

UNIVERSITY OF KWAZULU-NATAL

**DO WEB 2.0 SOCIAL MEDIA IMPACT
TRANSNATIONAL SOCIAL ADVOCACY? A STUDY OF
SOUTH AFRICAN CIVIL SOCIETY AND GREENPEACE**

By

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DECLARATION

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GLOSSARY OF ACRONYMS

AIT	Advanced Information Technologies
AJAX	Asynchronous JavaScript and XML
ANC	African National Congress
ANOVA	Analysis of Variants
APF	Anti-Privatisation Forum
API	Application Programming Interface
ARPA	Advanced Research Projects Agency
AST	Adaptive Structuration Theory
COP	Conference of the Parties
COSATU	Congress of South African Trade Unions
CSO	Civil Society Organisation
DARPA	Defense Advanced Research Projects Agency
DNS	Domain Name System
ENISA	European Network and Information Security Agency
GIS	Geographical Information Systems
GDP	Gross Domestic Product
HTML	Hyper Text Markup Language
HTTP	The Hypertext Transfer Protocol
IAB	Internet Architecture Board
ICANN	Internet Corporation for Assigned Names and Numbers
ICT	Information and Communication Technology
IETF	The Internet Engineering Task Force
IEEE	Institute of Electrical and Electronics Engineers
IP	Internet Protocol
IT	Information Technology
ICT&S	Information, Communication Technology and Society
IMC	Independent Media Centre
IMF	International Monetary Fund
ITU	International Telecommunications Union

LRA	Lords Resistance Army
MtCO ² e	Metric Tons Carbon Dioxide Equivalent
MIT	Massachusetts Institute of Technology
MMS	Multi-media Messaging Service
NGO	Non-governmental Organisation
PC	Personal Computer
PIPA	Protect IP Act
RSS	Real Simple Syndication / Rich Site Summary
RIA	Rich Internet Applications
RUE	Rich User Experience
SACP	South African Communist Party
SANGOCO	The South African National NGO Coalition
SMS	Short-Messaging Service
SMT	Senior Management Team
SOPA	Stop Online Piracy Act
TED	Technology, Entertainment, Design
TCP	Transmission Control Protocol
UNFCCC	United Nations Framework Convention on Climate Change
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
URL	Universal Resource Locator
UUCP	Unix-to-Unix Copy
WTO	World Trade Organisation
WWW	World Wide Web
XML	Extensible Markup Language

ABSTRACT

This study focuses on how civil society organisations deploy Web 2.0 technologies for transnational social advocacy, the context of this technology use, and the effect of this adoption in achieving organisational goals. It analyses the effectiveness of these technologies in an attempt to understand the strategic intent in deploying these social media services. The reciprocal impact of this technology adoption on civil society organisations' roles, structure, and orientation was also investigated. The technologies targeted for study are those commonly described as Web 2.0 social media including social networking sites, blogs, podcasts and wikis amongst others. While the literature points to many studies relating to the use of the Internet for advocacy it also suggests that emerging technologies have not been studied in any detail. In particular there are no recent studies that investigate Web 2.0 technologies. These studies have the potential to provide new perspectives to current theoretical frameworks.

This study is designed as part case study and part exploratory. The research adopts an interdisciplinary approach using both qualitative and quantitative methods. A survey of South African civil society organisations painted a picture of the extent of adoption of Web 2.0 social services across South African civil society, and detailed the reasons, and the benefits - both perceived and actual - of such adoption. The global environmental justice organisation, Greenpeace is used as a case study. The organisation's major goal is to advocate for changes in environmental policy and behaviour, has been at the forefront of environmental issues since its inception, and has used the mass media as an effective campaigning tool.

The key findings that emerged in the South African context was that of a sector that has a low-level of knowledge of social media services and an accompanying low level of adoption. This is partly explained by factors at a national level including macro-economic policies, and a low level of Internet penetration and ICT readiness. Using Greenpeace as a case study revealed that while social media-led activism is increasingly being seen as strategic, there is a level of organisational introspection that is required to precisely determine how traditional CSOs can exploit social media while maintaining their core values and traditions. Social media is not a panacea for the issues confronting activism in an increasingly connected world, but rather is seen as complementing traditional advocacy with its ability to coordinate, synchronise and document campaigns.

Key Concepts

Public sphere, Civil society, Advocacy, Web 2.0, Social media

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CHAPTER ONE: INTRODUCTION

An introduction to social media and transnational social advocacy

“The truth is that power resides in the people and it is entrusted for the time being to those whom they may choose as their representatives. Parliaments have no power or even existence independently of the people. It has been my effort for the last twenty years to convince the people of this simple truth. Civil Disobedience is the storehouse of power. Imagine a whole people unwilling to the laws of the legislature, and prepared to suffer the consequences of non-compliance! They will bring the whole legislative and executive machinery to a standstill. The police and the military are of use to coerce minorities however powerful they may be. But no police or military coercion can bend the resolute will of the people who are out for suffering to the uttermost.”

Mahatma Gandhi (Communal Unity, 2011)

1.1 INTRODUCTION

In December 2010 a Tunisian fruit-seller, in an act of desperation against continued police harassment, drenched himself in petrol and then lit the match that set him alight (Anderson, 2011). It was an act that ignited a trend marked by social uprisings and mass protests that spanned the globe. The Arab Spring, which started with this self-immolation of a single protester in Tunisia, spread to other Arab countries and had profound socio-political ramifications in the Middle East and the rest of the world and eventually resulted in the Egyptian President standing down and ultimately facing charges for civilian deaths that occurred during the protests in his country; the fleeing of the President of Yemen; uprisings in Bahrain; social protests in Morocco and Jordan resulting in the government’s embracing of reform; and the eventual death of Libyan president Muammar Qaddafi after a prolonged civil war in which the United Nations got involved (Sly & Fadel, 2011). As 2011 drew to a close fighting continued between citizens and government forces in Syria that left an estimated three thousand civilians dead. Social upheaval was not confined to the Arab world with riots in Greece aimed at government-introduced austerity measures, the outrage and indignation of the *Los Indignados* (The Outraged) in Spain, and civil unrest in other parts of Europe as the Euro crisis deepened and reached levels of contagion not seen since the Great Depression (Huffington, 2011). The Occupy Movement led protests against the currency crisis and corporate greed in New York, London and other major cities of the world. In Chile students seeking reform to the education system brought teaching to a halt, while in India thousands supported Anna Hazare a veteran anti-graft campaigner. Even the once seemingly popular Vladimir Putin, in what was seen as a Machiavellian abuse of power and a blatant perversion of the democratic process, faced mass protests in Russia after hatching a plan to run for president again in 2012. All these protests have been led for the most part by faceless individuals and have been characterised by a level of cooperation and coordination on a scale not seen before.

So much so that Time Magazines' much vaunted Person of the Year award for 2011 was 'The Protester' (Stengel, 2011; Anderson, 2011).

Much of the success of the protests has been attributed to the pervasiveness of technology-based social networks. The Arab Spring was about connectivity and was inspired by a young restive population with access to social media (Zakaria, 2011; Huffington, 2011) while the social rebellion in Russia saw thousands of protesters being mobilised via social networks rather than by traditional political parties, with the key figure being a popular blogger who was able to shake the Kremlin's power using social media (The Economist, 2011a). The influence of social media in the Arab Spring uprisings can be seen in the video uploaded on Twitter showing protesters chanting against the then President 'Ben Ali *dagage*' (Get out, Ben Ali) that got half a million views in a day, to the Tunisian blogger writing under the name of 'A Tunisian Girl' who's online reporting of the abuses committed by the Tunisian regime served as a key source of information (Mhenni, 2011; Ayari, 2011). In Egypt a Facebook page called 'We are all Khaled Said' in memory of a protestor beaten to death by police, was described as the "online epicentre of the protest movement" (Ackerman, 2011). In Europe, in what Darmanin (2011) considers a first, thousands of people particularly young people, were mobilised through social media to vent their frustration.

Social media is not only a tool for protest movements but has also been successfully embraced by established civil society organisations in their advocacy campaigning strategy. The environmental group Greenpeace, for example, has used social media services like YouTube and Facebook to successfully target large corporations like Nestle, McDonalds and even social networking giant Facebook itself, in various campaigns aimed at changing corporate behaviour (Greenpeace, 2006; 2010a; 2010b).

While the impact of social media services seems to be largely positive, many commentators and researchers have voiced some reservations as to the actual influence and ramifications of this adoption both in advocacy campaigning and socio-political protests. In the 2009 post-election unrest in Iran the much-vaunted role of the microblogging service Twitter has come under close scrutiny, with Gaffney (2010) for one noting that the role of Twitter in these protests was, if nothing else, uncertain. Early in 2012 the civil society organisation Invisible Children released a video on the Internet revealing the torturous reign of the East African warlord and leader of the rebel movement the Lords Resistance Army (LRA), Charles Kony (Invisible Children, 2012). The video was viewed approximately one hundred million times on YouTube and Vimeo in the space of two weeks (it was released on 5th March 2012). While these numbers suggest a dramatic highlighting of the issue, Zuckerman (2012) a researcher at the Berkman Center for Internet research at Harvard University, argues that the video had over-simplified issues and in

so doing, minimised the debate around the issues of conflict minerals, historical indigenous disputes, tensions over the ownership of land and the role of foreign armies.

The research documented here investigates the various dimensions of social media adoption. This chapter introduces the research study. The background to the research study is provided in section 1.2 and 1.3. The research objectives are stated in section 1.4, while the research approach and data collection are described in sections 1.5 and 1.6 respectively. Section 1.7 describes the theoretical and philosophical basis for the study. The layout of the thesis and the research output from this thesis are presented in section 1.8 and 1.9. Section 1.10 presents the writing conventions adopted and section 1.11 concludes the chapter.

1.2 THE RESEARCH STUDY

This study is exploratory in parts and is also an in-depth examination into the impact of Web 2.0 social media as a tool for transnational advocacy. The study focuses on how civil society organisations deploy emerging Web 2.0 technologies for social advocacy, the context of this technology use, and the impact of this technology adoption in achieving organisational goals. It analyses the effectiveness of these technologies and attempts to understand the strategic organisational intent in deploying them. The reciprocal impact of this technology adoption on civil society organisational roles, structure, and orientation will also be investigated. The technologies targeted for study are those commonly referred to as Web 2.0 social media and include social networking sites, blogs, podcasts, and wikis.

A survey of South African civil society organisations painted a picture of the extent of adoption of Web 2.0 social services across South African civil society. It detailed the reasons for such adoption, and the benefits - both perceived and actual – were identified. Greenpeace, one of the world's largest global environmental justice organisations, is used as a case study. With its forty national and regional offices, Greenpeace has been at the forefront of environmental issues since its inception in 1971 and has used the mass media as an effective campaigning tool. The organisation has probably done the most to bring environmental issues to the attention of the public, through its high-profile media-orientated protest campaigns (Castells, 2004). Its major goal is to advocate for changes in policy, legislation and behaviour amongst individuals, corporations and governments. Organised attempts at influencing and changing policy through direct action is termed advocacy.

The interplay between the Internet (which includes the World Wide Web) and society, between the actors and structures that exist, and those that are formed within this dialectic relationship provides a foundation for this research. In this study the Internet and the World Wide Web (hereafter referred to as the Web) is not seen as a specific network but rather as a socio-

technological network of networks that consists of a technological subsystem (a network of computer networks) and a social subsystem (social communication networks). As Fuchs (2008, p. 2) declares, it is a “general phenomenon of the interconnection of networked knowledge-based technologies and networked social systems.” This in turn relates to the two aspects of Information and Communication Technology (ICT) research, and of this study, firstly the extent to which society shapes the development and use of ICTs, and secondly the impact of this usage on society and civil society in particular.

1.3 BACKGROUND

Even a cursory glance at newspapers, magazines or the television is sufficient for even a casual observer to notice the amount of reporting relating to Web 2.0 social media. This pervasiveness of social media has created a universal system of cooperation and collaboration encapsulated in a socially connected Web that supports equally, all users’ capacity to generate content. Social media has broken stories about terrorist attacks in India, a shark attack off the West Coast of South Africa and was extensively exploited during the Arab Spring uprisings. It has become the constant companion of high-profile personalities, and also of a large majority of the online population. Facebook, which is the world’s largest online social network has approximately eight hundred million users and is exceeded only by the populations of China and India. The microblogging site, Twitter, recorded tweets at the rate of 25,088 times per second during the screening of an anime movie in December 2011 (Akimoto, 2011). The most popular personality on Twitter is a pop star who attracts in the region of seventeen million followers. In the United States celebrity websites garner more attention than websites devoted to religion, politics and personal well being (Tancer, 2009). Social networking companies are amongst the fastest growing and social networking sites are regularly cited as the most searched for and viewed sites on the Internet (Most Popular Websites, 2012). See Figure 1 for a list of the most popular websites.



Figure 1: Most Popular Websites (Most Popular Websites, 2012)

It is this pervasiveness of social media that makes the Internet a strategic imperative in public-led socio-political campaigns. Social media has become the voice of the oppressed and downtrodden and an important tool in the arsenal of civil society organisations. Indeed much of the success of a new resurgent civil society appears to be its ability to adopt and exploit new emerging technologies (Castells, 2004; Anheier, Glasius & Kaldor, 2001). Many environmental advocacy groups in particular have a presence on social networking sites, maintain their own blogs, and deploy other social media services like podcasts and wikis (Castells, 2009).

The philosophical intent with which the Internet and the World Wide Web was created has always been one of openness and absence of institutional rigour – in essence a self-regulating environment. Tim Berners-Lee who is credited with having created the World Wide Web is quoted as saying “I have always imagined the information space as something to which everyone has immediate and intuitive access, and not just to browse, but to create” (Berners-Lee & Fischetti, 2000, p. 169). But while social media may seem to carry an implicitly positive social message (Shirky, 2010) it is not averse to being used as a tool for oppression by organisations espousing radical religious views, for organisations advocating the violent overthrow of governments, by governments to oppress citizens, and by oppressive regimes, kleptocracies and other organisations to peddle their ideas. Writing in *The New York Times*, Gettleman (2011) reported that Somalia’s powerful Islamist insurgents, the al-Shabab - reputed to amputate the hands of people who do not share their views - had recently joined the microblogging site, Twitter, in which they described recent attacks against their enemies. The irony cannot be wasted on anybody - an organisation that vehemently eschews modern values and practices, even going to the extent of obstructing food-aid for victims of famine - embracing Twitter, an iconic website that represents a modern networked and digitally connected society.

In an acknowledgement of the merging existence of the Web user as an active contributor to the Web, Time chose ‘You’ as the person of the year for 2006 (Grossman, 2006), which symbolically represented all the users who add comments to a blog, post updates to social networking sites or upload photographs or videos to a content-sharing websites like Flickr or YouTube.

1.4 RESEARCH OBJECTIVES

The main aim of the thesis is to explore and address the key questions connected with the central theme of diffusion and deployment of Web 2.0 technologies in civil society organisations. In particular the study focuses on how civil society organisations are strategically appropriating and deploying emerging social media technologies effectively for transnational advocacy. The study also explores the reciprocal impact of this technology adoption on civil society roles, structure and orientation.

Secondary objectives include developing an understanding of the dynamics behind the creation, subsequent growth and overall lifespan of online communities, assessing the role of these communities in advancing advocacy initiatives, identifying how advocacy campaigns benefit from online communities, and importantly cataloguing and learning from social media-led advocacy campaigns.

1.5 METHODOLOGICAL APPROACH

This study is designed as part case study and part exploratory study. The research adopts an interdisciplinary approach using both qualitative and quantitative methods. A qualitative design allows for in-depth probing of issues and greater detail in responses (Denzin & Lincoln, 2011) and primarily employs interviews as a data collection tool. It also enables interaction with the participants whereby follow-up questions can be asked. The quantitative data collection utilises surveys as the data collection medium. The empirical research is split into two distinct phases as depicted in Figure 2.

