The study identifies how digital communications networks extend the
public sphere. Civil society organisations such as the environmental groups
that form the sample in this study undertake activist practices within the social
spaces created by ubiquitous computing, pervasive networks and digital
media. In these spaces networked publics form and alternative political
narratives are presented. The study demonstrates how practices flowing from
the connective properties of networks and the structures of their social spaces
are enacted to create networked public spaces, enabling marginal political
discourse a place within the public sphere. Network analysis in this study
identifies hyperlink patterns amongst the environmental groups campaigning online in the conflict around the protection of native forests in Tasmania. The patterns identified show how practices around the embedding of hyperlinks within web sites create networked political collectives.

This network analysis reveals the organisational inter-relationships amongst these environmental groups. The ways in which these environmental groups engage with a wider public is evidenced through the content analysis of their individual web sites. What this analysis reveals is that these groups use the space created by their online presence (their web sites), social networking spaces and new media channels to engage with the broader public. The study suggests that these are the digital spatial extensions of the public sphere.

Data from the study highlight the characteristics of Public Sphere 2.0. It is interactive at a massified level beyond previous public experience. It is global. Digital audio-visual narrative supplements textual literacy. The aspiration of rational discourse (Habermas, 1989) is challenged by the immediacy of the distribution of communication across digital networks and the nature of homophily as a defining characteristic of organisational and social networks. The study's analysis of hyperlink patterns amongst the environmental groups campaigning on the protection of native forest in Tasmania suggests that organisational positioning online is reflective of organisational status and resources. The study also identifies important ideas
around the perception of influence within Public Sphere 2.0. The underlying connective structures of digital networks define and shape the mechanisms of influence and agency. The primary phase of data collection and analysis in this study finds that in-links - hyperlinks into a web site – provide a useful measure of social positioning, influence and agency within networked collectives. The study notes the significance of this paradigm in online algorithms and analytics, from Google’s ranking system to the social alignments defined by social networking sites (for example ‘friends’, ‘followers’). This approach to understanding influence across online networks has proved to be a productive one in the context of this study; identifying the Australian Conservation Foundation and The Wilderness Society as dominant actors in the network of environmental groups campaigning on forest protection in Tasmania (as identified by this study) through to their presence as key signatories representing the environmental movement on the Tasmanian Forests Intergovernmental Agreement (Department of the Environment, 2014).

5.6.3 Changes in democratic practice

The shaping of emergent democratic practices by the structures and affordances of digital communications networks is highlighted by the data in this study. The identification of the hyperlink practices and patterns that delineate the networked environmental activist collective is, for instance, an illustration. The inclusion and incorporation of strategically selected hyperlinks within the web sites of these environmental groups represents a
process of self-identification within, and bounding of, the movement. This process creates alternative public space, which these groups use to provide and communicate an alternative narrative around forest protection. By offering access points to multiple social networking and new media environments within their sites, these groups can connect with the critical mass of online audiences rather than remaining reliant on search engine discovery. The personal online networks of sympathetic individuals become the medium for campaign content.

The study notes the prevalence of creative practices around the use of new media to create, host and distribute the alternative environmental narrative presented by the groups identified in the study. Digital video narratives created and distributed by organisations such as Australian Conservation Foundation, Environment Victoria, Friends of the Earth Australia, Huon Valley Environmental Centre and Rainforest Action Network provide the public sphere with alternative discourses from which the public themselves can engage with an active process of making sense of their own political positions.

Here the study finds that digital communications networks and new media offer the potential for positions of political agency to both civil society organisations and network citizens. Through creative new media practices activists appropriate the spaces and tools of the dominant internet
monopolies. Cairns and Far North Environment Centre embeds Google’s calendar widget within its web site in order to promote meetings, events and rallies. Amongst others in the sample of web sites this study has analysed, The Wilderness Society, Tasmanian Greens and Clean Ocean Foundation have dedicated YouTube channels to distribute their self-created video campaigning narratives.

These kinds of creative digital activist practices generate affordances in modes of democratic engagement by network citizens. The social and interactive native of new media and social networking web sites enables citizens to engage in direct ways with these alternative environmental narratives. Digital campaign content can be commented upon, shared across personal networks, promoted in ways that raise profile and influence (‘liked’, ‘retweeted’), or bookmarked in social environments enabling further discovery by wider audiences. These creative cultural practices and concomitant online behaviours offer new ways of holding power to account, making sense of political positions and of enacting democratic citizenship.

The study suggests that the spectrum of online behaviours around political content acts as a mode of political engagement; identifying political issues and positions of individual significance through interaction with and sharing of political narratives as digital cultural objects (such as YouTube videos, tweets, specific web sites). These digital artifacts become a collage of
political identity. This combination of activist practices by civil society organisations and engagement by network citizens creates the decentralized political movements that dominate mass protest on the global stage.

5.6.4 Global civil society

The study provides evidence of the collapsing of geographic, temporal and socio-cultural contexts. The hyperlink analysis of environmental group web sites campaigning on native forest protection in Tasmania reveals three significant international organisations on the periphery of the network. These organisations are:

- Global Greens – a coalition of international environmental political parties
- Rainforest Action Network – an environmental campaign group based in the United States focusing on forests protection
- United Nations Educational Scientific and Cultural Organisation World Heritage Centre – the United Nations body responsible for protecting sites that it designates as being of international cultural or environmental significance. The Tasmanian Wilderness has been designated as one such site.

Here the study identifies how networks of political solidarity and alignment extend beyond local socio-political contexts. There are other elements of the data that extend this theme of analysis. More than half (26
organisations, 52% of the sample) of the environmental groups captured in the sample for the study employ functionality within their websites to ease distribution and sharing of their site content across other online environments. Within the sample of websites, the functionality used is a combination of RSS, graphical links as access points to social networking sites and embedded widgets offering one-click sharing across multiple social networking platforms. Social networking websites with critical mass, such as Facebook and Twitter, have multi-national user communities and international audiences. The widget employed by the Australian Greens, Save Our Marine Life and The Wilderness Society facilitates sharing not only across multiple but also across multi-lingual social networking sites. In this way action in a local environmental conflict receives solidarity and support across multiple geographic constituencies. This infrastructure of content re-distribution creates the affordances that enable the collapsing of geo-spatial, temporal and socio-cultural boundaries. The study confirms the analysis of boyd (2010) and Breen (2012) who describe these elements of contextual collapse as inherent (and for Breen, problematic) features of the flow of information, cultural content and social interactions across online networks.

These social networking websites are the public spaces of Public Sphere 2.0, the town halls of global civil society. Notable features of this democratic configuration are the inter-relationship of local/regional issues contextualized by a global perspective on the one hand and a decline in the
perceived relevance of the national superstructure on the other. For Castells (2000, 2008), this shift is representative of globalisation as an economic and political imperative; spawning supra-national political institutions (for example the European Union, the World Bank, the International Monetary Fund) and a global public sphere.