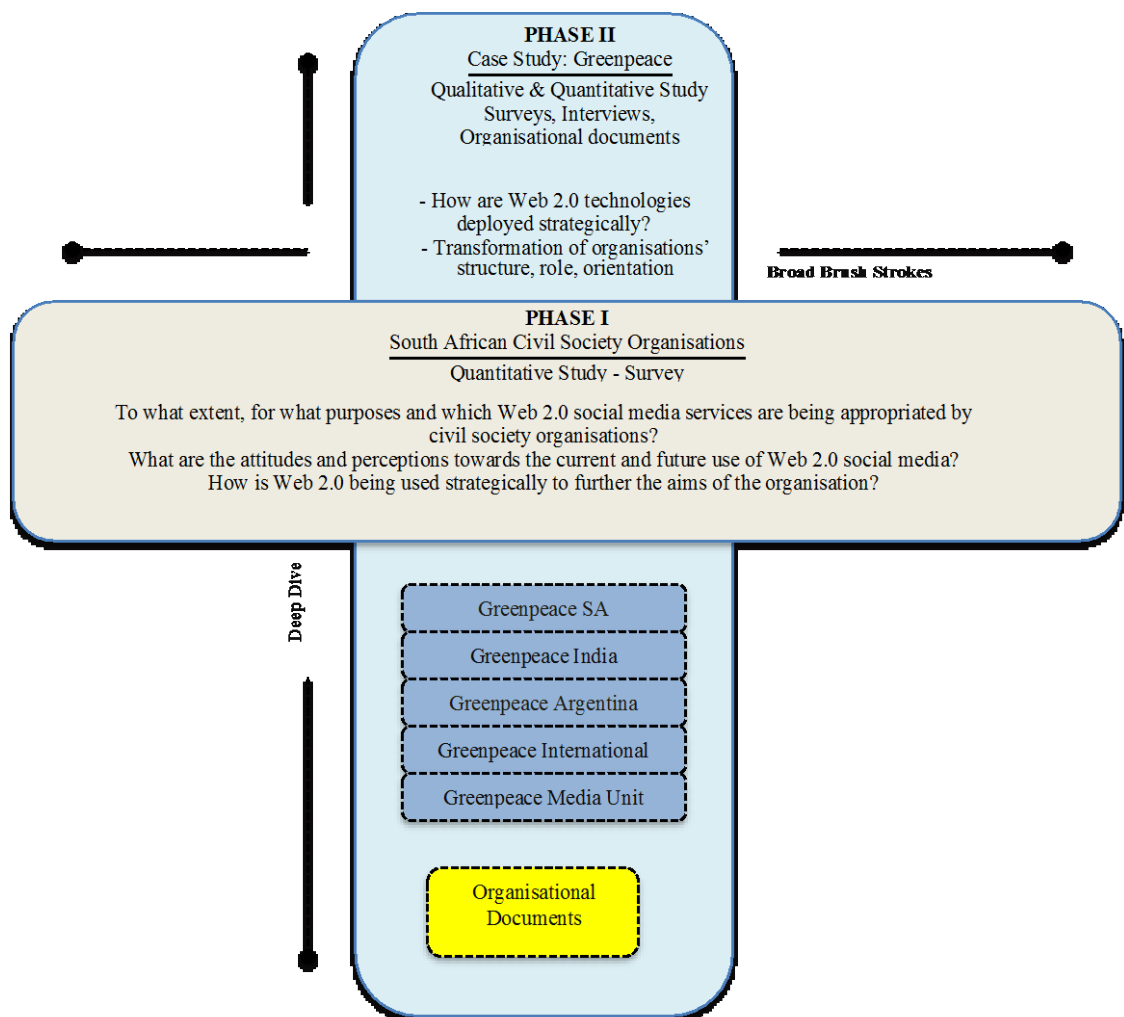


Figure 2: Overview of Research Phases

Phase one consists of a survey of South African civil society organisations while phase two was an in-depth analysis of the environmental group Greenpeace. The numbering of the phases did not imply a temporal order and both legs of the research were conducted in parallel in some instances.

1.6 DATA COLLECTION

A number of protocols were used for gathering data and information. These include:

- Surveys, conducted in English, were used to investigate the attitudes, perceptions and expectations of civil society organisations towards the use of Web 2.0 social media. The surveys were also used to identify the drivers of and barriers to these emerging technologies, and to gather data relating to the actual social media services being deployed and the reasons for deployment. Two surveys were conducted with the first one targeting South African civil society organisations (CSOs) and the other aimed at Greenpeace national and regional offices.
- A series of in-depth interviews were conducted both to provide additional evidence and also to acquire considered insight into the adoption, use and impacts of Web 2.0 social media. Two sets of interviews were conducted. The first targeted the senior management teams (SMT) of five Greenpeace offices globally. The second set of interviews was conducted with Greenpeace campaign managers responsible for the development and the running of social media-led campaigns.
- A desktop-based research was also undertaken which included document analysis and the identification and analysis of secondary data. The purpose was to identify and analyse social-media inspired and led advocacy campaigns
- The social media landscape was also investigated to both understand and analyse the discourse that took place in this new technology-enabled public sphere. The blogosphere (the collective term for the community of blogs and bloggers) and Greenpeace blogs in particular was analysed over various periods of time with respect to keywords and phrases, which correlate with specific advocacy initiatives. The results were analysed to describe changes in the blogosphere with regards to these advocacy initiatives (Bansal & Koudas, 2007). In addition it is possible to analyse the blogosphere with regards to clustering of blog entries and geographical distribution of blog comments, which can allude to any differences in technology appropriation between developed, and developing countries. The blogosphere analysis was also used to compare and contrast traditional CSOs to newer web based advocacy organisations e.g. Avaaz (discussed in section 2.8.1). The blogosphere analysis

was also used to frame questions for the in-depth interviews. Twitter feeds and videos and photos uploaded to content-sharing sites were also explored.

1.7 A PHILOSOPHICAL & THEORETICAL STANDPOINT

This section addresses the theoretical and philosophical basis for the research. A philosophical framework is necessary to contextualise perspectives and is helpful to better reflect on the diversity of arguments, and for the understanding and evaluating of complex positions or issues. It also assists a researcher to be temporarily detached so that they are better able to discern the strengths and weaknesses of arguments.

1.7.1 Philosophical Standpoint

Theoretical views of technology range from technological determinism to technological instrumentalism, with the concepts of autonomy and continuity being the key contentious issues in the debate between adherents of these philosophies.

Determinism versus Instrumentalism

Technological determinism is predicated on the view that technology is the main driver in the development of a society's structure and cultural values, with technology being an autonomous force beyond the direct control of humans and also the principal cause of social change (van Dijk, 2010). Determinists view the expansion of technology as sporadic, and technological growth is viewed as the result of a series of revolutionary steps forward. Chandler (2000) argues that technology determinism focuses on cause and effect relationships, which are extremely difficult to isolate in any exploration of communications technology. Technological instrumentalists argue that technology is completely under the control of humanity and exists only to accomplish human ends and can be used for either positive or negative purposes. Instrumentalists view the growth of technology as an evolutionary process, rather than a number of revolutionary innovations (van Dijk, 2010).

The social constructivists claim the middle ground. Constructivism is the idea that knowledge, facts, truth and even reality are constructed in a particular culture or society rather than pre-existing or natural (Bell, 2007). When applied to the study of technology, constructivism argues that the design and operation of technologies are fashioned by individual and organisational continuously, which is considered weak constructivism while strong constructivism implies that the properties and meaning of technology are subjectively dependent on social groups and are created by the processes of social negotiation and interpretation (Bijker & Law, 1994). Therefore technologies and in particular technologies with strong human characteristics such as information and communication technologies are socially shaped.

This study does not assume a determinist or instrumentalist view but leans towards the social shaping view and considers the impacts of ICT usage on society as a dialectic relationship between Information and Communication Technologies (ICTs) and society, with the two sides of the relationship being how the usage of ICTs transform society and the reciprocal impact of how society affects the way technology – irrespective of its original design intentions – is used. As a proponent of this view (Fuchs, 2008) contends that this social shaping view escapes both the deterministic and the socioconstructivist view, and rather proposes that ICTs are designed and moulded by people, a process that has the reciprocal effect of ICTs both enabling and constraining the way people think and communicate. Yang (2011) similarly argues for recognition of the centrality of technological and cultural forms in shaping reality with an emphasis on the role of real people and institutions.

Critical Theory

This study focuses on social change, specifically with regards to civil societies' appropriation of the elements of Web2.0 technologies. The research also has a strong positivistic¹ stance as implied in the research methods employed. Orlikowski and Baroudi (1991) argue that the criteria for classifying studies as positivist include the use of formal propositions, quantifiable measures of variables, hypotheses testing, and the drawing of inferences about a phenomenon from the sample to a stated population. While not always possible in an exploratory study of this nature, the researcher has attempted to employ the constructs of critical theory in the analysis of the results as a counter to the study's strong positivist stance, and adopts a non-dogmatic perspective. Critical theory offers a multidisciplinary approach to society, which combines perspectives drawn from many diverse disciplines; it has been described as an 'antidote' to the frequently noncritical quantitative approach (Bronner & Kellner, 1989). The multi-faceted nature of this research is in itself an attempt to incorporate the philosophy of critical theory. This study has attempted to satisfy the constructs for an adequate critical theory perspective as identified by the Stanford Encyclopedia of Philosophy (2005) in that it strives to be explanatory, practical and normative.

1.7.2 The Discipline of Information Systems

This study is firmly rooted in the discipline of Information Systems (IS), which is a pluralistic field of study premised on knowledge gained from other established schools of thought.

¹ Positivism holds that every justifiable assertion is capable of being scientifically verified and that the only meaningful empirical statements are those that are verifiable (Buckingham *et al.*, 2011). Positivism is a philosophy of science based solely on observable regularities i.e. society operates according to laws like the physical world and attempts to gain knowledge by introspective and intuition are therefore rejected; scientific method is the best approach to uncovering the processes by which both physical and human events occur.

Information Systems has and is changing the way organisations operate, and forms an exciting area for researchers (Elliot & Avison, 2005). Information systems emerged out a need for improved organisational ability to gather, store, manage, process and make sense of increasing amounts of data. As a multi-disciplinary subject Elliot & Avison (2005) state that IS has to address a range of organisational activities, from the strategic all the way through to managerial and operational issues. Fundamentally information systems is an applied science discipline relating to how technology is deployed. Lee (2001) describes the discipline of information systems as more than just the study of technology systems or social systems, or even both together. Additionally the study of Information Systems encompasses phenomena that emerges when technology and social systems interact, which differentiates it from other academic disciplines. Fuchs (2008) argues that the 'Internet' and related terms associated with emerging communication technologies, are often understood as technological constructs, and research in these areas have a deterministic implication; he argues rather that the term 'Information, Communication Technologies and Society' as being more appropriate.

1.7.3 Theoretical Frameworks

This study focuses on the adoption of social media as an effective strategy for civil society organisations and employs diffusion of innovations, structuration frameworks, and civil society theories and models.

Diffusion theory is an amalgamation of a number of different theories from various disciplines, each related to specific elements of the diffusion process, combining into what has been termed a meta-theory (Surry, 1997). Diffusion studies provide a rigorous approach to theories of social change and are a widely used research framework in the disciplines of sociology, economics, political science and communication (Wejnert, 2002). Diffusion theory has only recently been applied to the understanding of technological innovation and the role of technology in bringing about social change. Researcher Everett Rogers is credited with doing the most to synthesise all of the prevailing diffusion concepts to develop a unified theory of diffusion and forms the theoretical foundation for this study (Surry, 1997).

Adaptive Structuration Theory (AST) uses the concepts of social structures, rules and resources to provide a research framework that describes the relationship between innovative emerging technologies, social structures, and the relationships between these (DeSanctis & Poole, 1994).

Two additional frameworks have been incorporated within the overall diffusion and structuration study, both of which emphasise civil society's interaction with technology and the effects thereof. These frameworks first explore the multi-dimensional aspects of civil society

interactions, and secondly describe a technology appropriation model in civil society for the strategic use of technology. The theoretical frameworks are described in detail in Chapter three.

1.7.4 The Internet and Civil Society as Research Artefacts

The application of Information and Communication Technologies within civil society organisations (CSOs) has been an important and well-researched field. This research is based on the premise that the concept of the Internet as a research artefact, and its use in civil society organisations, has already been defined and institutionalised in research.

The authors Dahlgren (2005), Poster (1995) and Lunat (2008) examine the role of the Internet on the public sphere and on political communication. Diani (1999) in an early study on virtual networks considers the role of computer-mediated communication on social movements, while Pickerill, (2006) discusses the advent of radical politics on the Internet. Authors Frissen & Bockxmeer (2001) and Wellman (2001) identify new social interactions that emerged as a result of the Internet.

Research into Internet-based advocacy in CSOs includes an examination the Zapatista Movement in Mexico (Morello, 2007; Knudson, 1998; Ronfeldt, Arquilla, Fuller & Fuller, 1999; Castells, 2000), the overthrow of President Estrada in the Philippines (Rheingold, 2004; Castells, Fernandez-Ardevol, Qiu & Sey, 2005), and protests against the 1999 World Trade Organisations meeting which was dubbed the Battle for Seattle (Tarrow, 1998; della Porta & Diani, 2006; Kahn & Kellner, 2004). Recent research into social media and its impact on society include Clay Shirky's 'Here Comes Everybody' (2008), Sherry Turkle's 'Alone Together' (2011), and the 'Dragonfly Effect' by Aaker and Smith (2010). There have also been studies into the impact of social media on election campaigns in participatory politics (Hill & Hughes, 1998; Kerbel, 2009).

1.8 LAYOUT OF THE THESIS

This section presents the layout of the thesis and provides a brief overview of each chapter. There are a total of six chapters in this thesis, including this introductory chapter. Chapter two presents the literature review, which introduces the underlying concepts of the research including the public sphere, civil society organisations and advocacy. This chapter also places the Internet and the World Wide Web in historical context, describes the architecture and the technologies that underpin Web 2.0, and expands on the services that make Web 2.0 a unique technological innovation and a candidate for further research. The dialectic relationship between social media and advocacy campaigning is explored and social media-led campaigns are identified and described. The research methodology is presented in chapter three where more detail on the pluralistic nature of the data collection methods are introduced and described. This

chapter also describes the data collection protocols and the actual process of collecting the primary data. Chapters four and five present and analyses the primary data, supplemented with insight from the literature review and narrative from the social media space. Chapter six concludes the thesis and provides insight into the impact of the research and also identifies areas for further research.

This research produced one accredited journal article, two conference proceedings and one article published in an online industry journal. The researcher was the lead author for the conference proceedings, the online journal article, and co-author for the journal article. These outputs are identified, described, and mapped to relevant sections of the Literature Review in Appendix I.

1.9 WRITING CONVENTIONS

This section provides a summary of the writing conventions in the thesis and concludes this chapter.

- Each chapter starts with a diagrammatic representation (See Figure 3) of where the particular chapter is situated within the overall thesis.

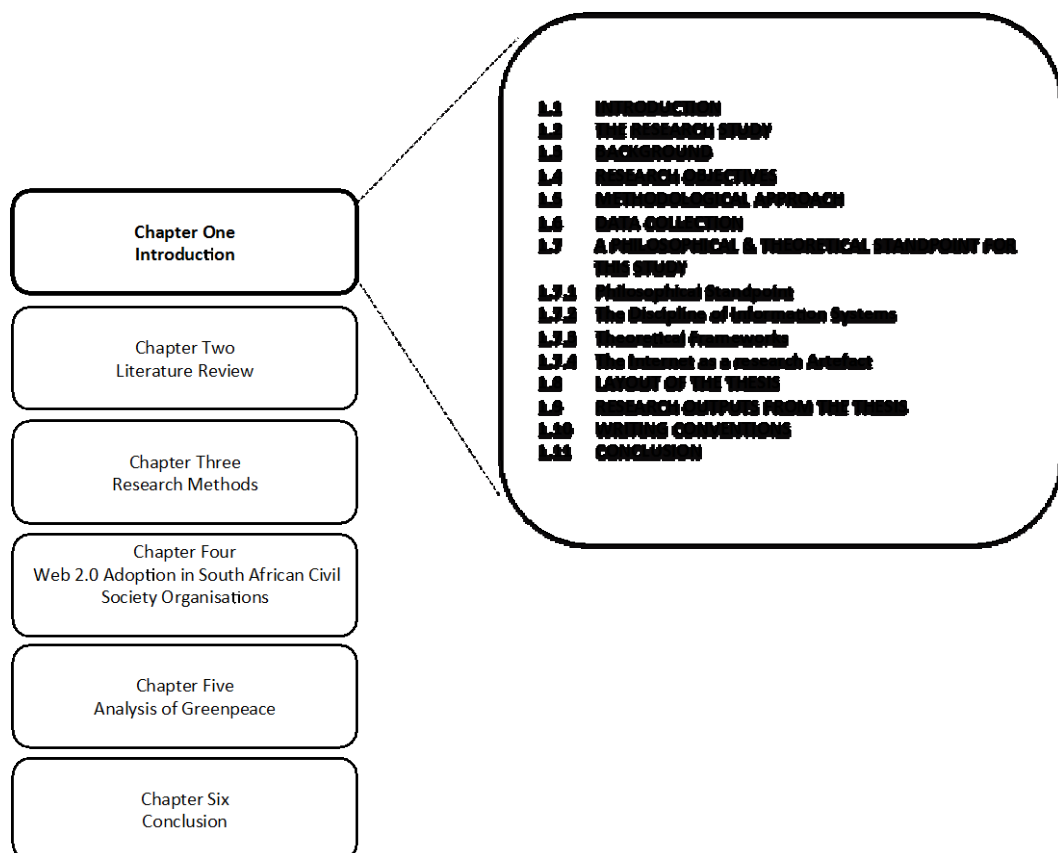


Figure 3: Example Diagram Used in Each Chapter

- All acronyms will be typed in full the first time they are used in each chapter.