The location of the UNESCO World Heritage Centre as a peripheral node on the network and as an actor of some significance within the political debate around forest protection in Tasmania illustrates this intersection of the local and the global. The two environmental organisations at the centre of the network – The Wilderness Society and the Australian Conservation Foundation – both link to the UNESCO World Heritage Centre site. UNESCO lists the Tasmanian Wilderness as one of its world heritage sites. In campaigning on the protection of Tasmanian forest and, ultimately as signatories of the Tasmanian Forestry Agreement (Department of the Environment, 2014), The Wilderness Society and the Australian Conservation Foundation gain symbolic authority through their links with the UNESCO World Heritage Centre.

UNESCO’s role in the conflict has gained in significance following the Australian government’s unprecedented attempt to de-list 74,000 hectares of native forest from the UNESCO World Heritage listing (Darby, 2014b). UNESCO may be a peripheral node on the study’s network, however through its relationship with influential, central nodes (The Wilderness Society and the
Australian Conservation Foundation), this supra-national organisation has a prominent role in the framing of policy within this local context.

5.7 Significant conclusions

5.7.1 Challenges for Democracy

The shift to Public Sphere 2.0, like all political change, is not unproblematic. For Breen (2012) the collapsing of geo-spatial, temporal and socio-cultural produces “unintended consequences” for the nature of political engagement. The immediacy of network distribution and the visceral emotional impact of new media create significant challenges for the aspiration towards rational discourse that is a foundation of democracy itself.

It is not hard to find circumstantial evidence of these problematic aspects of a globally networked public sphere. The distribution via YouTube of a film presenting the Muslim prophet Mohammed in dubious sexual circumstances sparked rioting across the Middle East, Pakistan (Black, Stephen, & Boone, 2012) and in Australia (ABC News, 2012). Following public concern over anti-social online behaviours, particularly cyber-bullying (or ‘trolling’), the Australian Government’s Minister for Broadband, Communications and the Digital Economy has recently complained publically about the lack of engagement of Twitter (the company) with the Australian Government and Australian legislative framework (Yeates, 2012). Interesting dilemmas and competing priorities arise from the ownership of the infrastructure of Public Sphere 2.0 by the dominant monopolies of the
internet. Given this context, who is the arbiter of free speech, of the extension of democratic freedoms, the norms of behaviour in civil society? Increasingly, one might suggest, it is these internet services themselves that fill these roles, with input (to varying degrees) from national and international institutions.

This complexity flows through to network citizens, who increasingly make sense of, and act on a political identity that is, to varying degrees, digitally-mediated. In the context of online interaction between the environmental movement and the Tasmanian government, the study identifies a gap; the Tasmanian Government’s Resource Planning and Development Commission does not reciprocate the link from the network. Chapter 4 notes initiatives by the government of Iceland and the European Union to create online environments that can involve citizens in digitally-mediated processes of policy development. The study suggests that in terms of engaging with civil society and network citizens whose practices of political participation are, at least in part, experienced through digital technologies, there is a need for innovation in the delivery of government. In fact the impetus for innovation may stretch to the very concept of government itself.

The mode of direct democracy envisaged by media theorist Marshall McLuhan (E. McLuhan & Zingrone, 1997; M. McLuhan & Fiore, 1968; M. McLuhan, et al., 1967) in the late 1960’s is reflected in the crowdsourced
Icelandic constitution and other innovative projects that draw on the paradigms of web 2.0 to create more open and participatory approaches to the delivery of government and public services. The Australian Government established a Government 2.0 taskforce in 2009 (Australian Government Information Management Office, 2009), which has produced notable outcomes. The Australian Government now has a Declaration of Open Government (Department of Finance and Deregulation, 2010). As a result of the recommendations of the taskforce the Government makes available significant quantities of Australian Government, State and Territory datasets for download (from http://data.gov.au/) with a view to their access and re-use by the public. Government information is now published under Creative Commons licencing, enabling its re-use. These are steps towards, and indicative of a shifting mindset around participatory governmental practices with which civil society can engage. Under this paradigm democratic engagement with government rests on the agency of network citizens and digitally-mediated interaction with government services and public information.

5.7.2 Internet research and digital methods

The study highlights the importance of developing innovative research methods in order to explore the dynamics of online social interactions and the reflexive relationship between digitally mediated behaviours and embodied, material and institutional practices. The specificity of digital networks as an
environment of social interaction and cultural reproduction is especially significant here. The structures and algorithms of digital networks play a significant role in shaping the mode of social interaction within the networks that these spaces create, offering affordances that can be appropriated and leveraged according to different social, political and economic rationales. Research methods need to consider these dynamics in order to provide clarity as to the nature of networked structures, interactions and behaviours. Internet research needs to recognise the algorithmic properties of digital networks without becoming subsumed by them.

This has been a significant feature of this study. The structures of digital networks (hyperlinks and other connective environmental properties such as ‘liking’, ‘friending, ‘following’) are explored as enablers of certain social dynamics. These social dynamics (the tendency towards homophily for instance) are inherent to social interaction and human behaviour rather than specific to digital networks. These networks shape how these dynamics are enacted but do not generate them out of cyberspace (as it were).

In this study a structural property – the hyperlink – is explored as a social relational metaphor. When explored within a larger sample, the study of this social affordance helps to identify patterns (such as homophily) and relationships (such as relational dominance through hyperlink capital) that would not have become clear without the application of a social slant to the
nature of networked interaction. In this way the findings of the study emphasize that the structures and algorithms of digital networks can provide rich descriptions of social relations when they are explored within the context of the nature of social relationships more broadly. This finding suggests that the application of a duality between the online and the offline may create a false dichotomy in the perception of social interaction and argues for a holistic approach to social internet research.

5.8 Theoretical contribution

The study makes a significant contribution in theorizing emergent democratic practices in Australian civil society. The findings identify how the capacity and potential of digital communications networks are being leveraged by civil society organisations such as those environmental groups examined in the study. The structures, information flows and modes of communication that extend the public sphere are identified and described. Here the study builds on the work of boyd (2010) in articulating the social spaces generated by networked publics. The potential for networked spaces, audiences and new media to generate counter-hegemonic cultural narratives is illustrated through the analysis of the digital media practices of the environmental movement. The study offers insight into the direction of the potential impact that this extension of the public sphere is likely to have on the practice of citizenship in the context of Australian democracy. In this context the study provides analysis of civil society’s contribution to emergent practices of
network citizenship in Australia, adding to Vromen’s (2011) investigation of
democratic participation by Australian youth.

The findings add to the rich body of literature around the formation,
cohesion and mobilisation of social movements (Diani, 1992, 2000; Malinick,
et al., 2012), emphasizing the role of online presence by activist groups, new
media as narrative and social networking within these practices in
combination with more traditional and embodied modes of social movement
action. This study builds on similar international research (Bennett &
Segerberg, 2012; Harlow & Harp, 2011; Pilny & Shumate, 2011) exploring the
loosely networked organisational structures of social movements within the
broader context of political protest and action. The study adds a specifically
Australian flavor to this area.