- To ensure that the narrative flows smoothly, important insights that may detract from the flow of thought are mentioned in the footnotes.
- Figures, tables and graphs are numbered sequentially in order of appearance.
- Finally, in keeping with this study into social media, the concept of a word cloud – which emerged with Web 2.0 – is used at relevant points in the study. Word clouds are based on graph theory and are particularly related to the two-dimensional generation of graphs. Word clouds are closely aligned with the emergence of social media (Kaser & Lemire, 2007) and specifically support in aggregating word-usage (see also section 3.8.2). Word clouds are visualisations of what people are saying or thinking (Governor, Hinchcliffe, & Nickull, 2009) and are used in this study as a conceptual tool to highlight for example, ideas and views that may have emerged from an interview. Figure 4 below is an example of a word cloud for this chapter, generated using the open source tool TagCrowd (TagCrowd, 2012). An interesting example of the use of word cloud is by South African academic Professor Jonathan Jansen who used a word cloud to analyse the South African President’s 2012 State of the Nation speech (Jansen, 2012).



Figure 4: Chapter One Word Cloud

1.11 CONCLUSION

Social media has become pervasive with social media sites becoming iconic and part of everyday life. They have changed the way we communicate, how news is created and distributed and altered the fabric of space and time. This chapter provided an overview of the thesis, its structure, conventions, and an overview of the methodology that has been adopted. The next chapter is a detailed literature review, which introduces the concepts that underpin this research, and the relationships between these concepts. In a unique approach the carbon-footprint for the research was calculated, the details of which are to be found in Appendix H.

CHAPTER TWO: LITERATURE REVIEW

Contextualising social media for transnational social advocacy

"In many respects, we now live in a society that is only formally democratic, as the great mass of citizens have minimal say on the major public issues of the day, and such issues are scarcely debated at all in any meaningful sense in the electoral arena. In our society, corporations and the wealthy enjoy a power every bit as immense as that assumed to have been enjoyed by the lords and royalty of feudal times."

Robert W. McChesney (2000), author

2.1 INTRODUCTION

This chapter is the outcome of a desktop-based literature review into the impact of Web 2.0 social media on transnational advocacy. Figure 5 illustrates where this chapter is situated within the overall research strategy.

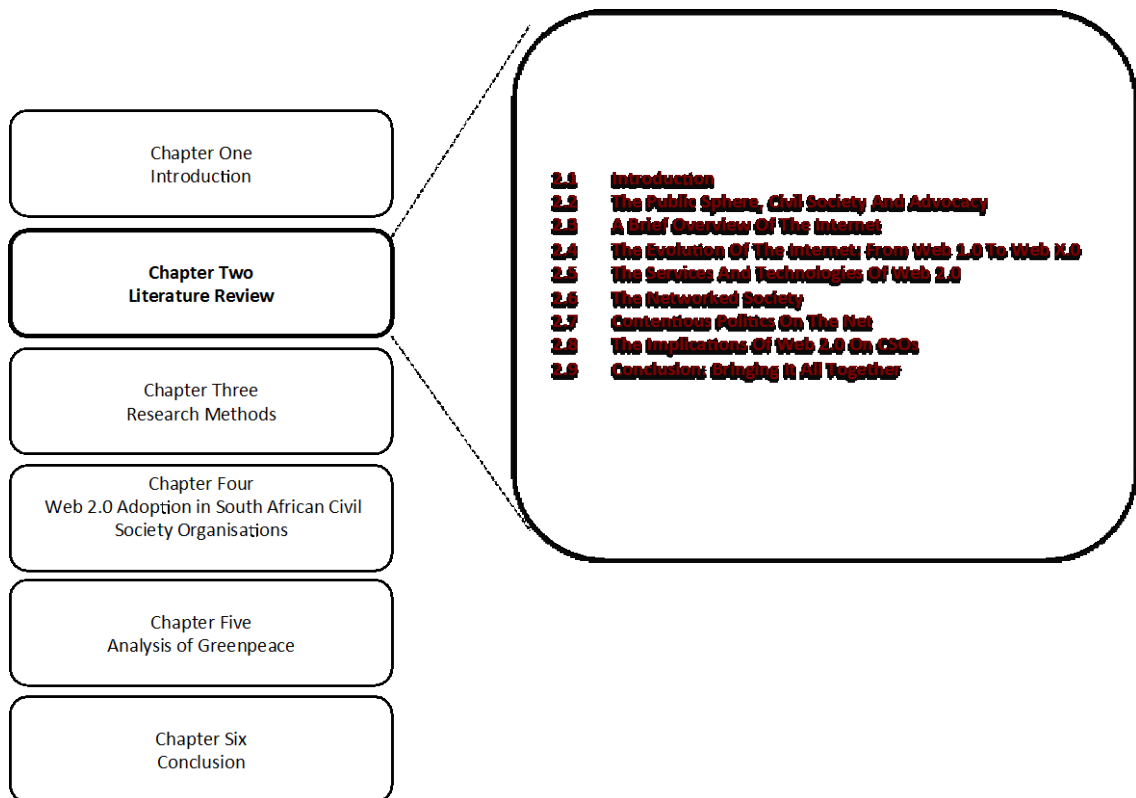


Figure 5: Chapter Two within the Overall Research Study

The literature review employs an approach – illustrated in Figure 6 – where the main concepts are first introduced and described, leading naturally into a discussion where the previously described concepts are analysed with respect to the objectives of the research.

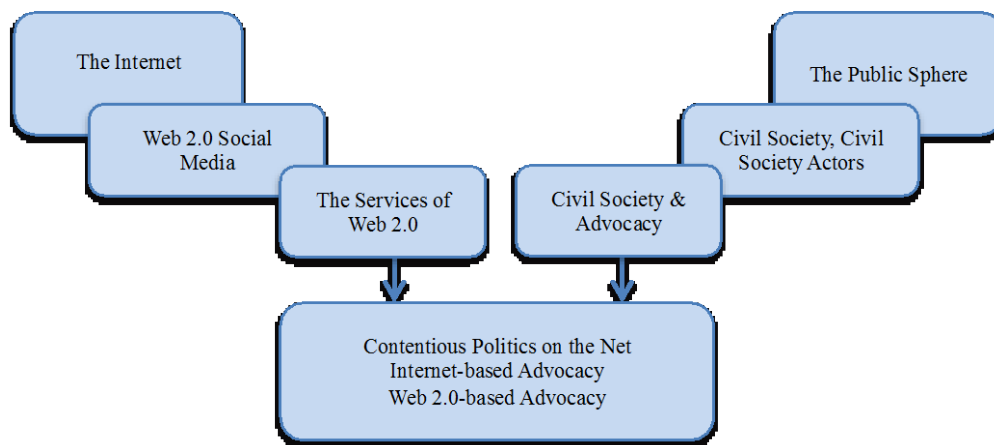


Figure 6: Strategic Approach to the Literature Review

Section 2.2 discusses the concepts of the public sphere, civil society and advocacy and establishes the relationships between these various concepts. South African civil society and civil society organisations are also described. The Internet is placed into historical perspective in section 2.3, while section 2.4 discusses Web 2.0 in detail and includes a brief overview of its evolutionary path and suggests some possible future trends in the advancement of the Internet and the Web. The services that constitute Web 2.0 are introduced in section 2.5, which ends with a discussion of the social aspects of Web 2.0. The network society, the knowledge economy, the networked public sphere, and online communities are examined in section 2.6 while section 2.7 culminates with a discussion of advocacy initiatives on the Web. It traces the genealogy of Internet-inspired advocacy campaigns and includes examples of social media-led campaigning. Section 2.8 concludes this chapter with a discussion on the reciprocal structural, operational and cultural impacts of social media on civil society organisations.

The literature review was conducted by initially searching online for specific key words and phrases. The sources targeted included online journals, conference proceedings, research firms, research centres, academic journals and databases. Social media sites (e.g. blogs) were also consulted, as were online lectures and podcasts. The search strategy follows the suggestions offered by the University of California Berkeley Library (2009) which states that distinct words and terms, and alternate words and similar terms, be used to identify possible resources. For example, the terms ‘Web 2.0,’ ‘social media,’ ‘Web 2.0 services’ and ‘social media services’ were used in combination; as were ‘civil society,’ ‘public sphere’ and ‘advocacy.’ Non-online sources included books, major research reports, journals and conference papers.

This literature has attempted to draw upon as many varied sources as possible. It must be borne in mind that when a topic spans both an emerging technological field and a concept like civil society, which is enjoying a rebirth, the amount of literature available is at times overwhelming. Furthermore technological innovation and innovation in social media in particular, ensures that

there is a constant supply of new and emerging research. Witness the research centers at Harvard University (Harvard University, 2010) and the Pew research project into the Internet and the American Life (Pew Research Center, 2010), which produces enormous amount of primary research and analysis. Furthermore the interest in civil society, social movements and citizen-inspired and led protests has increased to the point where the Time person of the year for 2011 was The Protester (Anderson, 2011). The literature has attempted to be exhaustive and has made use of seminal papers, research and thinking by leading proponents as the core of this study. It has also absorbed much of the current discourse and research, and the advocacy examples quoted are diverse in an attempt to show the extent of the assimilation of social media into everyday life, and also their impact on the socio-political transformations taking place. The nature of this research is such that there is every possibility that an almost immediate and guaranteed aftermath of this paper will be a substantial amount of research that would seem relevant to the reader.

Sections of the literature review have been published in van Niekerk, Pillay, & Maharaj (2011); Pillay & Maharaj (2010); and Pillay, van Niekerk, & Maharaj (2010).

2.2 THE PUBLIC SPHERE, CIVIL SOCIETY AND ADVOCACY

It is the collective thinking and behaviour of people that is the basis for the values enshrined in any society. Unsurprisingly there is, and always has been a continuous struggle to influence the minds of people, with the main weapon being information, which Castells (2007) describes as a source of both power and counter-power. The next sections introduce the concepts of the public sphere, civil society, and civil societies' relationship to both the public sphere and advocacy.

2.2.1 The Public Sphere

The concept of the public sphere is largely associated with the work of Jurgen Habermas (1989) who describes it as the space that shapes and holds public opinion and where "access is guaranteed to all citizens" Habermas *et al.*, (1974, p. 49). The public sphere thus describes a space that intercedes between the issues that are of concern to the general population and the domain of government and corporate influence. Habermas' (1989) further contribution to the narrative on the public sphere includes the concept of discourse ethics, which is a model for more open discussion between citizens and argues that nobody who can make a relevant contribution should be excluded. All participants must be granted an equal opportunity to make contributions and where participation and communication must be free from external and internal coercion (Goode, 2005). While Habermas emphasised political participation as the core of a democratic society, he also cautioned on any fundamental changes to the structure of the

public sphere associated with the increasing influence of the state and global corporations in public life (Kellner, n.d.).

According to Deakin (2001, p. 101) the public sphere generates “communicative power” while Chadwick (2009) contends that Habermas’ concept of the public sphere is perhaps the most influential approach to the role of communication in citizens’ engagement. The function of the media has always been to help form and transmit public opinion. But Habermas (1989) cautions against the role of the media being transformed from facilitating public debate, to rather structuring and limiting the public discourse to topics that have been sanctioned by powerful global media organisations. McPhail (2010) concurs and notes that the concept of the public sphere is now often used in such a way that the media has become the public sphere rather than just providing input towards the public discourse. Various organisations and institutions, collectively known as civil society, occupy the space provided by the public sphere.

2.2.2 Civil Society

Civil society is those formal groups that facilitate the engagement of citizens in activities that exist and operate outside of government (Etling, Faris, & Palfrey, 2010). Civil society in Latin is ‘*societas civilis*’ while ‘*politike koinona*’ the Greek equivalent, translates as ‘political society’ (Anheier *et al.*, 2001). Both the Greek and Latin terms imply that institutional and policy development occurs because of the central role of citizens (Kaldor, 2003). It was Hegel (quoted in Kaldor, 2003) who is credited with using the term to imply something separate from the State and described civil society as “the realm of difference, intermediate between the family and the state.” Marx and Engels described civil society as the “theatre of history...Civil Society embraces all the material relations of individuals within a definite stage of the development of productive forces. It embraces the whole commercial and industrial life of a given stage and, hence, transcends the State and the nation, though, on the other hand again, it must assert itself in its foreign relations as nationality and inwardly must organise itself as state” (Kaldor, 2002, p. 6). Antonio Gramsci, Italian parliamentarian and general secretary of the underground Italian Communist Party is credited with the resurrection of the concept of civil society that has led to the modern understanding of its role as the non-state and non-economic moderator of social interaction. He believed that civil society was made up of educational institutions, trade unions, cultural organisations and other non-state bodies and institutions (Anheier *et al.*, 2001). According to Ehrenberg (1999) Habermas’ concept of civil society includes spontaneously emerging associations, organisations, and movements which filter, refine and transmit citizens’ reactions on current issues within society to the public sphere. Fundamentally civil society is a network of associations organised within the framework of public spheres for the purpose of providing alternate discourses, and problem-solving issues of general interest. Kaldor (2002, p.

8) describes these networks as having an “egalitarian, open form of organisation that mirrors essential features of the kind of communication around which they crystallise and to which they lend continuity and permanence.”

Edwards (2004) views civil society as a democratically created and maintained public sphere that sits between the state and the market, whose existence creates a space for citizens to influence state processes and policy. This space must simultaneously enable, act out, and protect active citizenship (Naidoo, 2010a). The structuring of civil society evolves within an institutional, cultural and technological context and the more these contexts maximise the chance of autonomy, the more civil society empowers itself (Castells *et al.*, 2005). Regardless of the various meanings attached, civil society has always implied a society governed by rules that have been consented to by individuals; differences in meanings reflect the different ways in which this consent was obtained and manifested (Kaldor, 2003). Various terms are used to describe civil society institutions including non-profit, volunteer, social economy, non-governmental organisations (NGOs), charitable or the third sector. The next section will introduce these organisations and expand upon their roles and responsibilities in society.

2.2.2.1 The Actors of Civil Society

Civil society is made up of various global networks of organisations, movements, institutions and behaviours that exist between governments, the markets, and the family (Glasius, 2002; Kaldor, 2003). They are operationally and structurally different, have alternate agendas and wide-ranging reasons for existing. They vary in the way they attempt to achieve their goals, are staffed differently and serve different constituencies. What they have in common is that they all operate in the public sphere with a view to achieving public agendas.

As a definitional starting point this paper employs The London School of Economics Civil Society Project definition (quoted in Deibert & Rohozinski, 2008, p. 124), which states:

“Civil Society refers to the arena of uncoerced collective action around shared interests, purposes and values. In theory, its institutional forms are distinct from those of the state, family and market, though in practice, the boundaries between state, civil society, family and market are often complex, blurred and negotiated. Civil society commonly embraces a diversity of spaces, actors and institutional forms, varying in their degree of formality, autonomy and power. Civil societies are often populated by organisations such as registered charities, development non-governmental organisations, community groups, women's organisations, faith-based organisations, professional associations, trades unions, self-help groups, social movements, business associations, coalitions and advocacy groups.”

Structurally, institutional civil society ranges from organised movements (such as Amnesty International and Greenpeace) to associations that benefit its members (such as trade unions and professional associations) and includes faith-based organisations (Clark, 2008). The characteristics that define these organisations include support for individual initiatives to bring about social change and a commitment to solidarity action and community development (Salamon, Sokolowski & List, 2003).

Organisational forms of civil society take on many guises with Kaldor (2003) distinguishing four types of organisational types, which while they overlap with each other, describe alternate forms of accountability. Table 1 illustrates these organisational types.

	Social Movements	NGOs	Social Organisations	Nationalist & religious groups
Mission	Emancipation of the poor and excluded	Development and humanitarian relief	Protection and promotion of members interests	Empowerment of national and religious group
Activities	Protests, demonstrations, media events	Service provision	Service provision, lobbying	Mobilisation through media, religious organisations, and sometimes violence
Social composition	Activists, committed individuals, students	Professional staff	Workers, farmers, employers, local communities, displaced persons	Newly urbanised groups, peasant
Forms of organisation	Loose horizontal coalitions, network	Ranges from bureaucratic and corporate to small-scale and informal	Ranges from vertical and hierarchical to informal networks	Vertical and hierarchical although can involve networks of tightly organised cells, charismatic leadership

Table 1: Type of Civil Society Actors (Kaldor, 2003, p. 12)

Salamon *et al.*, (2003) propose the following features that define the organisations that belong to the civil society sector: (1) irrespective of whether they are formally and legally constituted they have some structure and a recognisable form of operating, (2) they exist outside the realm

of the state irrespective of any any support they may receive from government, (3) they do not have a primary commercial purpose with regards to distributing profits, (4) they have full control of their own affairs with their own internal governance mechanisms and are able to stop operating on their own authority, and (5) membership or participation is voluntary.

2.2.2.2 South African Civil Society

The history of South Africa civil society is characterised by two distinct periods. The first, marked by the emergence of black civil society actors (who were previously prohibited by the laws of the time from engaging in the public sphere), dates back to early 1980s when there was a prodigious growth in civil society rooted in the protests against apartheid. The second phase dates to the post-democracy years from 1994 onwards when civil society, faced with different challenges and also new opportunities, changed fundamentally (Habib, 2003). Prior to 1994 the majority of South African CSOs shared common cause with the dominant exiled liberation movement, the African National Congress (ANC). After 1994 and with the advent of democracy, civil society began to adopt more 'traditional' civil society-type activities and sought to place the interests of citizen's on the governments' agenda (Ranchod, 2007).

The advent of democracy and the impact of globalisation has had a significant impact on South African civil society with an evolution into three distinct blocks: the first was the creation of an enabling environment for civil society heralded by the political restructuring under a democratic dispensation; the second was the passing of the Non-Profit Act which changed the political environment by officially recognising civil society organisations that had proper governance procedures, and also encouraged the voluntary registration of CSOs; and the third was an economic environment that sought to ensure the financial sustainability of civil society (Ranchod, 2007; Habib, 2003).

Ranchod (2007) contends that the post-democracy ANC-led government, in what may be a throwback to pre-democracy days, views South African civil society as an arm of the state's delivery function, and civil society's role as an independent mechanism to challenge the status quo has been largely side-lined. Kihato & Rapoo (1999) note that in South Africa modes of engagement with the state involve formal engagement (contributing to green and white papers, submissions to portfolio committees, forums and government commissions etc.), and informal methods (petitions, lobbying, general public debates etc.). Three notable civil society organisations active currently are:

- The Treatment Action Campaign (TAC) was formed in 1998 and has become the leading civil society organisation calling for a comprehensive health care regime for people living with HIV&AIDS (Treatment Action Campaign, 2012). The role of TAC has been to

conduct research into HIV prevention and cure, whilst all the while holding the government to account with a number of protests and demonstrations, which has raised the profile of the organisation in South Africa and also internationally.

- The Congress of South African Trade Unions (COSATU) is in an informal tri-partite alliance with South Africa's ruling party (the ANC) and the South African Communist Party (SACP). COSATU has managed to significantly impact labour policy using a combination of negotiations, strikes and acts of civil disobedience.
- The South African National NGO Coalition (SANGOCO) was formed in 1995. The aim of which was to "coordinate NGO input into government policy and ensure that the rich traditions of civil society, forged in the resistance to apartheid, continue to serve the people of South Africa" (South African National NGO Coalition, 2011). It is the single largest civil society organisation in South Africa.

The new democratic political environment has resulted in the formation of many new social movements united against governments' macro-economic policies, which they believe, will further entrench poverty and inequality in South Africa. Fakir (2004) argues that the macro-economic policy implemented soon after the transition to democracy placed fiscal limitations that has mostly impacted the areas of poverty eradication and the addressing of inequalities, which in turn has laid the groundwork for the emergence of social movements. Desai (2002) supports this and states that in response to the South African governments economic policies, civil society has reconstructed itself: firstly there has been an explosion of informally-based organisations geared at assisting poor communities; while the second has seen the formation of civil society organisations (sometimes called social movements) opposed to the state's macro-economic policies. One notable example was the formation of the Anti-Privatisation Forum (APF), which emerged out of protest actions by the South African Municipal Workers Union's opposition to restructuring plans of the Johannesburg Council (The Anti-Privatisation Forum, 2011). In the city of Durban, and in response to a march by approximately five thousand residents in June 2003, the City Council relented, and wrote off seventeen million Rands (ZAR) worth of municipal services arrears. In the cities of Cape Town and Johannesburg widespread demands for the reconnection of water and electricity services in 2002, resulted in many instances of unauthorised reconnection of these basic services (Ranchod, 2007).

The next section briefly introduces the concept of globalisation especially within a civil society context. Globalisation restructures the way we live our lives, and influences everyday life as much as it does events on a world scale.

2.2.2.3 A Globalising Civil Society

"The only thing worth globalizing is dissent."

Arundhati Roy (2002), author

Appadurai (2006) described globalisation as the process of cultural mixing or hybridisation across locations and identities, while Giddens (1990) similarly defines it as intensification in global social relations that results in events occurring in different parts of the world impacting each other. The World Bank (2011) argues that globalisation is a consequence of the “growing interdependence of countries resulting from the increasing integration of trade, finance, people, and ideas in one global marketplace. International trade and cross-border investment flows are the main elements of this integration.” Reinert (2007) contends that globalisation - as interpreted by amongst others, the World Bank and the International Monetary Fund (IMF) - is in practice a very rapid economic integration of rich and poor countries. Castells (2000) draws a distinction between the concepts of a ‘global economy’ and a ‘world economy’ with a global economy having the capacity to work in real-time across all parts of the world. Globalisation creates new pressures on local autonomy, is responsible for the revival of local cultural identities and also creates new economic and cultural zones within and across nations (Giddens, 1999).

With the revolution in communication technologies transforming the world into the much-touted ‘global village’ (McLuhan, 2011) social movements and social actions are also subject to the formal and informal rules of globalisation and are increasingly influenced by happenings in distant places (della Porto & Kriesi, 2009). As Deakin (2001) notes, globalisation exposes the issue of power, that is, who or what has the capacity to control events and by contrast, which individuals or organisations simply experience power outcomes without any capacity to change them. Harcourt (2003) describes global civil society as self-organising, non-hierarchical ‘meshworks.’ Global civil society while attempting to transform a diverse range of issues, are created because of common experiences and complementary forms of action and its growth is often unplanned.

In recent years international campaigns have strongly shaped the image of civil society. Lahusen (2009) argues that international campaigns mediate between external conditions and internal movement dynamics and identifies the following as recent examples of campaigns that have an international influence: The Nelson Mandela International Reception Committee which oversaw the release of Nelson Mandela from prison; Greenpeace International’s campaign against the British Shell Petroleum Company’s intention to dump their oil-tank platform, Brent Spar, at sea; and Amnesty International’s Human Rights Awareness Campaign. Anheier, *et al.*, (2001) argue that the term global civil society has differing interpretations: for some it is a

counter-weight to global capitalism like the Greenpeace actions against transnational corporations, while to others it has to do with the infrastructure that is needed for the spread of democracy and development.

The growth of global civil society has been fuelled by an increase in resources, technology and money. The larger global civil society organisations (also referred to as transnational social movements) are made of numerous national offices, have memberships in the millions, and have strong levels of bureaucracy. For example Amnesty International has over a million members and formal chapters in fifty-six countries; Greenpeace has between two and three million members and has forty national / regional offices; Friends of the Earth is a coalition of sixty-one national associations that coordinate about five thousand local groups and a million members; the World Wildlife Fund has approximately five million members; while Oxfam is made up of a confederation of twelve organisations (della Porta & Diani, 2006).

The 'Battle for Seattle', which refers to protests against the 1999 World Trade Organisation's (WTO) annual meeting of ministers, has become recognised as a seminal moment in the development of global activism (Levi & Olson, 2000). From that point onwards there has been a growing indication that a global movement has emerged evidenced by increased levels of coordination, cooperation and protest activities, with technology becoming a vital part of this process (Bennet, 2004).

The seventeenth United Nations Framework Convention on Climate Change (UNFCCC), also known as the Conference of the Parties (or COP17), was held in the South African city of Durban during December 2011 and attracted, in addition to the twenty-five thousand official delegates, an estimated additional twenty thousand activists from civil society all over the world. Their intention was to create pressure on the delegates for a legal and binding agreement on carbon emissions and for the creation of a climate fund. They did this by creating an alternative to the official COP17, by engaging in debates and by pushing their agenda in the mainstream press. They were also involved in direct action with sit-ins and protests that eventually led to the deporting of three Greenpeace activists and the barring of others, including the Greenpeace International Executive Director, from the conference floor.

Civil society plays an important part in increasing democratic participation by acting as a mediator between the citizen and the state and when this is applied to the global stage, civil society actors then necessarily manifest themselves as legitimate actors in processes of global governance (Cammaerts, 2008).

2.2.3 Civil Society Organisations and Advocacy

Civil society organisations work at all levels of society. Influencing national and regional policy is the priority at the macro- and meso-levels respectively, while at the micro-level CSOs work with communities and organisations. CSOs work on the principle of broad involvement, which serves to develop the capacity for advocacy and activism at all levels (Keane, 1995; Naidoo, 2010a). The main weapon in the CSOs arsenal is advocacy, which has been described by Mayoux (2003) as:

“The process by which individuals and organizations attempt to influence public policy decisions. Advocacy, at its core, is an action-oriented process. It plays an important role in determining social justice, political, and civil liberties, and in giving voice to citizens and historically marginalized groups...at its best, advocacy expresses the power of an individual, constituency, or organization to shape public agendas and change public policies.”

In many contexts CSOs have experienced a gradual shift from service delivery on behalf of the state towards advocacy (Jones, Datta & Jones, 2009). Advocacy can mean tactics such as lobbying, influencing, campaigning, demonstrations and boycotts (Chapman & Wameyo, 2001), with (Mayoux, 2003) identifying two types of advocacy: adversarial advocacy which is based on direct-action, protest and civil disobedience; and negotiated advocacy which attempts to engage all parties and promotes negotiation and consensual decision-making.

Using Oxfam’s hierarchy of advocacy objectives Acevedo (2008) identifies the following possible advocacy outcomes: heightened awareness about an issue, the ability to contribute to debates, changes of opinion, policy changes, policy implementation, and finally a positive change in people’s lives. Jones (2011) highlights five key dimensions of possible policy impact: (1) focusing the attention of decision-makers on emerging issues, ensuring that these issues are debated and changing the attitudes and perception of stakeholders to these issues by offering alternate discourses, (2) urging commitment from governments and other influential parties, (3) changing processes to ensure that policy is debated in the public sphere, and (4) effecting change to policy.

One of the most dramatic civil society advocacy stories traces the rise of the ‘*Las Madres de Plaza de Mayo*’ – the Mothers of the Disappeared (deMars, 2005). The Argentinian ‘Dirty War’ took place from 1976 to 1983 when the military *junta* ruled the country with an iron fist. It targeted left wing organisations and individuals and at the end of the conflict approximately thirty thousand people had been ‘disappeared.’ On 30th April 1977 fourteen previously apolitical middle-aged women, whose children were missing, began a weekly vigil in the central square in

Buenos Aires, the Plaza de Mayo, in the hope of finding out what had happened to their children. The group ran a great risk with some being killed, but more than three decades later the group still hold their vigil every Thursday at 3:30pm in the hope of holding their current and previous governments to account.

2.2.4 Summary: Bringing it All Together

The public sphere, which is the focal point for collective socio-political action ferments contentious politics by waging direct action against the hegemonic forces of the day, including powerful social groups and even cultural practices (Tarrow, 1998). Social action manifests itself in different ways with Etling *et al.*, (2010) offering a suggestion on varying forms of collective mass action (See Figure 7). At the bottom of the ladder of engagement is popular protest (or online mobilisation of the ‘mob’) which is described as ‘episodic and spontaneous’ (Etling *et al.*, 2010). These contentious politics when backed by well-structured social networks lead to social movements (Tarrow, 2011) which differ from mobs in a number of ways: (a) social movements are singularly focused on a long-term goal which may take years to achieve and are consequently less transient than mobs or once-off political protests, (b) social movements also have more identifiable leadership and more developed organisational structures (Etling *et al.*, 2010). While many sociologists identify the root of social movements in the reaction to the horrors of the French revolution, conflict has very often been inscribed in the very structure of society (Tarrow, 2011). Tilley (1998) describes the objectives of social movements as correcting the wrongs that have been inflicted on a society. On achieving their objectives, social movements often disband. A case in point are the social movements that led the protests during the Arab Spring, which in many cases dissolved once their objectives had been achieved. Social movements are a vital element of civil society, and while their choice to sometimes exist outside of participatory politics often leads to a lack of depth in strategy, their tactics of engaging in contested spaces often produce important gains (Ranchod, 2007).

The top layer of Figure 7 represents civil society, which as a political phenomenon provides alternate discourses that oppose the dominant conditions that prevail in society. The role of civil society has always been to propose alternate arguments, ensuring that political systems are dynamic which guarantees the possibility of change (Fuchs, 2008).

Whether talking about mobs, social movements or civil society, all are described as advocacy-based organisations. What may differ is their size, longevity, areas of focus and degree of organisational formality.

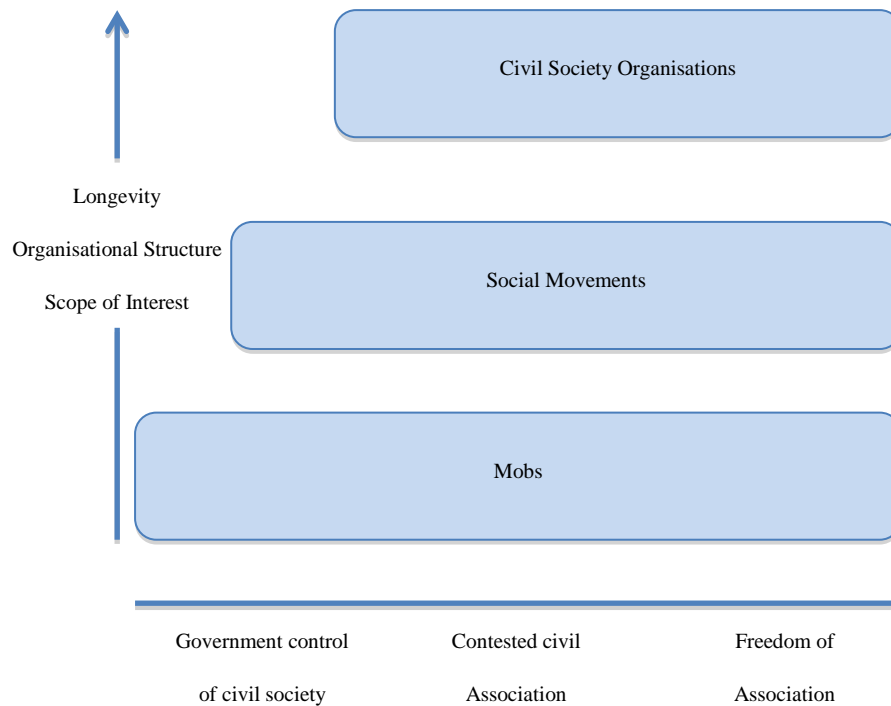


Figure 7: Three Models of Social Organising (Etling *et al.*, 2010)

The power and influence of advocacy organisations to fundamentally alter the status quo by changing the agenda, decisions and policies of society should not be underestimated (Andrews & Edwards, 2004). Civil society organisations have continuously addressed, with varying degrees of success, fundamental social issues such as slavery, apartheid, gender emancipation and environmental justice, which to some extent were and are upheld by the hegemonic structures of the day. Chomsky (2003) in his treatise on power in the twenty-first century argued that the only two superpowers left in the world are the USA and public opinion.