The affordances for micro-level political action that are leveraged by
environmental organisations (such as embedded functionality to distribute
campaign content via personal networks, over multiple platforms or to
interact directly with campaigning narratives in new media format) are
highlighted in this study. This analysis adds support to the work of Van Aelst
and Van Laer (2010) in theorizing the political potential of an additional layer
of digitally-mediated individual agency within the democratic process. The
study finds that multiple affordances for such a layer of individual agency and
network citizenship are leveraged by environmental groups; in the design of
their web sites and their appropriation of the spaces and distribution channels of new media and social networking.

The findings of the study suggest that positioning within online social movement networks is indicative of the capacity of specific actors to influence the framing of issues, public mobilisation and the formulation of policy. Strategic hyperlinking practices channel the movement’s hyperlink capital toward those actors most effectively positioned to effect political change. Given the increasingly algorithmic and digitally-mediate nature of social interaction, hyperlink capital is a significant resource, one that structures visibility in public sphere 2.0 (via search engine results for instance, or social media engagement). Civil society organisations such as those within the environmental movement leverage social online behaviours (such as sharing, ‘liking’, ‘friending’) of the populations of social media environments. The social networks that these new media environments facilitate become the distribution channels for the narrative of these environmental groups. This networked distribution of alternative political narratives allows the environmental movement to reach global audiences of potential support whilst bypassing the traditional mainstream broadcast media. The environmental groups in this study made use of the affordances of social media environments to create networks of association and affiliation (‘like’ and ‘follow’ buttons for instance) to facilitate community building and to engage a wider public with the movement. Questions remain as to the
sustainability of such forms of engagement, however data from this study suggest that it is a form of participation that has strategic value to social movements.

Finally, the study contributes to the emerging discourse around the application of digital methods to qualitative research questions. As social practices become increasingly digitally-mediated, innovation in research methods is required to collect, collate and analyze digital data so that these aspects of human interaction may be explored in the context in which they take place. In Australia, digital technologies continue to embed themselves in the social milieu (Australian Bureau of Statistics, 2009, 2010, 2012); this is a trend that is likely to increase given the scope of social applications envisaged as streaming from public investment in the National Broadband Network (Department of Broadband Communications and the Digital Economy, 2010). Digital research methods can contribute to the critical appraisal of the impact and effect of ubiquitous computing on Australian society. Digital research methods such as the network analysis employed by this study can become part of the researcher’s toolkit for data collection and analysis.

5.9 Implications for practice

The findings from the study suggest that online presence within the public sphere extended by digital networks is vital for civil society organisations that wish to drive forward an agenda of social change. Active positioning by civil society organisations across these networks creates spaces
for the formation of alternative political discourses and communities. Given the increasing ubiquity of networks and digitally-mediated social interactions, it is likely that political engagement will be increasingly shaped by these practices. Civil society organisations (and their web design teams) therefore need to:

- Embrace digital communications technologies in order to engage with the public sphere of networked democracy;
- Use the connective properties of network environments to generate loose collectives of support across both other organisations and the wider public;
- Engage with the creative capacity of digital technology to create and distribute online campaign content, which can drive new media narratives framing issues and shaping the public policy debate;
- Encourage social behaviours around digital content. Sharing, re-use and re-distribution of digital content disseminates campaign messages to audiences via personal networks. Political messages received through one’s own network are likely to be viewed as more authentic than those received from neutral sources; and,
- Not view digital activism in isolation. Activism across digital networks should be a component of a broad strategy. Loosely
networked collectives can be activated using targeted and specific new media narratives. Campaigning, however, needs to extend into material public spaces and political institutions to drive change.

The rise of online political engagement by civil society and network citizens has implications for government; raising questions around how government can, might, even should respond to changing social configurations. Acemoglu and Robinson (2012) see this shift as being of particular importance, suggesting that the inability of states to respond to technological change is one of the 10 Reasons Why Countries Fall Apart. The implementation suite of online applications forcing transparency in political representation, freedom of information and financial accountability in the UK and European Union has been spearheaded by the not-for-profit mySociety (http://www.mysociety.org/) organisation. mySociety uses a combination of public data, geo-spatial mapping and a positive hacker mindset to generate participative e-democracy platforms. This approach has produced online environments that facilitate new ways of engaging in the democratic process, such as:

- http://www.theyworkforyou.com/ - TheyWorkForYou enables the tracking of the speeches, activities and voting patterns of elected representatives across the legislative assemblies of the UK;
- http://www.fixmystreet.com/ - FixMyStreet enables citizens across the UK to report problems to their local council;

- http://www.alaveteli.org/ and http://www.whatdotheyknow.com/ - Alaveteli and WhatDoTheyKnow allows citizens and consumers to make public freedom of information requests to both government, government-funded bodies and corporations; and,

- http://www.asktheeu.org/ - AskTheEU channels freedom of information requests to the appropriate bodies within the European Union and makes the response publically available.

The European Union is exploring collaborative models of online engagement as a way of enhancing the public accountability of the policy making process around contentious issues such as immigration and climate change. The European Union has developed Puzzled by Policy (http://www.puzzledbypolicy.eu/), a software platform developed by the European Union in order to improve public participation in the formulation of immigration policy. The European Commission – the executive arm of the European Union – has made use of Debategraph (http://debategraph.org/) to visualise the Union’s position on climate change through its projects, debates and policy. Debategraph is an independently developed online platform for mapping and visualising the process of deliberation and decision making. The
value of these types of deliberation platforms is that: they can enable distributed involvement in, for instance, policy formulation; and, that the process can be mapped and visualised to enhance transparency and accountability.

These participatory models of networked and data-driven partnership between governments and citizens are new modes of delivery for government services and in encouraging democratic accountability. As models they demonstrate potential approaches to forms of democratic engagement that are enhanced by networked technologies. The findings of this study point to emerging modes of political engagement by civil society and Australian citizens. So, how can government respond to these emergent practices in ways that enhance the richness of Australian democracy? Governments can

- Continue the steps towards open government that have been taken since the establishment of the Government 2.0 taskforce and the Declaration of Open Government (Department of Finance and Deregulation, 2010) with a view towards a more participatory model of government services;

- Broaden the delivery of public data at http://data.gov.au/ to encourage the co-development of e-democracy platforms. At this stage three mobile apps have been developed to indicate the geographic location of Australian public toilets, however the is no
public data service tracking the activities and voting patterns of elected representatives in the House of Representatives or Senate;

- Be innovative in the use of online technologies and behavioural models (such as crowdsourcing, social networking) to encourage civil society and public stakeholder involvement in and consultation processes around policy formulation; and,

- Acknowledge the digital divide as a fundamental problem in democratic enfranchisement and undertake policy consultation to explore means of alleviating this barrier.

5.10 Future research directions

One strength of the study has been its capacity to follow the evolution of this political conflict around forest protection through campaigning into policy formulation and some degree of resolution. This longitudinal approach has enabled me to situate the digital activism of the environmental movement within the broader context of political change, providing contextual clarity as to the role of digital communications networks within the political process. The mapping of online positioning within the activist environmental collective could be correlated with involvement in policy formulation, with the Australian Conservation Foundation and The Wilderness Society in dominant positions in the network identified in this study and ultimately acting as signatories for the environmental movement on the forestry agreement.
between the movement, the forestry industry and both the Tasmanian and Australian Governments.

In order to avoid deterministic analyses of the role that digital networks play in political change, the findings from this study suggest that holistic approaches involving a variety of methods of data collection and analysis are likely to provide the richest interpretations. Following campaigns from activism to mobilisation through to (where possible) political outcomes using a mix of methods (digital data, interviews, news coverage analysis, coding of policy documentation) situates researchers in a position where they may appropriate the algorithms of digital networks in their data collection and analysis without becoming subsumed by them. This approach incorporates digital practices within the broad spectrum of socio-cultural interactions.

In relation to this study there is potential for mapping the layers of engagement across social networking sites into the analysis. One approach to this would be to collect data from a social networking environment such as Twitter, to explore statements, shared resources and hashtagging practices relating to the campaigning around the protection of Tasmanian native forest. Once again, visualisation could be employed to analyze these networks, communication flows and practices.

This study has focused on web design and new media practices of environmental groups. There is scope to expand on the data analysed in this
study. Given that political protest and social movements are increasingly configurations of international coalitions (Castells, 2000, 2012), one approach would be to explore online networks of solidarity across regional boundaries. Hyperlink analysis that is not restricted to the .au domain may provide insights here. Moving beyond domain specific (for example .au, .uk) web crawling could provide data that extend investigation into the trans-national nature of protest networks. Such data offers the possibility of exploring emerging patterns of political engagement that are beyond the scope of traditional democratic practices and institutions.

Qualitative studies offer opportunities for depth of analysis in this area, framing the insights of large digital data sets within the context of a naturalistic setting. Interviews with members of the groups involved in activism in this study for instance would provide further depth to the analysis presented here. Dialogue with those actively involved in web design and social media communication on behalf of these environmental groups would extend the narrative that this study presents, providing valuable data relating to the agency in design and information practices that drive strategic decision making in relation to campaign new media. Such an approach might investigate digital activism within the context of an overall campaign strategy, as well as how that strategy transfers into new media production, web design and social media communication practices.
The initiatives described in section 5.9 to design online platforms to support and enhance democratic participation and deliberation are in their infancy. Several are regionally-bounded in their scope (for example to the UK or Europe) and are not populated at levels equivalent to globally popular social media environments such as Facebook. Future research could evaluate the performance of these platforms within the context of their local democratic spheres (such as the UK and European parliamentary democracies); to what extent has public engagement on these platforms influenced the agenda setting and policy formulation? Many national governments, particularly prominently by those of Germany and Brazil, have expressed concern around the implications for both national democratic sovereignty and competitive economic advantage of the data sharing relationship between major internet intermediaries such as Google, Yahoo, Microsoft and Facebook and the US Government’s National Security Agency (Goldstein, 2014). Future research could explore the emergence of alternative digital initiatives related to democratic deliberation in light of the Snowden revelations around internet surveillance (Ball, et al., 2013).

Users of the sites, digital media and social networking channels of these environmental groups present another perspective on the use of networks and new media in political activism. Digital methods might be used to explore the flows of digital media as political communication across social media platforms. To extend these data, interviews with activists and
supporters of environmental groups could develop the richness of studies of this nature, exploring the motivations, social interactions and digital practices that contribute to political engagement for network citizens. A research narrative is emerging (Bennett & Segerberg, 2011, 2012; Castells, 2012; Gerodimos, 2011; Loader & Mercea, 2011; Sloam, 2014; Xenos, Vromen, & Loader, 2014) that explores non-traditional modes of political engagement mediated through social and digital networks. This narrative offers a balanced perspective in relation to concerns over a decline in more traditional mechanisms political participation in advanced democracies (voting, membership of a trade union or political party for instance). This study of the environmental movement in Australia adds to the richness and detail of that narrative. Further research that describes how social and digital networks shape emergent modes of civic engagement can extend definitions of citizenship. The study has noted how local protest can, through networks of international solidarity, be drawn into a broad and coherent political agenda. Comparative studies of local instances of conflict and activism provide another avenue for further research. Such studies would enable comparison of emergent citizenship practices within advanced democracies, as well as enhancing understanding of the digital divide as a factor limiting collaborative networks of activism and protest between those in advanced democracies and those in developing societies. In all of these possibilities for future research what is important is that the campaign itself is explored as the naturalistic
setting of these studies, rather than limiting analysis to the digital strands of that campaigning. A holistic approach – exploring digital campaigning, offline protest, policy responses, journalistic coverage - can add depth to insights gained from studies of this nature. Longitudinal studies that follow protest movements and campaigns for substantial periods of time may enhance how we understand the impact of emerging protest strategies and non-traditional citizenship practices in terms of producing political change.

The study’s network data can be exported from the Issuecrawler environment. The network analysis facilitated and visualised using Issuecrawler is of limited sophistication, exploiting rankings of inlink and outlink counts to generate the relational positioning of nodes on the network. A tool with more sophisticated capacity for network analysis, such as Gephi, would facilitate further analysis of the network structures within the study’s data. Data can be exported from Issuecrawler in a format that can be ingested by Gephi. This reveals exciting possibilities for further analysis of the study’s network data with a view to developing measures of centrality at the node level, as well as measures of clustering coefficient, density and reciprocity at the network level. Such data could provide useful points of comparison for future studies of digitally-mediated social network structures.

5.11 Conclusion

This study has explored digital activism by the environmental movement in Australia, focusing specifically on campaigning to protect native
forest by rejecting the proposed construction of a massive pulp mill in
Tasmania’s Bell Bay. The study was driven by a range of research questions
that interrogate the relationships between networks and new media, political
engagement and protest. Using grounded theory, network and content
analyses, the study has explored a network of environmental groups,
describing the ways in which they employ web design, the production of new
media content and engagement with social media as campaign strategy. The
study’s findings suggest that networks and new media extend the public
sphere of political participation, that civil society activity at the local level can
be amplified across networks into a global context, that political protest
mobilised online can transfer offline in a hybrid form of social movement
organization, and that non-traditional modes of citizenship practice are
emerging as a result of the structural configurations of online networks. The
study describes how the environmental movement, in a specific and local
context, has recognised, responded to and facilitated these trends. In this
sense, the findings extend our understanding of how engaged citizenship
might be conceptualised in advanced democracies. This final chapter has
noted the possibilities for further research in this context. The analysis offered
through digital data might be expanded by interviewing communication
strategists within the environmental movement as well as activists and
protesters. Extending the range of hyperlink analysis would enable the
investigation of trans-national networks of solidarity across the environmental
movement. Comparative studies of the organisation of protest in different international contexts could provide an opportunity to explore how access to digital networks enhances or limits the capacity of protest movements to enact political change. The study makes a contribution to the evolution of grounded theory methodology, incorporating digital methods into the repertoire of the grounded theorist. An exercise in emergent methods, the study has used a variety of research practices to draw out findings that are rich in detail whilst grounded in the data.