2.3 AN OVERVIEW OF THE INTERNET

The Internet is a happy anarchy naturally independent of government; it is an act of nature and it grows itself through our collective actions."

John Perry Barlow

'Grateful Dead' lyricist, founding member of the Electronic Frontier Foundation.

The Internet's capacity to overcome physical and spatial barriers thus allowing different groups of people from around the world to communicate and exchange ideas on a scale not seen before, has made it the fastest growing technological innovation in history (Rogers *et al.*, 2003). The Internet's revolutionary effect is also due to its interactive nature, which differs significantly from the one-way communication mode of other transmission medium such as radio, television and print media (United Nations, 2011). This section provides a brief history of the Internet and also provides a description of the current stage of its evolution.

2.3.1 A Brief History of the Internet

Various authors have eloquently described the invention and continuing development of the Internet, in particular John Naughton's (1999) 'A Brief History of the Future,' 'The Future of the Internet' by Jonathan Zittrain (2008), and 'Where Wizard Stay Up Late' by Hafner and Lyon (2003). What follows is a brief account of the birth of the Internet and accompanying developments that leads up to the advent of Web 2.0.

During the Cold War the United States government in response to fears of a nuclear attack developed a computer network, the principle purpose of which was to ensure America's ability to keep the lines of communication open in the advent of a war. The organisation that was responsible for this was the Advanced Research Projects Agency (ARPA)² and the computer network that was created was the ARPANET. While it was originally created as a defence mechanism, by the 1980s it had transformed into the Internet, primarily as a result of an explosion in the number of people owning personal computers, first in the US and then globally.

The Internet has grown at such an astonishing rate, in large part due to its open standards, which allows cheap interconnections that remove the impositions between academic, corporate and consumer networks. One of the founding principles of the Internet has been openness with very few 'closed doors' on the network and a free spirit prevailing amongst its founding members (Hafner & Lyon, 2003). However, the Economist magazine contends that the openness of the Internet is under threat from governments, corporations and network operators. Firstly on a national level, governments like China, Iran, Cuba and Saudi Arabia are restricting what people can view, and what content they can provide on the Internet (The Economist, 2011c). Even the United States is being lumped in this group of nations with Wikipedia, the free online information service, and many other sites shutting down their service for twenty-four hours in January 2012, in protest against proposed US anti-piracy legislation, which Wikipedia believed posed a threat to the future of the Web (Peterson, 2012). Secondly companies are creating islands of control by developing proprietary protocols and applications which restrict access to organisations who may have implemented competing technologies. Thirdly network operators, probing for new markets are reaching agreement with content providers that favour organisations who agree to pay the asking price, which in turn discourages competition.

Technically the Internet can be described as a distributed series of interconnected devices, computers and networks that interoperate via a set of protocols and open standards that govern their behaviour and support multiple patterns of interaction (Governor, *et al.*, 2009). The core

² From inception ARPA has been known interchangeably as ARPA or DARPA. The original ARPA was formed in 1958, and the name was changed to DARPA in 1972 and back to ARPA in 1993, and again back to DARPA in 1996 (DARPA, 2012).

of the Internet is the Transmission Control Protocol (TCP) and Internet Protocol (IP), which are almost always grouped together as TCP/IP. The TCP/IP stack, which is based on an open architecture and is non-proprietary, routes small amounts of data, called packets, between computers on a network. The packets contain the address information of the sending and destination computers. IP moves packets of data from one point to another while TCP builds reliable connections on top of IP. The Hypertext transfer Protocol (HTTP) works as a layer on top of TCP/IP and handles all the actions required for web browsers to interact with the Internet. The TCP/IP architecture supports the connecting of networks that use different hardware and communication protocols. Using the open TCP/IP standard as a platform for the Internet enabled a global network in which any network could connect to any other network. This emerging ‘internetwork’ enabled the Internet to grow at astonishing speed. The architecture of the Internet has been described in terms of an hourglass with three layers (Zittrain, 2009). The physical layer, or the physical medium over which data flows, resides at the bottom of this hourglass. The next layer contains the protocols, which ensures that data is transferred in a consistent manner thus ensuring that anyone can ascertain who the data is from and where it is going. The application layer sits on the top and represents all the activities that are possible on the network.

The Internet has had a profound effect on people’s learning, entertainment, creativity and ability to communicate and as a communication tool it out performs most media on speed, cost and reliability. With over two billion people online (Internet World Stats, 2011) the Internet is now the most significant communications tool in the world. Table 2 illustrates the numbers of Internet users for different regions of the world.

WORLD INTERNET USAGE AND POPULATION STATISTICS (December 31, 2011)						
World Regions	Pop (2011 est.)	Internet Users (Dec. 2000)	Internet Users (December 2011)	Penetration (% pop.)	Growth (2000-2011)	Users % of Table
Africa	1,037,524,058	4,514,400	139,875,242	13.5 %	2,988.4 %	6.2 %
Asia	3,879,740,877	114,304,000	1,016,799,076	26.2 %	789.6 %	44.8 %
Europe	816,426,346	105,096,093	500,723,686	61.3 %	376.4 %	22.1 %
Middle East	216,258,843	3,284,800	77,020,995	36.6 %	2,244.8 %	3.4 %
North America	347,394,870	108,096,800	273,067,546	78.6 %	152.6 %	12.0 %
Latin America	597,283,165	18,068,919	235,819,740	39.5 %	1,205.1 %	10.4 %
Oceania/	35,426,995	7,620,480	23,927,457	67.5 %	214.0 %	1.1 %
WORLD	6,930,055,154	360,985,492	2,267,233,742	32.7 %	528.1 %	100.0 %

Table 2: World Internet Users and Population Stats (Internet World Stats, 2011)

Over thirty percent of the world's population is connected to the Internet, which equates to a little over two billion people. Africa has the lowest penetration levels with just over eleven percent of Africans connected to the Internet. There has been an increase from approximately 4,514,400 in 2000 to 139,875,242 in 2011 in the number of Africans using the Internet (Internet World Stats, 2011). According to McPhail (2010) the United States can be considered the Internet superpower, partially explained by using language, technological and cultural advantages that help the US remain the most powerful nation in the information age. It is also home to key stakeholders such as Google, Microsoft, Apple and social network organisations.

Zittrain (2009, p. 70) contends that the architecture of the Internet is generative which is "a systems capacity to produce unanticipated change through unfiltered contributions from broad and varied audiences." This generative nature of the Internet has the following underlying principles: Leverage, which states that a system's ability to produce change, is directly related to what the system can do; Adaptability is the capacity of a system or technology to be used for purposes for which it was not originally designed; Accessibility which states that more accessible systems are more generative; Transferability, which is the ability to easily convey changes to a technology to others, for example on the Internet, programs and information (and anything that is accessible) can be replicated to millions of users in a matter of moments. The ability of a broad spectrum of society being able to adopt and adapt to a technology is also an important factor for generative systems.

While no single government, organisation or individual owns the Internet several global organisations have oversight authority over the Internet's infrastructure and protocols. The Internet Society is a non-profit organisation that develops standards and policies for Internet usage. The Internet Engineering Task Force (IETF) is an open membership international organisation that focuses the architecture of the Internet, and also on issues of security to ensure stable environment. The Internet Architecture Board (IAB) oversees the design of Internet protocols and standards while the Internet Corporation for Assigned Names and Numbers (ICANN), a private non-profit corporation, manages the Internet's Domain Name System (DNS) and ensures that every Internet domain name is correctly assigned the right IP address.

The original Internet system was designed as a system in which certain users would have access to selected data. It has now become a twenty-four hour mass medium capable of aggregating and disseminating enormous amount of data and information anywhere in the world in a matter of seconds, and in the process, redefining the way people think, work and play.

No discussion of the Internet would be complete without a review of gaming and video games. Video games have evolved from a cottage industry to a market worth approximately fifty-six

billion US dollars in 2010 (The Economist, 2011b). The development of video games has set new and higher standards for graphics, speed and sophistication for each new generation of Personal Computer (PC). Although considered a separate technology it has had an impact not only on the Internet, but also on software development, particularly graphics capabilities (McPhail, 2010).

2.3.2 The Internet in South Africa

The first Internet connections in South Africa were established in 1988 with an email link for academics using the FidoNet email system, which interacted with the Internet using a Unix-to-Unix Copy (UUCP) gateway (Freedom House, 2011). FidoNet consisted of approximately ten thousand worldwide networks that exchanged mail and files via modems using a proprietary protocol (FidoNet, 2011). Early Internet usage in South Africa was driven by the Foundation for Research Development (which has been subsequently incorporated into South Africa’s National Research Foundation) and a loose grouping of individuals in various universities. The Internet diffused rapidly amongst the country’s technologically advanced elite especially from 1993 when it was commercialised, and by the mid-1990s South Africa ranked higher in Internet usage than other comparable countries (Freedom House, 2011). Currently South Africa has the fourth highest Internet penetration rate in Africa (Internet World Stats, 2011) with just fewer than fourteen percent of the population (6, 860 000) having Internet access (See Table 3).

World Regions	Pop (2011 est.)	Internet Users Dec. 2000	Internet Users 30-Jun-11	Penetration % pop.	Users% Africa 2000- 2011
Nigeria	155,215,573	200,000	43,982,200	28.3 %	37.0 %
Egypt	82,079,636	450,000	20,136,000	24.5 %	16.9 %
Morocco	31,968,361	100,000	13,213,000	41.3 %	11.1 %
South Africa	49,004,031	2,400,000	6,800,000	13.9 %	5.7 %
Algeria	34,994,937	50,000	4,700,000	13.4 %	4.0 %

Table 3: Internet Penetration Rates (Internet World Stats, 2011)

A United Nations report (2011) states, “While the Internet has been in existence since the 1960s, its current use throughout the world across different age groups, and incorporation into virtually every aspect of modern human life, has been unprecedented.”

2.4 THE EVOLUTION OF THE INTERNET: FROM WEB 1.0 TO WEB X.0

“I have always imagined the information space as something to which everyone has immediate and intuitive access, and not just to browse, but to create.”

Tim Berners-Lee (2000, p. 169)

While the Internet can be thought of as a network of networks connected by millions of computers and servers located globally, all of which can communicate with each other, the World Wide Web (or simply the Web) is a separate and distinct application that provides an efficient way of accessing information over the medium of the Internet. This section describes both the emergence of Web 2.0 and also its underlying technical and non-technical concepts and introduces the core technologies or services that constitute Web 2.0 (including mobile telephony). It describes the evolution of the Web leading up to Web 2.0 and provides a suggestion as to where this evolution may lead.

2.4.1 A Brief History of the Web

The World Wide Web, whose creation in 1992 is credited to Tim Berners-Lee (Lanier, 2010) originated in a paper that he wrote in 1980 entitled ‘Enquire-Within-Upon-Everything’ which contained a software program that in addition to be able to link arbitrary computers, had the additional capacity to sort information by certain categories. The Web introduced the concepts of Hyper Text Markup Language (HTML), Hypertext Transfer Protocol (HTTP), Universal Resource Locator (URLs), and web browsers to create a graphical interface that made the Internet easy to use. The Web has been described as an Internet-based process that came about through the convergence of advanced technologies and increased sophistication in programming languages (McPhail, 2010). The design of the Web as it appears today was not inevitable with Lanier (2010) observing that in the 1990s there were many credible efforts for presenting digital information over a networked infrastructure.

The World Wide Web is a techno-social system i.e. on one hand the Web cannot be defined without addressing the human connections, and on the other humans interactions are based on technological networks (Fuchs, Hofkirchner, Schafranek, Raffl, Sandoval & Bichler, 2010, p. 51). The Internet (and Web) is fundamentally a social cognitive system that supports communication and cooperation, based on society’s technological infrastructure, which itself is an outcome of social action (Fuchs *et al.*, 2010). The philosophy of open standards, a simple architecture, and a global design, all aided by the benefits of the ‘network effect’ (see section 2.4.3.4 for a description of the Network Effect) has allowed the Web to grow into a distributed network that holds and hosts a vast and diverse set of information and applications.

2.4.2 A Definition of Web 2.0

The O'Reilly Media Inc. organisation is credited with coining the term Web 2.0 (Anderson, 2007) a concept that was then popularised by Tim O'Reilly in a paper called 'What is Web 2.0: Design Patterns and Business Models for the Next Generation of Software.' While alternate terms abound e.g. the 'social web' or 'live web', Web 2.0 remains a useful term to define the set of popular emerging Internet technologies. The following trends and attributes that characterise the Web 2.0 era (Rigby, 2008; O'Reilly, 2007)

- A highly connected and networked global society where more than two billion people are connected to the Internet, with many Web 2.0 applications in return dependent on a high user base for their existence.
- The idea that the more people adopt a service, the more useful it becomes, known as the Network Effect (van Dijk, 2010).
- The interactive nature of Web 2.0 means that communication is no longer one-way and that people no longer just consume information but contribute original content as well.
- Decentralisation, which recognises the power of collective action even if people are geographically far apart.
- Internet data and software is becoming increasingly open and accessible to any users. Developers are now able to create new software; typically called mashups as a result of combining pieces of currently used software (See section 2.5.7).
- The development of new software is based on what users want, rather than on what designers think is required.
- Because of its multimedia nature, the Web is now able to offer rich visual experiences, which include graphic, audio and video information.
- The Web as a platform with websites creating an experience similar to the desktop, and software makers choosing to launch their applications on the Web.
- An architecture of participation.
- The power of collective intelligence or crowdsourcing.

While Web 2.0 may not be easily defined it can be described as a strongly communicative platform, which is aimed at harnessing the power of the Internet in a more interactive and collaborative way with an emphasis on social interaction and user-generated content (Fuchs *et al.*, 2010; Murugesan, 2010). An alternate way of looking at the concepts of Web 2.0 is through a meme - which is an abstract artefact for illustrating the relationships between constructs

(Governor *et al.*, 2009). Figure 8 represents a reductionist view of Web 2.0. Reductionism holds that complex things can always be reduced to simpler more fundamental things and that the whole is nothing more than the sum of the simpler parts, while holism (the opposite of reductionism) states that the properties of any given system cannot be described as the mere sum of its parts.

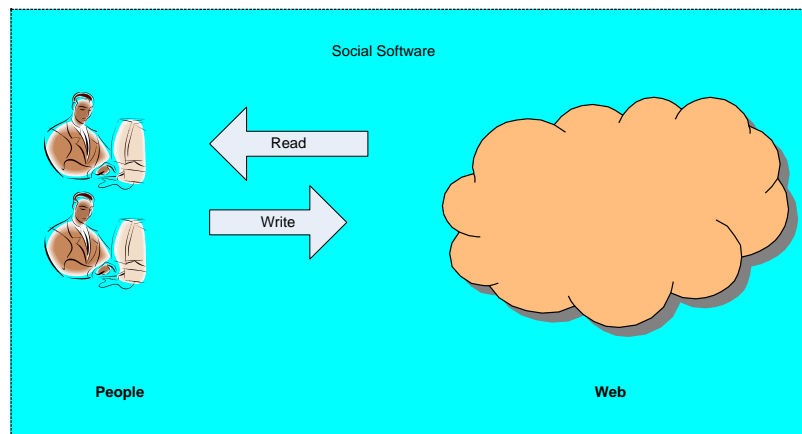


Figure 8: Reductionist View of Web 2.0 (Governor *et al.*, 2009, p. 63)

The division between reductionism and holism capture an essential debate on Web 2.0 with one group researching the very principles that underpin Web 2.0 and another seeking to explain things in terms of what is actually happening on a daily basis. Governor *et al.*, (2009) argue for a combination of views in attempting to define Web 2.0.