Whilst this study is complete, the protection of native forest in Tasmania continues to be a political issue. In 2013 the UNESCO World Heritage Society expanded the boundary of the area protected by the Tasmanian Wilderness World Heritage Listing to include an additional 170,000 hectares of native forest (Darby, 2013). In a move that UNESCO has described as “exceptional” (Mathiesen, 2014), the conservative coalition federal government in January 2014 proposed that the World Heritage Listing be reduced by 74,000 hectares. With economic development overshadowing the Tasmanian state election (set for 14 March 2014), the state government (led by the Australian Labor Party) is introducing legislation to encourage the development of the Bell Bay pulp mill, despite the financial insolvency of the forestry company that initiated the project, Gunns Limited (Crowley, 2014). Environmental groups that feature prominently in this study’s activist network such as The Wilderness Society and Environment Tasmania are already leading
protest campaigns (Darby, 2014a; Smiley & Edwards, 2014). This study demonstrates how they will make use of digital networks and new media to engage Tasmanian, Australian and global networks of political participation and protest in their campaigning.
References


Facebook. (2014a). Information we receive and how it is used. *Data Use Policy*, from https://www.facebook.com/about/privacy/your-info


presented at the Association for Information Science and Technology 76th Annual Meeting, Montreal, Canada.


Google. (2014). Tasmanian pulp mill. from


371


378


Shirky, C. (2011). The political power of social media: technology, the public sphere and political change. *Foreign Affairs, 90*(1).


Twitter Developers. (2013). Best Practices for Hashtags. from [https://dev.twitter.com/media/hashtags](https://dev.twitter.com/media/hashtags)


## Appendices

### Appendix A: Content analysis codes

<table>
<thead>
<tr>
<th>Code</th>
<th>Definition</th>
<th>Examples</th>
</tr>
</thead>
</table>
| **New media** | “digital communication channels and tools embracing both Web 1.0 and Web 2.0 technologies” (Australian Centre for Public Communication, 2008) | • Blogs  
• photo-sharing platforms (eg flickr, picassa)  
• video sharing platforms (eg YouTube)  
• embedded video (eg from YouTube)  
• embedded audio  
• Flash animation  
• social networking applications (eg MySpace, facebook)  
• embedded API mash-ups (eg Google maps, Google calendar) |
| **Community engagement** | Facilities encouraging interaction, participation and engagement with a community of involved stakeholders through the web site | • mailing lists  
• email update bulletins  
• online forums  
• comments facility  
• Online forms for joining or volunteering  
• Links listings |
| **Findability** | Functionality providing access to organisation’s online content | • folksonomic tagging  
• user-generated categorization  
• search facility  
• Taxonomy  
• Site map |
| **Share potential** | Use of digital information networking applications to share content across alternative web | RSS  
Social networking and booking marking services:  
• Email  
• Favorites  
• Dig  
• Delicious |
<table>
<thead>
<tr>
<th>platforms</th>
<th>platforms</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Myspace</td>
<td>• Myspace</td>
</tr>
<tr>
<td>• Google</td>
<td>• Google</td>
</tr>
<tr>
<td>• Facebook</td>
<td>• Facebook</td>
</tr>
<tr>
<td>• Reddit</td>
<td>• Reddit</td>
</tr>
<tr>
<td>• Live</td>
<td>• Live</td>
</tr>
<tr>
<td>• Aim</td>
<td>• Aim</td>
</tr>
<tr>
<td>• Aolfav</td>
<td>• Aolfav</td>
</tr>
<tr>
<td>• Ask</td>
<td>• Ask</td>
</tr>
<tr>
<td>• Backflip</td>
<td>• Backflip</td>
</tr>
<tr>
<td>• Ballhype</td>
<td>• Ballhype</td>
</tr>
<tr>
<td>• Blinklist</td>
<td>• Blinklist</td>
</tr>
<tr>
<td>• Blogmarks</td>
<td>• Blogmarks</td>
</tr>
<tr>
<td>• Bluedot</td>
<td>• Bluedot</td>
</tr>
<tr>
<td>• Buzz</td>
<td>• Buzz</td>
</tr>
<tr>
<td>• Delicious</td>
<td>• Delicious</td>
</tr>
<tr>
<td>• Dig</td>
<td>• Dig</td>
</tr>
<tr>
<td>• Diigo</td>
<td>• Diigo</td>
</tr>
<tr>
<td>• Email</td>
<td>• Email</td>
</tr>
<tr>
<td>• Facebook</td>
<td>• Facebook</td>
</tr>
<tr>
<td>• Favorites</td>
<td>• Favorites</td>
</tr>
<tr>
<td>• Fark</td>
<td>• Fark</td>
</tr>
<tr>
<td>• Feedmelinks</td>
<td>• Feedmelinks</td>
</tr>
<tr>
<td>• Friendfeed</td>
<td>• Friendfeed</td>
</tr>
<tr>
<td>• Furl</td>
<td>• Furl</td>
</tr>
<tr>
<td>• Google</td>
<td>• Google</td>
</tr>
<tr>
<td>• Caboodle</td>
<td>• Caboodle</td>
</tr>
<tr>
<td>• Kirtsy</td>
<td>• Kirtsy</td>
</tr>
<tr>
<td>• Linkedin</td>
<td>• Linkedin</td>
</tr>
<tr>
<td>• Live</td>
<td>• Live</td>
</tr>
<tr>
<td>• Magnolia</td>
<td>• Magnolia</td>
</tr>
<tr>
<td>• Misterwong</td>
<td>• Misterwong</td>
</tr>
<tr>
<td>• Mix</td>
<td>• Mix</td>
</tr>
<tr>
<td>• Multiply</td>
<td>• Multiply</td>
</tr>
<tr>
<td>• Myweb</td>
<td>• Myweb</td>
</tr>
<tr>
<td>• Myspace</td>
<td>• Myspace</td>
</tr>
<tr>
<td>• Netvous</td>
<td>• Netvous</td>
</tr>
<tr>
<td>• Newsvine</td>
<td>• Newsvine</td>
</tr>
<tr>
<td>• Print</td>
<td>• Print</td>
</tr>
<tr>
<td>• Propeller</td>
<td>• Propeller</td>
</tr>
<tr>
<td>• Reddit</td>
<td>• Reddit</td>
</tr>
<tr>
<td>• Segnalo</td>
<td>• Segnalo</td>
</tr>
<tr>
<td>• Sharedstuff</td>
<td>• Sharedstuff</td>
</tr>
<tr>
<td><strong>Functionality</strong></td>
<td><strong>Fundraising</strong></td>
</tr>
<tr>
<td>------------------</td>
<td>----------------</td>
</tr>
<tr>
<td><strong>Fundraising</strong></td>
<td>Functionality for fundraising, accepting donations, merchandise</td>
</tr>
<tr>
<td></td>
<td>Fundraising, donate options available within site. Merchandise sales. Personalisation of these features.</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

- Slashdot
- Spurl
- Stumbleupon
- Stylehive
- Tailrank
- Technorati
- Thisnext
- Twitter
- Yardbarker
- yahoobkm
| colour, layout, emotive images and graphics | individual sites |
## Appendix B: primary and secondary codes

<table>
<thead>
<tr>
<th>Primary codes</th>
<th>Secondary codes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Community engagement</td>
<td>Involvement and association&lt;br&gt;Link listing&lt;br&gt;Subscription to updates&lt;br&gt;Events&lt;br&gt;Action and campaign tools</td>
</tr>
<tr>
<td>Accessibility</td>
<td>Accessibility statement&lt;br&gt;Font size&lt;br&gt;Validation&lt;br&gt;Web Content Accessibility Guidelines&lt;br&gt;Translation</td>
</tr>
<tr>
<td>Personalisation</td>
<td>Authentication</td>
</tr>
<tr>
<td>Fundraising</td>
<td>Shop&lt;br&gt;Donations</td>
</tr>
<tr>
<td>Design quality</td>
<td>Design quality 1&lt;br&gt;Design quality 2&lt;br&gt;Design quality 3&lt;br&gt;Design quality 4&lt;br&gt;Design quality 5</td>
</tr>
<tr>
<td>Findability</td>
<td>Categorisation&lt;br&gt;Search functionality&lt;br&gt;Site map</td>
</tr>
<tr>
<td>Share potential</td>
<td>RSS&lt;br&gt;Email&lt;br&gt;Social media&lt;br&gt;Widget</td>
</tr>
<tr>
<td>New media</td>
<td>Multimedia&lt;br&gt;Social media&lt;br&gt;Widget</td>
</tr>
</tbody>
</table>
Appendix C: Tasmanian forest protection issue network
Appendix D: Organisations on the issue network and their respective node URLs

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Node URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australian Conservation Foundation</td>
<td>acfonline.org.au</td>
</tr>
<tr>
<td>ACT Greens</td>
<td>act.greens.org.au</td>
</tr>
<tr>
<td>AddThis</td>
<td>addthis.com</td>
</tr>
<tr>
<td>Australian Ethical Investment</td>
<td>austethical.com.au</td>
</tr>
<tr>
<td>The Australian Greens Bob Brown</td>
<td>bob-brown.greensmps.org.au</td>
</tr>
<tr>
<td>The Australian Greens Bob Brown</td>
<td>bobbrown.org.au</td>
</tr>
<tr>
<td>Cairns and Far North Environment Centre</td>
<td>cafnec.org.au</td>
</tr>
<tr>
<td>Conservation Council of South Australia</td>
<td>ccsa.asn.au</td>
</tr>
<tr>
<td>The Australian Greens Christine Milne</td>
<td>christine-milne.greensmps.org.au</td>
</tr>
<tr>
<td>Organization</td>
<td>Website</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>Clean Ocean Foundation</td>
<td>cleanocean.org</td>
</tr>
<tr>
<td>Huon Valley Environment Centre</td>
<td>coolforests.org</td>
</tr>
<tr>
<td>Doctors for Forests</td>
<td>doctorsforforests.com</td>
</tr>
<tr>
<td>Environment Victoria</td>
<td>envict.org.au</td>
</tr>
<tr>
<td>Environment Tasmania</td>
<td>et.org.au</td>
</tr>
<tr>
<td>Friends of the Earth Australia</td>
<td>foe.org.au</td>
</tr>
<tr>
<td>Forest Protection Portal</td>
<td>forests.org</td>
</tr>
<tr>
<td>Great Barrier Reef Marine Park Authority</td>
<td>gbrmpa.gov.au</td>
</tr>
<tr>
<td>Global Greens</td>
<td>globalgreens.org</td>
</tr>
<tr>
<td>The Greens</td>
<td>greens.org.au</td>
</tr>
<tr>
<td>The Australian Greens MSPs</td>
<td>greensmps.org.au</td>
</tr>
<tr>
<td>Organization</td>
<td>Website</td>
</tr>
<tr>
<td>------------------------------------------------------------------------------</td>
<td>----------------------------------</td>
</tr>
<tr>
<td>Friends of Forests and Free Speech</td>
<td>gunns20.org</td>
</tr>
<tr>
<td>Huon Valley Environment Centre</td>
<td>huon.org</td>
</tr>
<tr>
<td>Lawyers for Forests</td>
<td>lawyersforforests.asn.au</td>
</tr>
<tr>
<td>Eftel Limited</td>
<td>lexicon.net</td>
</tr>
<tr>
<td>Australian Marine Conservation Society</td>
<td>marineconservation.org.au</td>
</tr>
<tr>
<td>Nature Conservation Council of NSW</td>
<td>nccnsw.org.au</td>
</tr>
<tr>
<td>The Greens NSW</td>
<td>nsw.greens.org.au</td>
</tr>
<tr>
<td>NT Greens</td>
<td>nt.greens.org.au</td>
</tr>
<tr>
<td>Oceanwide Images</td>
<td>oceanwideimages.com</td>
</tr>
<tr>
<td>Origin Energy</td>
<td>originenergy.com.au</td>
</tr>
<tr>
<td>Department of Economic Development, Tourism and the Arts</td>
<td>pulpmill.tas.gov.au</td>
</tr>
<tr>
<td>Organization</td>
<td>Website</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Queensland Conservation</td>
<td>qccqld.org.au</td>
</tr>
<tr>
<td>Queensland Greens</td>
<td>qld.greens.org.au</td>
</tr>
<tr>
<td>Australian Rainforest Conservation Society</td>
<td>rainforest.org.au</td>
</tr>
<tr>
<td>Rainforest Action Network</td>
<td>ran.org</td>
</tr>
<tr>
<td>Resource Planning and Development Commission</td>
<td>rpdc.tas.gov.au</td>
</tr>
<tr>
<td>Australian Greens SA</td>
<td>sa.greens.org.au</td>
</tr>
<tr>
<td>Save our Marine Life</td>
<td>saveourmarinelife.org.au</td>
</tr>
<tr>
<td>Save the Mary River</td>
<td>savethemaryriver.com</td>
</tr>
<tr>
<td>Solar House Day</td>
<td>solarhouseday.com</td>
</tr>
<tr>
<td>TAP into a Better Tasmania</td>
<td>tapvision.info</td>
</tr>
<tr>
<td>Tarkine National Coalition</td>
<td>tarkine.org</td>
</tr>
<tr>
<td>Organization</td>
<td>Website</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-------------------------</td>
</tr>
<tr>
<td>Tasmanian Greens</td>
<td>tas.greens.org.au</td>
</tr>
<tr>
<td>Tasmanian Times</td>
<td>tasmaniantimes.com</td>
</tr>
<tr>
<td>Tasmanian Conservation Trust</td>
<td>tct.org.au</td>
</tr>
<tr>
<td>The Green Directory</td>
<td>thegreendirectory.com.au</td>
</tr>
<tr>
<td>Trees for Life</td>
<td>treesforlife.org.au</td>
</tr>
<tr>
<td>Victorian Greens</td>
<td>vic.greens.org.au</td>
</tr>
<tr>
<td>The Greens Western Aust</td>
<td>wa.greens.org.au</td>
</tr>
<tr>
<td>UNESCO World Heritage Centre</td>
<td>whc.unesco.org</td>
</tr>
<tr>
<td>The Wilderness Society</td>
<td>wilderness.org.au</td>
</tr>
</tbody>
</table>
Appendix E: Organisation types featured within the issue network