2.4.3 A Non-Technical View of Web 2.0

Some of the important non-technical implications of Web 2.0 which will be explored in this section include the concepts of individual production and user generated content, harnessing the power of the crowd, data on an epic scale, an architecture of participation, Network Effect, openness and many-to-many communication.

2.4.3.1 Individual Production and User Generated Content

The way people use Web 2.0 is fundamentally different from how people previously interacted with the Web. Prior to the emergence of Web 2.0, users were restricted to the passive viewing of websites and downloading of information. Website development was the domain of small group of programmers that had markup programming skills. With Web 2.0 almost anyone who is connected can add content in real-time. As Lin (2007) notes technologies are just tools that can be used for the higher purpose of disseminating knowledge. User-generated content is converted through a process of recombination, collaboration and aggregation to create outcomes that are valuable to the user and the user community at large.

2.4.3.2 Rich Internet Applications

The new social-Web, which allows people to create and share every kind of content, demands a user-interface that provides a more intuitive and interactive experience, called Rich Internet Applications (Valverde, Pastor, Valderas & Pelechano, 2010). Rich Internet Applications (RIA) have narrowed the distinction between desktop and Web-based applications, for example the Google Earth experience on the desktop provides the same information, functionality and interaction mechanism as the Web-based version. The characteristics of RIA include the ability to combine conventional Web interfaces with interface functionality found on the desktop e.g. drag and drop and information pop-ups. In addition RIA transfers some of the functionality from the server to the client, eliminates full-page refreshing which in turn promotes sophisticated navigation features, enables the automatic refreshing of parts of a page, and aids the embedding of multimedia (e.g. video), geographic objects (e.g. Google Maps) and animation (Rossi, Uribieta & Ginzburg, 2010).

2.4.3.3 Crowdsourcing: Harnessing the Power of the Collective

One of the fundamental ideas underlying Web 2.0 is that of network-based applications acting as systems for harnessing collective intelligence (O'Reilly & Battelle, 2009). Also called 'crowdsourcing' it has been described as a network-based paradigm that produces creative solutions by harnessing the power of a distributed network of individuals (Brabham, 2008).

In November 2009 the Defense Advanced Research Projects Agency (DARPA) came up with a unique challenge to celebrate the 40th anniversary of the ARPANET. DARPA wanted to look at the how the Internet was used to overcome spatial boundaries and to mobilise people to solve problems. The exercise involved locating ten red weather balloons at secret sites in the United States and challenged anyone, or any organisation, to find the exact GPS coordinates of all ten. The Massachusetts Institute of Technology (MIT) Red Balloon Challenge Team took less than nine hours to win the challenge (Choi, 2011). In addition to confirming the Defense Agency's own commitment to using social media, the DARPA Network Challenge demonstrated the crowdsourcing feature of the Internet with people who have nothing in common, working together to reach a goal that does not benefit them personally. Under the right circumstances groups are often smarter than the smartest person in the group i.e. the power of crowds is not derived from averaging solutions but from aggregating them (Brabham, 2008).

2.4.3.4 The Network Effect

One of the key features of Web 2.0 is the Network Effect, an economic concept which states the value that of a network increases directly in proportion to the number of users who join the network. After a service is grounded in the public consciousness, it has an immediate rapid

growth spurt and then continuous to grow exponentially after that. An example of the Network Effect was the telephone whose usage grew as its value increased (and vice versa). The Network Effect is an essential prerequisite of Web 2.0 (which is fundamentally a telecommunications network) in that, as the size of the Web increases so to does the value of Web 2.0 services (Berners-Lee, Hall, Hendler, Shadbolt & Weitzner, 2006).

2.4.3.5 Data on an Epic Scale

The Information Age generates and maintains increasing volumes of data with some researchers voicing concern that this 'datafication' may cause more problems than provide actual solutions (Anderson, 2007). YouTube currently holds approximately one hundred terabytes of data (Focus, 2012) while the global online population has generated 1.2 zettabytes (one zettabyte = one trillion gigabytes) of digital information (Cook & Van Horn, 2011). Data generation is predicted to continue to increase by a factor of forty-four by 2020 (IDC, 2011). The US government currently holds an archive of approximately one hundred and forty two terabytes of government documents (USA Today, 2011).

2.4.3.6 Architecture of Participation

Anderson (2007) contends that the understanding of this concept lies in giving equal importance to both words, *architecture* and *participation*. The implication is twofold: firstly the design of a service that encapsulates low barriers to its use facilitates mass user participation; and secondly a service gets better and improves through normal use. This effect might appear coincidental to a user but is in fact a design consideration. Search engines for example, which have been described as the *lingua franca* of the Web have evolved from brute force word matching engines to massively complex algorithms that use hundreds of different ranking criteria to produce search results (O'Reilly, 2005). They also contain feedback loops that help search engines learn and adjust results accordingly. The Web learns by discovering structure to what otherwise might appear to be unstructured data. Facebook founder Marc Zuckerberg recognised that online friend relationships actually constitute a generalised social graph i.e. turning what first appeared to be unstructured data into something structured, and implicit with meaning (O'Reilly, 2007).

2.4.3.7 Openness

The emergence and large scale adoption of the Web has necessitated a host of new legal and regulatory codes, and political and cultural developments related to the creation, control, and access of digital information. In contrast the philosophy of the Internet, and of Web 2.0 has always been one of openness; for example, open standards platforms, the use open-source software, data re-use, and a spirit of collaboration and cooperation. The openness of the Internet

and the Web has been protected by what has been termed a ‘multi-stakeholder’ model and decisions have in the large been taken by informal consensus (The Economist, 2011c). This openness that the Internet has always enjoyed has been under threat in recent times with governments increasingly wanting to have the last word on contentious issues.

Open data is also a new phenomenon making an impact. In a lecture hosted by the organisation TED, Berners-Lee (2010) provides examples from everyday life of how data can be used to make decisions and uncover knowledge implicitly embedded with data. For example, rescue attempts after the devastating earthquake in Haiti were assisted by people updating open data maps to show accurately where assistance was needed and where help was being provided. Within days, what was once a sparsely populated online map, had been transformed into one that contained vast amounts of information, obtained by harnessing the power of open data, and the power of the crowd (Berners-Lee, 2010).

The news website USA Today (2011) reported on efforts by US President Obama to modernise US governments’ record keeping with an increased emphasis on digital documents with a statement in part reading: "The current federal records management system is based on an outdated approach involving paper and filing cabinets. Today's action will move the process into the digital age so the American public can have access to clear and accurate information about the decisions and actions of the federal government."

2.4.3.8 A Many-to-many Mode of Communication

The traditional Web (or Web 1.0) is primarily a one way publishing medium (Murugesan, 2010) while Web 2.0 fosters a many-to-many mode of communication (Figure 9) far removed from the traditional one-to-many broadcast-type mode of communication (Pillay *et al.*, 2010).

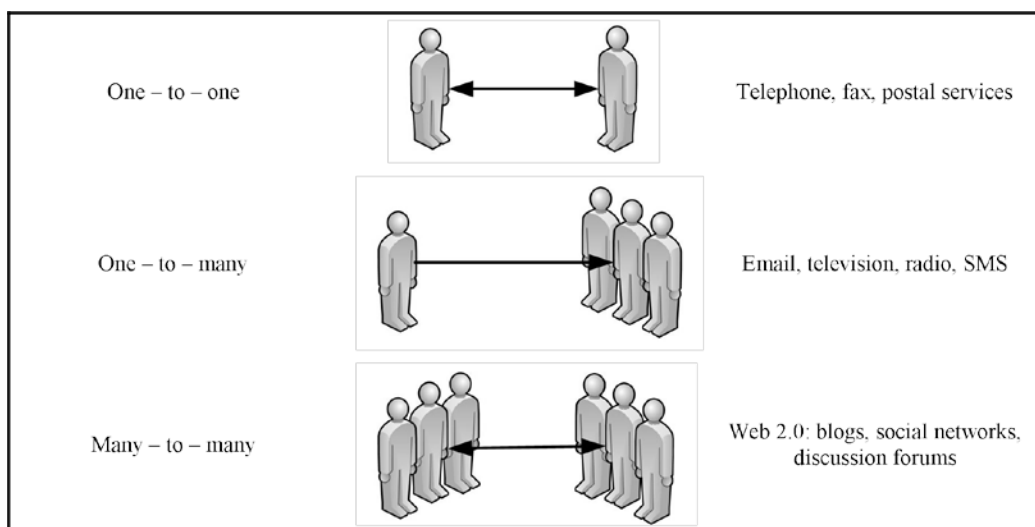


Figure 9: Modes of Communication (Pillay *et al.*, 2010, p. 51)

Birdsall (2007) argues that there has always been a continual interaction between technological developments in communication and the basic human right of all people to communicate. Web 2.0 represents a continuation of this interaction. The United Nations (2010) views the Internet as a fundamental medium for people to express their opinions, a freedom that is guaranteed by article nineteen of the Universal Declaration of Human Rights and the International Covenant on Civil and Political Rights. The Universal Service and Access Agency of South Africa (USAASA) whose aim is to promote the goals of universal access and universal service, places an emphasis on the rights of citizens for access to the Internet (USAASA, 2012).

This section has identified the non-technical concepts and constructs that underpin the evolution to Web 2.0. The next section identifies the more technical aspects of Web 2.0.

2.4.4 Some Technical Concepts of Web 2.0

The Web 2.0 concepts are fundamentally based on the original architecture of the Internet. Fuchs *et al.*, (2010) argue that Web 2.0 is not a technological innovation, but instead an evolutionary step whose technological basis has been developed well before the terms Web 2.0 and social media emerged. Borrowing from evolutionary science, Web 2.0 and its previous version (Web 1.0) share a common ancestor, which is the original Internet as conceived and developed almost forty years ago. Continuing the evolutionary theme, Web 1.0 and Web 2.0 are said to be homologous i.e. there is a 'sameness' about them (Dawkins, 2009). While Web 2.0 is inherently based on the Internet it is important to understand some of the technical principles that support this interactive collaborative Web architecture.

2.4.4.1 AJAX and Flash

Asynchronous JavaScript and XML (AJAX) is the core behind Web 2.0 and is what allows smaller part of web pages to be updated. AJAX has been described as the technological pillar that supports Web 2.0 enabling the creation of responsive user interfaces (Ankolekar, Krotzsch, Tran & Vrandecic, 2008). It also allows users to collaborate and has the ability to pull data from different sites. AJAX is not a single technology, but a group of technologies that incorporates standards-based presentation, dynamic display and interaction, data interchange and manipulation and asynchronous data retrieval (Linnenfesler, Weber & Rech, 2010).

2.4.4.2 Microformats

Microformats are a group of open-source data formats developed using widely adopted existing standards, and are a way of thinking about data and design principles. Microformats are employed by Web developers to embed some level of semantic 'meaning' within a webpage (Çelik & Khare, 2006). For example information intended for end-users (such as contact

information or calendar events) can be processed by software as well e.g. hResume is a microformat for CVs and resumes.

2.4.4.3 Open APIs

An Application Programming Interface (API) is a software methodology that allows programmers to deploy previously developed functionality without having to access the original source code of these modules. Open APIs, while licensed, are freely available and have fuelled the rapid development of Web 2.0 services. They also facilitate the creation of mashups, which are services that aggregate data from various sources. Google Maps for example makes available an API, which allows Web developers to embed maps within their own sites.

2.4.5 Web 2.0 Architectural Patterns

Architecture is not limited to the design of commercial buildings, airports and roads etc. It also involves the design, description and documentation of structure, internal and external components, and the inter-relationships between these components (Governor *et al.*, 2009). Architecture is a long established discipline, and more recently has embraced software development. The ANSI/IEEE³ defines software architecture as “the fundamental organization of a system, embodied in its components, their relationships to each other and the environment, and the principles governing its design and evolution” (ANSI/IEEE). The Open Group⁴ describes software architecture as “...a formal description of an information system, organized in a way that supports reasoning about the structural properties of the system. It defines the components or building blocks that make up the overall information system, and provides a plan from which products can be procured, and systems developed, that will work together to implement the overall system” (The Open Group, 2001). Governor *et al.*, (2009, p. 4) identifies the following ‘architectural patterns’ that make Web 2.0 a distinct phase in the evolution of the World Wide Web (See Table 4):

³ ANSI/IEEE The Institute of Electrical and Electronics Engineers (IEEE, read *I-Triple-E*) is a non-profit professional association headquartered in the United States that is dedicated to advancing technological innovation

⁴ Open Group is a global consortium that enables the achievement of business objectives through IT standards. It has over 350 member organisations that spans all sectors of the IT community

Service-Orientated Architecture (SOA)	SOA is an architectural paradigm that supports the integrating of services that are owned and managed independently
Software as a Service (SaaS)	SaaS delivers computational functionality by delivering SOA to the realm of software and shifting away from the older model of locally-installed self-contained software.
Participation-Collaboration	The Participation-Collaboration model focuses on self-organising communities and social interactions amongst Web 2.0 users
Mashup	The mashup pattern aggregates content or computational resources from multiple sources and combines them to create something new
Rich User Experience (RUE)	The RUE pattern combines several aspects including visual presentation, contextually relevant information and applications that are modelled to understand the complete scope of possible interactions between users and software
The Synchronised Web	In this pattern, applications or users share the same state or views of the same state e.g. online video gamers commonly use this pattern in order to play games together
Collaborative Tagging	Tagging refers to the ability to add labels or 'tags' to link resources with semantic symbols that themselves are grounded in a conceptual domain
Declarative Living and Tag Gardening	People constanly make declarations about themselves and Declarative Living is the act of encoding these declarations in syntax that a machine can process and make them visible to other entities on the Web. Tag gardening is the act of mining these declarations to learn about the users collective state
Semantic Web Grounding	This pattern assembles interactions that monitor the links between tage and resources. It facilitates self-learning and the pattern of interactions can lead to inferences about the relevancy of declarations
Structured Information	The ability of XML (Xentsible Markup Language) to apply customised tagging to specific elements has led to the rise of syntaxes commonly referred to as microformats i.e. formats that have a highly specialised ability to mark up precise information within documents which in turn allows users to access content at a lower level.

Table 4: Web 2.0 Architectural Patterns Governor *et al.*, (2009, p. 4)

2.4.6 The Evolution of the Web

The World Wide Web is in a constant state of flux and since its inception over twenty years ago has evolved in multiple directions. The ‘Internet of Things’, for example, where all devices and physical entities are connected to the Internet creating a network of unprecedented scale is currently a major field of research (Council for Scientific and Industrial Research, 2011). The International Telecommunications Union suggests that the Internet of Things and the world’s objects will be connected in both a sensory and intelligent manner (International Telecommunications Union, 2005). The vision is that all connected objects will be uniquely identifiable in terms of status, geo-location and ability, which will enhance decision-making and actions.

Many terms have been suggested to describe the evolution of the web with Murugesan (2010) proposing the following taxonomy to describe the stages in the evolution of the Web: Web 1.0 was about connecting information; Web 2.0 is about connecting people; while Web 3.0 is about integrating data, knowledge and applications and putting them to work in ways that make the Web more meaningful in a more collaborative platform. Categorising the development of knowledge as a process of either cognition, communication or cooperation, Fuchs (2010a) identifies three evolutionary steps in the development of the Internet: Web 1.0 as a tool for cognition, Web 2.0 as a medium for human communication and Web 3.0 as a social and technological network that support human collaboration. Weber & Rech (2010) have attempted to describe the evolutionary Web from its very beginnings almost twenty years ago to a where it may be headed in the decades that follow (See Table 5).

The use of ascending numbers when describing the evolution of the Web does not constitute a temporal order such as in a version of software. Neither is there an implication that Web 2.0 supersedes Web 1.0 and so on. Rather these naming conventions encourage the notion that the Web is evolving and also encourage researchers to explore the advancements and promise held in these evolutionary steps. In any attempt to describe what the future may hold for the World Wide Web, it is important to note that there is an evolutionary path that is being defined and researched.