<table>
<thead>
<tr>
<th>Organisation type</th>
<th>Number of network nodes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Activist group</td>
<td>6</td>
</tr>
<tr>
<td>Campaign group</td>
<td>8</td>
</tr>
<tr>
<td>Commercial</td>
<td>6</td>
</tr>
<tr>
<td>Community group</td>
<td>1</td>
</tr>
<tr>
<td>Government</td>
<td>3</td>
</tr>
<tr>
<td>Lobby group</td>
<td>11</td>
</tr>
<tr>
<td>Media</td>
<td>1</td>
</tr>
<tr>
<td>Non-governmental organisation</td>
<td>1</td>
</tr>
<tr>
<td>Political party</td>
<td>13</td>
</tr>
</tbody>
</table>
Appendix F: Issue network nodes categorized by organisation type

Organisation type - Political party

<table>
<thead>
<tr>
<th>Political party</th>
<th>Node URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Global Greens</td>
<td><a href="http://www.globalgreens.org/">http://www.globalgreens.org/</a></td>
</tr>
<tr>
<td>Australian Greens South Australia</td>
<td><a href="http://www.sa.greens.org.au/">http://www.sa.greens.org.au/</a></td>
</tr>
<tr>
<td>The ACT Greens</td>
<td><a href="http://act.greens.org.au/">http://act.greens.org.au/</a></td>
</tr>
<tr>
<td>The Australian Greens MSPs</td>
<td><a href="http://greensmps.org.au/">http://greensmps.org.au/</a></td>
</tr>
<tr>
<td>Northern Territory Greens</td>
<td><a href="http://nt.greens.org.au/">http://nt.greens.org.au/</a></td>
</tr>
<tr>
<td>Organisation</td>
<td>Node URL</td>
</tr>
<tr>
<td>---------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>The Greens Western Australia</td>
<td><a href="http://wa.greens.org.au/">http://wa.greens.org.au/</a></td>
</tr>
</tbody>
</table>

**Organisation type – Lobby group**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Node URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Friends of Forests and Free Speech</td>
<td><a href="http://www.gunns20.org/">http://www.gunns20.org/</a></td>
</tr>
<tr>
<td>Tarkine National Coalition</td>
<td><a href="http://www.tarkine.org/">http://www.tarkine.org/</a></td>
</tr>
<tr>
<td>TAP into a better Tasmania</td>
<td><a href="http://www.tapvision.info/">http://www.tapvision.info/</a></td>
</tr>
<tr>
<td>Huon Valley Environment Centre</td>
<td><a href="http://www.huon.org/">http://www.huon.org/</a></td>
</tr>
<tr>
<td>Organisation</td>
<td>Node URL</td>
</tr>
<tr>
<td>--------------------------------------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>Doctors for Native Forests</td>
<td><a href="http://www.doctorsfor.forests.org.au">http://www.doctorsfor.forests.org.au</a></td>
</tr>
<tr>
<td>Ecological Internet</td>
<td><a href="http://www.ecologicalinternet.org/">http://www.ecologicalinternet.org/</a></td>
</tr>
<tr>
<td>Forest Letter Watch</td>
<td><a href="http://www.forestletterwatch.org/">http://www.forestletterwatch.org/</a></td>
</tr>
</tbody>
</table>

**Organisation type – Campaign group**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Node URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cairns and Far North Environment Centre</td>
<td><a href="http://www.cafnec.org.au/">http://www.cafnec.org.au/</a></td>
</tr>
<tr>
<td>Organisation</td>
<td>Node URL</td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>---------------------------------</td>
</tr>
</tbody>
</table>

**Organisation type – Activist group**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Node URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Save the Mary River</td>
<td><a href="http://www.savethemaryriver.com/">http://www.savethemaryriver.com/</a></td>
</tr>
<tr>
<td>Rainforest Action Network</td>
<td><a href="http://www.ran.org/">http://www.ran.org/</a></td>
</tr>
<tr>
<td>Clean Ocean Foundation</td>
<td><a href="http://www.cleanocean.org/">http://www.cleanocean.org/</a></td>
</tr>
<tr>
<td>Huon Valley Environmental Centre</td>
<td><a href="http://www.huon.org/">http://www.huon.org/</a></td>
</tr>
<tr>
<td>Friends of the Earth Australia</td>
<td><a href="http://www.foe.org.au/">http://www.foe.org.au/</a></td>
</tr>
</tbody>
</table>

**Organisation type – Commercial**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Node URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ocean Wide Images</td>
<td><a href="http://www.oceanwideimages.com/">http://www.oceanwideimages.com/</a></td>
</tr>
<tr>
<td>Organisation</td>
<td>Node URL</td>
</tr>
<tr>
<td>------------------------------------</td>
<td>-----------------------------------------------</td>
</tr>
<tr>
<td>AddThis</td>
<td><a href="http://www.addthis.com/">http://www.addthis.com/</a></td>
</tr>
<tr>
<td>Solarhouseday.com</td>
<td><a href="http://www.solarhouseday.com/">http://www.solarhouseday.com/</a></td>
</tr>
</tbody>
</table>

**Organisation type – Government**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Node URL</th>
</tr>
</thead>
</table>

**Organisation type – Non-government organisation**

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Node URL</th>
</tr>
</thead>
<tbody>
<tr>
<td>UNESCO World Heritage Centre</td>
<td><a href="http://whc.unesco.org/">http://whc.unesco.org/</a></td>
</tr>
</tbody>
</table>

**Organisation type – Media**

402
<table>
<thead>
<tr>
<th>Organisation type – Community group</th>
</tr>
</thead>
<tbody>
<tr>
<td>Trees for Life</td>
</tr>
</tbody>
</table>
Appendix G: Social networking web sites available via the AddThis content sharing widget

AddThis is a widget that can be incorporated into a web site to enable simple (one-click) content sharing functionality. It allows users of a particular web site to share the site’s content across a range of social bookmarking and social media platforms.