Whatever nomenclature may be used in describing this new emerging Web, it is evident that the Web is evolving into a set of dynamic communication tools that have the potential of more power than any other previous medium available. As Wheeler (2009) states Web 2.0 has managed, at some level, to copy the capabilities of all other communication media including the printing press, telephone and television.

Web 0.5: The Rise of Tim Berners-Lee's Vision**Web 1.5: The Web of Experts (2000 – 2005)**

In the late 1980s and early 1990s the fundamental technologies such as HTML, URL and HTTP, web servers and the concept of linking web pages were developed. Web 0.5 services were distributed and content-offering precursors to Web pages using non-standard protocols and tools.

The next phase occurred when the general public embraced the Web (1990-2000). Web 1.0 services are presentation-orientated content viewing services based on technologies supporting static Web pages without much interaction.

The Web of experts is the phase where the Web experienced increasing commercialisation. Web 1.5 services are commerce-orientated content-viewing services based on technologies supporting dynamic pages

Web 2.0: The Social Web**Web 3.0: The Semantic Web (2005 – 2020)**

Web 2.0 services are user-orientated, content-sharing (upload, edit, download), social networking (personal data), or static mashup services based on technologies supporting dynamic micropages that harness collective intelligence

Web 2.5 services are expected to be mobile device orientated, cross-site, content-moving, virtual-reality based, or dynamic mashup services based on technologies supporting rich user interfaces and personal data portability

Web 3.0 services will be content-orientated, semantic-based, context-sensitive services based on technologies supporting semantically enriched websites that might support portable IDs in order to use the Web as a database and an operating system

Web 3.5: The Ubiquitous Web**Web 4.0 (2020 – 2030)**

Web 3.5 services will be fully pervasive, interactive and autonomous agents that will support artificial intelligence which will bring the virtual and real worlds closer together

Web 4.0 services will be autonomous, proactive, content-exploring, self-learning, collaborative and content-generating based on fully matured semantic and reasoning technologies

Table 5: Evolution of Web 2.0 (Adapted from Weber & Rech, 2010, p. 15-19)

2.4.7 A Summary of Web 2.0

Although technically nearly fifty years old (since the launch of ARPANET), for all practical purposes, the Internet as a widespread phenomenon is only about a decade and a half old. In that time Web 2.0 has emerged as mainstream phenomena and has been embraced by a range of sectors encompassing the legal fraternity, all the way through to local and national Government. Whereas Web 1.0 can be described as a development phase of the Internet (dominated by information production and reception) Web 2.0 is a phase that is dominated by human communication. While both are very much embedded within the Internet and dependent on Internet-based technologies, Web 1.0 is seen as being an encapsulated part of Web 2.0 (Fuchs, 2010a).

Madden & Fox (2006) emphasize that Web 2.0 is not a new and improved Internet network but rather a useful conceptual umbrella under which a new evolution of Internet applications embodying the participatory web can be grouped. These emerging Web applications and websites are fundamentally different from the ones found in the previous version of the Web. O'Reilly (2007) who is credited with creating the concept of Web 2.0 argues that while Web 2.0 does not have a hard boundary, there are a group of principles and behaviours that tie together a host of sites and services that demonstrate all or some of these principles. While some may argue the new applications emerging on the Web represent a gradual evolution of the Internet and not a new version of the Web, the term Web 2.0 has come to refer to the current generation of social Web applications being developed (Beemer & Gregg, 2009).

While the Web 2.0 concept is probably still too intangible for a solid classification, it can however be said that the Web 2.0 approach emphasises interaction, collaboration, and cooperation while fostering a sense of dialogue. Probably the most fundamental principle underlying Web 2.0, and also the point of departure for this study, is that of an evolutionary Web based on an architecture of social collaboration and participation.

2.5 THE SERVICES AND TECHNOLOGIES OF WEB 2.0

It is to some extent self-defeating to attempt to analyse the impact of emerging technologies on public discourse by cataloguing emerging technologies, as undoubtedly these will be over-taken by newer technologies. Analysing the effect without having a sense of what these technologies are or how they are being used is, on the other hand impossible. This leaves the researcher with the need to catalogue what is being used currently, and to transpose this to a new theory of emerging technologies as a new platform for the public sphere (Benkler, 2006).

A United Nations report (2011, p. 6) contends that the emergence of the participatory and collaborative Web 2.0, which facilitates the creation of content, means that people are no longer “passive recipients, but also active publishers of information.” While the services identified in

this study do not represent a complete list of Web 2.0 sites and services, as a collection of Web 2.0 services they embody all of the underlying principles of Web 2.0. The terms Web 2.0 and social media will be used interchangeably to describe the overall concept of Web 2.0 as an evolutionary step in the development of the World Wide Web. The terms social media services and social media technologies are synonymous and represent the actual umbrella of services that constitute Web 2.0.

There are numerous open-standards websites and technologies (also referred to as services) that encapsulate the Web 2.0 concept. O'Reilly (2007) directly compares Web 1.0 and Web 2.0 applications and websites in an effort to draw a distinction: content management systems versus Wiki's; directories versus Tagging; and screen scraping versus Web services. The Pew Internet Research Center (Pew Research Center, 2011b) describes Web 2.0 as "an umbrella term that is used to refer to a new era of Web-enabled applications that are built around user-generated or user-manipulated content, such as wikis, blogs, podcasts, and social networking sites."

The services which are most often cited as embodying the principles of Web 2.0, including social networking sites, blogs, wikis, social bookmarking, multi-media sharing and data mashups (Anderson, 2007; Rigby, 2008; Murugesan, 2010; O'Reilly, 2007) will be discussed in greater detail in the following sections.

2.5.1 Social Networking

Social networking sites have fundamentally changed the nature of both professional and private communication by allowing for profiles to be created and changed. boyd⁵ (2006) writes about social networking sites:

"Even when there's no prescribed activity, people are doing things on these sites. They're hanging out. They're dancing in front of digital mirrors. They're patting their friends on their digital backs. They're increasing the strength of their relationships through sharing. They're consuming and producing cultural artifacts that position them within society. They're laughing, exploring and being entertained."

Facebook is the second most popular Internet site, after Google. It is the biggest social network with a membership of over eight hundred million and available in over seventy languages (Socialbakers, 2011). If it were a country, it would be the third biggest in the world after China and India. With 1.5 million business pages and over fifty-five million updates every day, the Facebook community shares more than fourteen billion pieces of content every month (Facebook, 2011). The organisation further claims that more than fifty percent of active users (approximately eight hundred million) log on to Facebook everyday, with an average user

⁵ boyd prefers her name to be written in lowercase letters

having one hundred and thirty friends. More than two hundred and fifty million photos are uploaded every day, and there are over nine hundred million objects (groups, events and community pages) that users interact with. Schroeder (2010) estimates that users of social networking sites spend approximately five and half hours per month online, with Facebook accounting for the majority of that time

While Facebook may be the social networking site with the largest user base, it is by no means the only social networking site. Other niche sites focus on specific issues like music and entertainment (MySpace) and professional networking (LinkedIn), while others still are popular in specific countries, for example Orkut in India and Brazil, Skyrock in France, VKontakte in Russia and Cyworld in South Korea (Rigby, 2008).

It took LinkedIn sixteen months to sign up the first million members and eleven days to sign up the most recent million (Economist, 2010), which is also an excellent example of the Network Effect. The interactive nature of the social media services are dependent on the Network Effect which has become their *raison d'être* i.e. people join sites to connect with others who have similar interests.

Currently, there are just over four and a half million Facebook users in the South Africa, which makes it number thirty in the ranking of all Facebook statistics by country (World Wide Worx, 2011). This equates to a 9.19% penetration rate of the entire population and an 85.12% penetration rate of the online population. Globally, sixty-one percent of users are aged between eighteen and thirty-four (Socialbakers, 2011).

2.5.2 Wiki's

The name *wiki* comes from the Hawaiian word for quick and in this context refers to an online encyclopaedia service. Wikis provide information on specific topics, which can be edited by any user who has access to that webpage and in essence they are online encyclopaedias built through ad-hoc collaboration. Wikis unlike blogs lets users look at previous versions and definitions and also have the ability to 'rollback' to a previous version.

Wikipedia, probably the best know example of a wiki, was started by Jimmy Wales - described as an 'options-trader-turned-Internet-entrepreneur' – who launched a free online encyclopaedia called Nupedia in 2000 (Brafman & Beckstrom, 2007). The problem with Nupedia was that the process to get anything published proved to be onerous but was soon improved through the use of the wiki technology and Wikipedia was born. With Wikipedia, any person based anywhere in the world can collaborate and contribute to topics in which they have an interest, with no single authority having the power to identify subjects and approve content. Wikipedia employs the collaborative functionality of wiki's to present collectively verified authoritative content, on a

platform that uses hyperlinks between subjects to facilitate fast cross-referencing of facts (Governor *et al.*, 2009).

Wikipedia's fifteen million plus registered users have added 3 832 264 content pages, over eight hundred thousand uploaded files, and over half a billion page edits since it was started with an average of nineteen edits per page (Wikipedia, 2011b). As is to be expected with any open access system, Wikipedia has been subjected to false reports and inaccurate editing. One example was the false reporting of the death of Senator Ted Kennedy, which was termed "death by Wikipedia" by the Washington Post (Pershing, 2009).

But while it has been attacked for factual accuracy, Nature magazine (Giles, 2005) undertook an evaluation of Wikipedia and the online encyclopaedia Britannica in terms of accuracy of science articles, which showed that Wikipedia came close to Britannica in terms of the accuracy of its scientific entries. Brafman & Beckstrom (2007) are of the opinion that the quality of articles on Wikipedia is high and contend that people in an open system like Wikipedia will automatically want to contribute, which is illustrative of the concept of crowdsourcing i.e. how an unconnected group of people can work together to produce information on the Internet. The challenging question of accuracy regarding Wikipedia content becomes more problematic with contentious topics such as politics, religion or historical views.

2.5.3 Blogs and Blogging

A web-log, commonly known as a blog, is a webpage that requires no HTML knowledge but which allows users to update the site using plain text. Blogs are date and time specific and posts are reflected in chronological order. The interactive nature of blogs ensures that it is easy for anybody to reply to a post. Blogs are generally used as personal opinion or diary sites. The nature of the blog also allows users to easily find the geographical location of the blog (Bansal & Koudas, 2007). With regards to the architectural patterns, introduced in section 2.3.2.3(e), blogs are an example of declarative living and tag gardening.

The ability of blogs to report on current events in almost real-time makes them strong competition to commercial mass media. Benkler (2006) writes of the 'weighted conversation,' which refers to the exchange of views resulting from the posting of comments. This interactive nature has grown because of software development which enables users to easily set up discussion forums, post comments, link to other blogs (blog roll) and tag content. Blogs are evolving from being purely text and graphics-based to mobile blogs (moblogs), video blogs and even group-based blogs. The community of weblogs is known as the blogosphere, an entity that grew by two orders of magnitude between 2003 and 2006, and was estimated to be doubling every two hundred days (Bansal & Koudas, 2007).

In the beginning of the 1990s Beppe Grillo, an Italian activist, directed his satire at the ruling Socialist Party and as a consequence was banned from television (Pepe & di Gennaro, 2009). Unable to access the public broadcaster, Grillo began to blog about events affecting the country including politics, the environment, corruption and activism. His blog grew in popularity and was eventually listed as one of the top ten most influential blogs in the world. Grillo's blog is a good demonstration of how powerful forums offering a platform for uncensored information, where differing political opinions are traded freely, can be.

In China much of the dissident protest against the government has been fanned by an estimated seventy million bloggers and the blogosphere has been labelled as nationalist-leaning and has according to Friedman (2010) become the *de facto* voice of the people.

2.5.4 Microblogging and Twitter

A variation of blogging is microblogging, the most popular example being Twitter. Users of Twitter are allowed to send short messages of no more than one hundred and forty characters, which are known as tweets. The heart of Twitter is the ability to share information in real-time especially if it is being used on a mobile phone (Rigby, 2008). Senders can restrict delivery to a closed group or by default allow open access. Twitter works by using hashtags which are words or phrases prefixed by the hash sign (#) e.g. #Greenpeace. This enables tweets on a specific topic to be found simply by searching for the hashtag.

During a December 2011 broadcast of an anime film, Japanese users recorded the highest number of tweets per second. At the film's climax the two main characters chant the magical word '*Balse*' - and it had become popular for the audience to join in - and during this particular broadcast the Twitter space saw the word being tweeted at the rate of 25,088 times per second (Akimoto, 2011). Twitter has become much favoured amongst celebrities with many vying to get the largest numbers of followers. Of the top ten people with the largest number of Twitter followers President Obama features at number seven (with just over eleven million followers), while the number one position was filled by a pop star with over seventeen million followers (Socialbakers, 2011). With regards to the architectural patterns discussed in section 2.3.2.3(e), Twitter is an example of declarative living where people make declarations about themselves, which others can access.

2.5.5 Social Bookmarking, Folksonomies & the Taxonomy of Web 2.0

Social bookmarking is a tool that allows users to either remotely or centrally save their favourite sites either to be accessed at a later date or to be shared with others. Often these sites are described by keywords known as tags. Tagging is also used in other applications including Flickr, YouTube and Odeo, which allows for tagging of podcasts, videos and photographs.

Social bookmarking is also known as collaborative tagging, social indexing and social tagging. While tagging promotes flexibility of definitions, this flexibility is also the source of problems that plague tagging: including typographical errors, tags on different levels of abstraction, and the use of synonyms to tag the same object (Zacharias, Braun & Schmidt, 2010). The incentive for bookmarking includes the ability to retrieve information in the future, the contribution and sharing of information and opinions, the need for attention and also for online gaming and competitions (Yanbe, Jatowt, Nakamura & Tanaka, 2010).

Tagging is sometimes called ‘folksonomy’ and refers to the classification of knowledge (Cannata, 2009). Folksonomy is a portmanteau word derived from blending the words ‘folk’ and ‘taxonomy.’ The word folk is used because it is created by people rather than by experts and taxonomy represents a conceptual indexing system for categorising data (Derham & Mills, 2010). Folksonomies exhibit key characteristics of Web 2.0 such as openness and collaboration.

2.5.6 Multimedia Sharing and Podcasting

Multimedia sharing allows users to actively produce and use Web content. Anderson (2007) talks of the writeable Web, which is a space where users create, store and share content with YouTube being the fastest growing example of this phenomenon. YouTube (2011a) sees forty-eight hours of video being uploaded every minute, resulting in nearly eight years of content uploaded every day or the equivalent of two hundred and forty thousand full-length films every week. YouTube is localised in twenty-five countries across forty-three languages with over three billion videos being viewed a day. The age group of the majority of its users is between eighteen and fifty-four years old.

As a tool of protest YouTube has made possible the large-scale dissemination of videos showing many acts of atrocity. It has also been responsible for advocacy campaigns going viral in cyberspace⁶. Two cases are illustrative of this with the first one being the Greenpeace Kit Kat campaign targeted at Nestlé, which saw its spoof video being viewed by over one million people worldwide (Greenpeace, 2010b). In the video an orangutan’s finger replaced a piece of Kit Kat chocolate and upon being bitten gushes blood. It was intended to highlight the use of palm oil in the making of Nestle products and the accompanying destruction of Indonesian forests.

⁶ The term cyberspace was first used in 1984 by William Gibson in his book *Neuromancer* (Gibson, 1984)

In Egypt, a video of a woman being brutally beaten, stripped of her clothing and violated by members of the army was viewed by approximately 815 326 (as at 21st February 2012) viewers and became a symbol of the ongoing protests in the country (See Figure 10⁷).