<table>
<thead>
<tr>
<th>Service</th>
<th>URL</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>AIM</td>
<td><a href="http://www.aim.com/">http://www.aim.com/</a></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Amazon Wishlist</td>
<td><a href="http://www.amazon.com/wishlist">http://www.amazon.com/wishlist</a></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Ask</td>
<td><a href="http://www.ask.com/">http://www.ask.com/</a></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Backflip</td>
<td><a href="http://www.backflip.com/">http://www.backflip.com/</a> (now defunct)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>BallHype</td>
<td><a href="http://www.ballhype.com/">http://www.ballhype.com/</a> (now defunct)</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Bebo</td>
<td><a href="http://www.bebo.com/">http://www.bebo.com/</a></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Blogger</td>
<td><a href="http://www.blogger.com/">http://www.blogger.com/</a></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Blogmarks</td>
<td><a href="http://blogmarks.net/">http://blogmarks.net/</a></td>
</tr>
<tr>
<td>Service</td>
<td>URL</td>
</tr>
<tr>
<td>----------</td>
<td>------------------</td>
</tr>
<tr>
<td>Buzz</td>
<td><a href="http://www.google.com/buzz">http://www.google.com/buzz</a></td>
</tr>
<tr>
<td>Delicious</td>
<td><a href="http://www.delicious.com/">http://www.delicious.com/</a></td>
</tr>
<tr>
<td>Digg</td>
<td><a href="http://digg.com/">http://digg.com/</a></td>
</tr>
<tr>
<td>Diigo</td>
<td><a href="http://www.diigo.com/">http://www.diigo.com/</a></td>
</tr>
<tr>
<td>Email</td>
<td></td>
</tr>
<tr>
<td>Facebook</td>
<td><a href="http://www.facebook.com/">http://www.facebook.com/</a></td>
</tr>
<tr>
<td>Fark</td>
<td><a href="http://www.fark.com/">http://www.fark.com/</a></td>
</tr>
<tr>
<td>Favorites</td>
<td></td>
</tr>
<tr>
<td>Faves</td>
<td><a href="http://faves.com/">http://faves.com/</a></td>
</tr>
<tr>
<td>FriendFeed</td>
<td><a href="http://friendfeed.com/">http://friendfeed.com/</a></td>
</tr>
<tr>
<td>Google</td>
<td><a href="http://www.google.com/">http://www.google.com/</a></td>
</tr>
<tr>
<td>Service</td>
<td>URL</td>
</tr>
<tr>
<td>------------</td>
<td>----------------------</td>
</tr>
<tr>
<td>Hatena</td>
<td><a href="http://www.hatena.com/">http://www.hatena.com/</a></td>
</tr>
<tr>
<td>Kaboodle</td>
<td><a href="http://www.kaboodle.com/">http://www.kaboodle.com/</a></td>
</tr>
<tr>
<td>kIRTSY</td>
<td><a href="http://www.kirtsy.com/">http://www.kirtsy.com/</a></td>
</tr>
<tr>
<td>Link-a-Gogo</td>
<td><a href="http://www.linkagogo.com/">http://www.linkagogo.com/</a></td>
</tr>
<tr>
<td>LinkedIn</td>
<td><a href="http://www.linkedin.com/">http://www.linkedin.com/</a></td>
</tr>
<tr>
<td>Live</td>
<td><a href="http://www.hotmail.com/">http://www.hotmail.com/</a></td>
</tr>
<tr>
<td>Menéame</td>
<td><a href="http://www.meneame.net/">http://www.meneame.net/</a></td>
</tr>
<tr>
<td>Mister Wong</td>
<td><a href="http://www.mister-wong.com/">http://www.mister-wong.com/</a></td>
</tr>
<tr>
<td>Mixx</td>
<td><a href="http://www.mixx.com/">http://www.mixx.com/</a></td>
</tr>
<tr>
<td>Multiply</td>
<td><a href="http://multiply.com/">http://multiply.com/</a></td>
</tr>
<tr>
<td>myAOL</td>
<td><a href="http://my.aol.com/">http://my.aol.com/</a></td>
</tr>
<tr>
<td>Service</td>
<td>URL</td>
</tr>
<tr>
<td>---------</td>
<td>----------------------</td>
</tr>
<tr>
<td>MySpace</td>
<td><a href="http://www.myspace.com/">http://www.myspace.com/</a></td>
</tr>
<tr>
<td>Netvibes</td>
<td><a href="http://www.netvibes.com/">http://www.netvibes.com/</a></td>
</tr>
<tr>
<td>Netvouz</td>
<td><a href="http://www.netvouz.com/">http://www.netvouz.com/</a></td>
</tr>
<tr>
<td>Newsvine</td>
<td><a href="http://www.newsvine.com/">http://www.newsvine.com/</a></td>
</tr>
<tr>
<td>Nujij</td>
<td><a href="http://www.nujij.nl/">http://www.nujij.nl/</a></td>
</tr>
<tr>
<td>Plaxo</td>
<td><a href="http://www.plaxo.com/">http://www.plaxo.com/</a></td>
</tr>
<tr>
<td>Print</td>
<td></td>
</tr>
<tr>
<td>Propeller</td>
<td><a href="http://www.propeller.com/">http://www.propeller.com/</a> (now defunct)</td>
</tr>
<tr>
<td>Reddit</td>
<td><a href="http://www.reddit.com/">http://www.reddit.com/</a></td>
</tr>
<tr>
<td>Segnalo</td>
<td><a href="http://segnalo.virgilio.it/">http://segnalo.virgilio.it/</a></td>
</tr>
<tr>
<td>Simpy</td>
<td><a href="http://www.simpy.com/">http://www.simpy.com/</a> (now defunct)</td>
</tr>
<tr>
<td>Service</td>
<td>URL</td>
</tr>
<tr>
<td>-----------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Slashdot</td>
<td><a href="http://slashdot.org/">http://slashdot.org/</a></td>
</tr>
<tr>
<td>Spurl</td>
<td><a href="http://www.spurl.net/">http://www.spurl.net/</a></td>
</tr>
<tr>
<td>StumbleUpon</td>
<td><a href="http://www.stumbleupon.com/">http://www.stumbleupon.com/</a></td>
</tr>
<tr>
<td>Stylehive</td>
<td><a href="http://www.stylehive.com/">http://www.stylehive.com/</a></td>
</tr>
<tr>
<td>Technorati</td>
<td><a href="http://technorati.com/">http://technorati.com/</a></td>
</tr>
<tr>
<td>ThisNext</td>
<td><a href="http://www.thisnext.com/">http://www.thisnext.com/</a></td>
</tr>
<tr>
<td>Tip'd</td>
<td><a href="http://tipd.com/">http://tipd.com/</a></td>
</tr>
<tr>
<td>Tumblr</td>
<td><a href="http://www.tumblr.com/">http://www.tumblr.com/</a></td>
</tr>
<tr>
<td>Twitter</td>
<td><a href="http://www.twitter.com/">http://www.twitter.com/</a></td>
</tr>
<tr>
<td>TypePad</td>
<td><a href="http://www.typepad.com/">http://www.typepad.com/</a></td>
</tr>
<tr>
<td>WordPress</td>
<td><a href="http://wordpress.org/">http://wordpress.org/</a></td>
</tr>
<tr>
<td>Y! Bookmarks</td>
<td><a href="http://bookmarks.yahoo.com/">http://bookmarks.yahoo.com/</a></td>
</tr>
<tr>
<td>-------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Yardbarker</td>
<td><a href="http://www.yardbarker.com/">http://www.yardbarker.com/</a></td>
</tr>
</tbody>
</table>