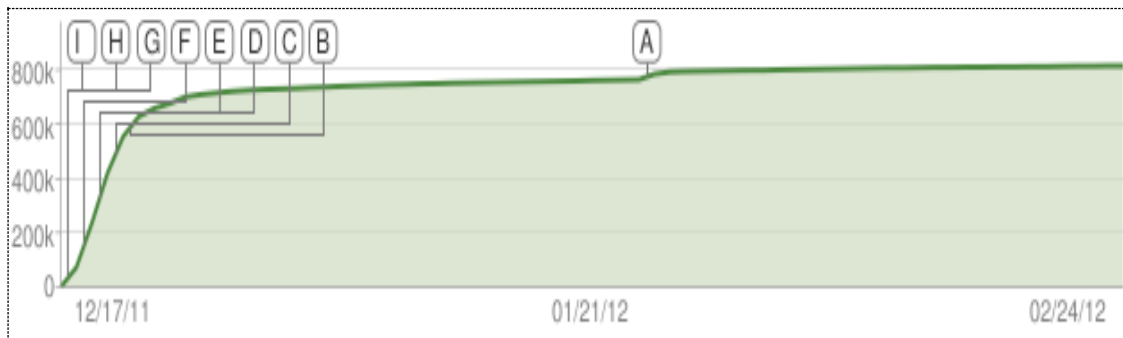


Figure 10: Video Statistics: ‘Lady in the Blue Bra’ (YouTube, 2011b)

The women became known as the women in the ‘blue bra’ - which was exposed during the beating - and the blue bra has become a symbol of the protest in Egypt and also a call for the emancipation of women from religious oppression, with the hashtag #bluebra becoming a rallying cry against the government (Quinn, 2012).

Audio recordings via the Internet have also become popular with interviews, discussions, programmes and lectures being recorded and stored in central locations. This process is known as audio blogging, or podcasting. These podcasts can be accessed through computers, laptops and most smartphones. Video clips or video podcasts are a more recent development. In 1984 a non-profit organisation called TED (which stands for Technology, Entertainment, Design) started as a conference but has since broadened its scope to include a series of lectures - known as TEDtalks - by prominent thinkers which are freely available on their website (TED, 2012). The lectures are released under the creative commons open-source license and include lectures by such luminaries as Sir Tim Berners-Lee, former British Prime Minister Gordon Brown, Yochai Benkler who is the Director at the Harvard Berkman Center, and Jeff Bezos the founder of Amazon.

Another social media service available to subscribers is Real Simple Syndication or Rich Site Summary (RSS). This service aggregates information from the Web based on an individual’s particular criteria and removes the need for users to check multiple sites, informing them when new information has been added. This process, known as syndication ‘pipes’ updates to the individual which includes the title and summary of the story as well as the websites’ URL. The RSS feed on the site must be enabled by the user and the RSS service is then able to pick up any

⁷ The legend on Figure 10 indicates when different services first embedded e.g. ‘I’ equates to the first upload of the video to Facebook, while ‘H’ equates to the video’s first viewing on a mobile phone

changes to blogs, podcasts and other website applications. RSS uses a type of software called aggregators or feed collectors to monitor websites at regular intervals.

2.5.7 Geographical Information Systems and Mashups

Geographical Information Systems (GIS) described as the “intersection of geospatial awareness and Web 2.0” (Butler, 2006) provides an attractive foundation to build geographic applications which are important tools for the visualisation of socio-political information (Kyem & Saku, 2009). Many projects that involve GIS have been initiated by grassroots groups and community-based organisations (Sieber, 2006). This ‘geoweb’ is significant in its ability to engage the public through the geo-location of stories and points of interests on digital maps which Rigby (2008) calls the new face of advocacy.

One application of digital maps has been the concept of mashups (sometimes called data mashups) which aggregate knowledge from different disjointed information sources, for example databases, legacy systems, XML, dynamic web pages and RSS feeds (Beemer *et al.*, 2009; Murugesan, 2010). Weber & Rech (2010) distinguish between the following different mashup types: content mashups which mix different data streams; software mashups which use multiple services or reusable functionality; static mashups which are programmed by developers and dynamic mashups which are developed using a mashup development tool and can be changed by the user. Content used in a mashup may carry certain copyright restrictions, but software services licensed through the open-source Creative Commons license allows free distribution and is a perfect fit for mashups.

The organisation Ushahidi (which means ‘testimony’ in Swahili) was formed in Kenya in response to the violence that erupted after the country’s general election in 2008 (Ushahidi, 2011). Using open-source tools Ushahidi developed a platform that mapped the exact locations of political violence, based on reports received from the public via either the Web or through their mobile phones. Ushahidi consists of a Web server and other software that lets anyone send in information that is then displayed on a map. Since the platform was first used in Kenya, it has been used for everything from spreading information during the Haitian earthquake in January 2010 to dealing with snow removal in New York City. A version of the Ushahidi platform was deployed within two hours after Japan was devastated by an earthquake and tsunami in March 2011 (Naone, 2011). The site dedicated to Japan (See Figure 11) was used to determine the precise locations of people trapped in the rubble, areas that were still too dangerous to venture into, and also the locations of food, clean water and medication (Sinsai, 2012).

Roush (2006, p. 30) argues that the Web is often an abstract experience of being a place with sites that ‘we go to.’ GIS’s change this by enhancing the Web experience with a sense of real

space. It also enhances physical locations on the Web with information that can intensify the Web experience. Jones (2007) supports the concept of deeper knowledge and contends that geographical maps help answer the journalist-inspired questions of who, what, when, where and why, which in turn frequently assists users to move from an initial quest for information towards a greater understanding thus exposing deeper knowledge and insight.

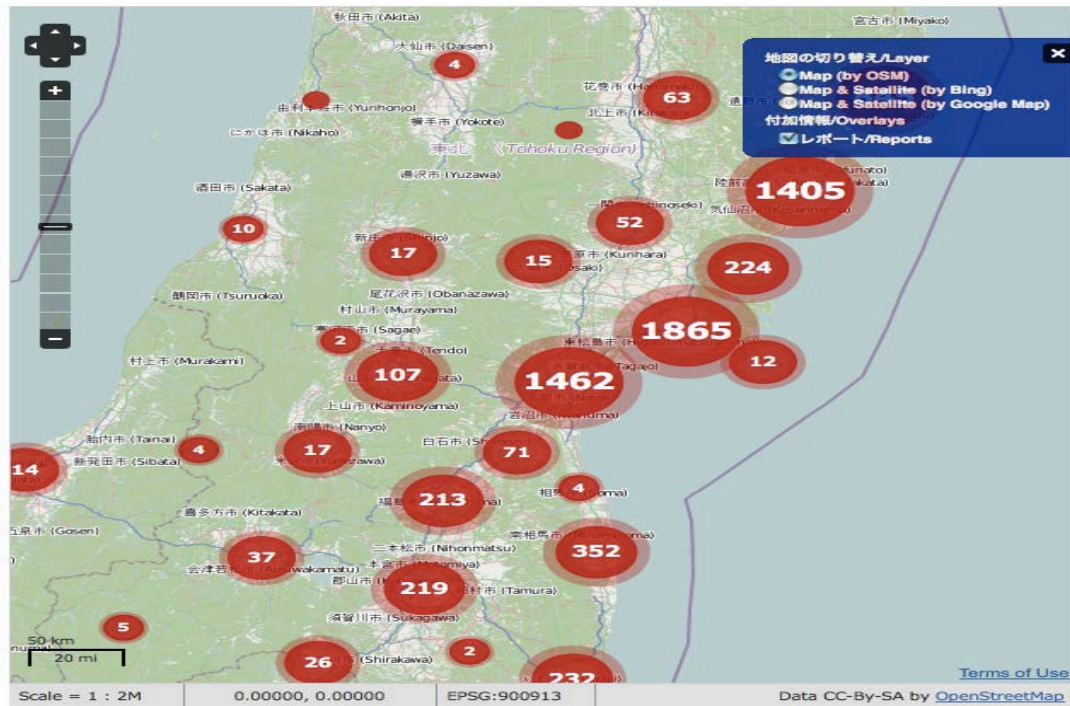


Figure 11: Sinsai Website (Sinsai, 2012)

2.5.8 A Summary of Social Media Services

It is apparent that social media services have made a fundamental impact on the lives of people, corporations, governments, and social movements. Time Magazine - which named Facebook founder Marc Zuckerberg as Person of the Year in 2010 – contends that Facebook has managed to mimic the Internet’s original infrastructure while at the same time infusing it with a more practical idealistic feel, which makes cyberspace seems more like the real world (Time, 2010, p. 46). Cannata (2009) states that the collaborative and socialising tools of Web 2.0 serve to connect people and enhance their lives in many different ways, at a time that suits them. Never before has it been possible for anyone to reach an audience of millions by means that are essentially free. Our debates on the role of the media and the very theories of mass media are framed by the adoption of these emerging technologies and the long-term effects of this connectedness will be as unpredictable as they are significant.

Even the ubiquitous email is under threat from social media with an estimated decrease of fifty-nine percent in the use of Internet-based email services by twelve to seventeen-year-olds, who

favour using social media for staying in touch (ComScore, 2011). But while Naughton (2011) attempts to downplay this statistic by arguing that email is ubiquitous in the work environment and most young people have yet to start work, Atos Origin, Europe’s largest IT company, intends to scrap internal emails by 2013 with its Chief Executive Officer quoted as saying that the volume of email is unsustainable (Palmer, 2011).

While the statistics and the numbers relating to social media services are impressive there is also scepticism of the role these services in certain situations. The next section discusses cellular phones, both as an innovation in its own right but also as a platform for the delivery of social media services.

2.5.9 Mobile Telephony

The technologies of cellular phones have advanced to the point that mobile phones have become woven into the fabric of society (Pillay & Maharaj, 2010). Columbia University’s Earth Institute describes mobile phones as “the single most transformative tool for development” (The Economist, 2009). While actual numbers are hard to estimate the International Telecommunications Union (2012) estimates that approximately six billion people have some form of access to cellular services with the number of people with access increasing across all regions in the world (See Figure 12).

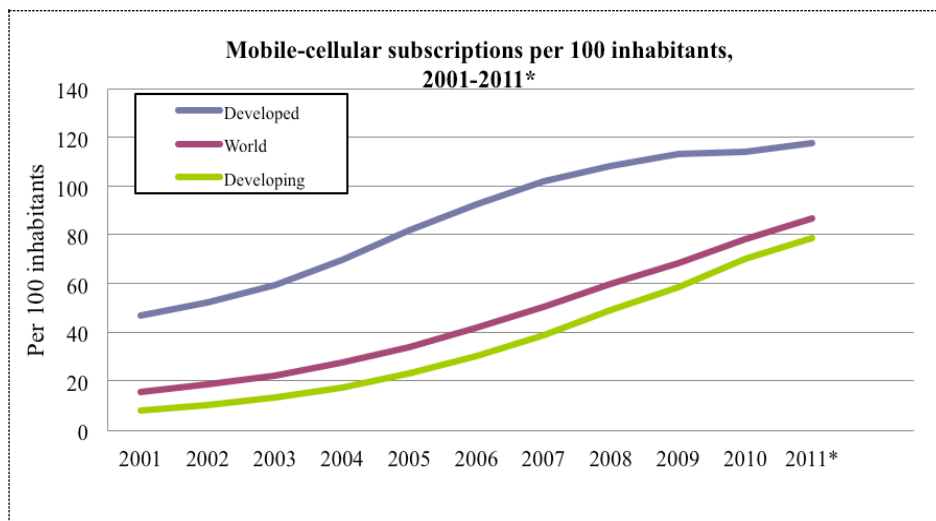


Figure 12: Global Mobile Cellular Subscriptions (International Telecommunications Union, 2012)

The first generation (1G) of wireless mobile network was analogue and was released early in the 1980s. The second-generation (2G) General Packet Radio Service (GPRS), the Enhanced Data for GSM Evolution (EDGE), and the Global Standard for Mobile (GSM) networks were released soon after in the late 1980s. GSM pioneered the ubiquitous Short Message System (or SMS). Third generation (3G) wireless mobile networks emerged in the late 1990s and provided

better transmission speeds and voice quality, and additional services like global roaming and data always-on. Fourth generation (4G) systems provide high-speed wireless networks, while the generation beyond are conceptual frameworks with extremely high transmission speeds with no access limitations.

2.5.9.1 Mobile Phone and Social Media

In addition to being a useful tool in itself, mobile phones provide an ecosystem for the deployment of social media services, and together with the advent of web services⁸ will offer the very real potential to communicate independently of space and time (Wu & Unhelkar, 2010). According to the European Network and Information Security Agency (ENISA, 2010) approximately sixty-five million people accessed Facebook via their mobile phones in 2009, which has risen to more than three hundred and fifty million (Facebook, 2011). Mobile users of Facebook are almost fifty percent more active than traditional non-mobile users (ENISA, 2010).

The networking company Juniper identifies a growing trend to assimilate the Web 2.0 experience, with location specific information on the mobile platform in what it terms a 'geosocial' networking phenomenon, which the company believes will, fuelled by a continuing increase in smartphone adoption, increase the number of people who access social media on a mobile device up from six hundred and fifty million in 2011 to an estimated 1.3 billion by 2016 (Social IP, 2011). Geosocial networking is fuelled by people's need to know the location of available services and activities in an area, and also the desire to find out where and what their friends are doing. Because geosocial services are based on the exact current location of users, it makes them particularly suited to the mobile platform. Additionally many smartphones now include Global Positioning System (GPS) applications which give an 'always on, always connected' experience. One company that exploits location-based social networking is Foursquare, which employs GPS hardware and associated applications in mobile phones to allow users to tag their current locations either through a website, text message or a device-specific application. The company claims to have had more than three hundred and eight million 'check-ins' (Foursquare, 2012).

The mobile phone has become an indispensable tool during natural disasters and emergency situations. In the aftermath of the Haitian earthquake, SMSs (or text messaging) was widely used by emergency aid groups to firstly broadcast the locations where displaced people could find food and shelter, and secondly to provide emergency aid to people trapped by the earthquake. Even though Haiti has a mobile penetration rate of only thirty-five percent, the sharing of phones increased access by three to four times (Bulkley, 2010).

⁸ Web services is the ability for software services to be wrapped with commonly understood standardised interfaces

2.5.9.2 Access to Broadband

Many emerging Internet-based services and technologies are dependent on broadband⁹ infrastructure, with many applications unable to run effectively without sufficient bandwidth. While the Internet has already generated major economic and social benefits, and will characterise the decade of the 2010s, most of its global impact is still ahead and as broadband networks become widespread, will profoundly change economic and social dynamics across the world (Rueda-Sabater & Garrity, 2011). Improvements in the speed and quality of broadband networks combined with Web 2.0 technologies and applications will generate more economic and social benefits. The Internet and the applications riding on high-speed IP networks provide a unique and cost-effective way for countries to become more competitive and to circumvent physical and geographic constraints.

Developing countries have been slow to embrace either terrestrial or wireless broadband. Broadband networks have had a less than significant impact in increasing access to Internet services in developing countries, with many developing countries not able to exploit the possibilities available by leapfrogging directly to a 3G network (UNCTAD, 2010). Broadband infrastructure capacity is being dramatically increased especially through the laying of underwater submarine cables.

2.5.10 The ‘Sociability’ of Web 2.0 and Social Media

The concept of ‘sociability’ on the Web or even a sociable Web is more than just about the numbers and statistics regarding social media, impressive as they may be. The fact that one seventh of the world’s population are on Facebook or that enormous numbers of tweets are sent in day does not begin to adequately express the concept of sociability in cyberspace. An understanding of whether (and how) Web 2.0 is different from previous versions is the main reason for seeking an understanding of what is social about software and sociality on the Web.

Beer & Burrows (2007) argue that even though the the concept of Web 2.0 has already been “contaminated by rhetorical strategies of (the) web designer, the sales patter of commercial futurists, and the new cultures discourse of the popular media,” Web 2.0 is still “complex, ambivalent, dynamic, laden with tensions and subversions” and of increasing sociological

⁹ Broadband access is usually described by its speed or bandwidth and generally refers to always-on access to data (including the internet) at a speed or bandwidth greater than dial-up modems is measured as the amount of data (in bits) that can be transferred per second either to the user (download) or from the user (upload). The average download speed of broadband connections today is around 3Mbps. Broadband access technologies include: (1) the copper telephone network, (2) cable networks which uses a mixture of optical fibre and coaxial cables, (3) optical fibre which is considered the most future-proof option for broadband access, (4) wireless which allows broadband access without the need for a cable into the home and (5) mobile which is becoming increasingly popular.

significance. While a detailed discussion of the sociological theories that underpin the relationship between technology and society is out of scope of this thesis, this section will offer a brief overview and contextualise them within the objectives of the research.

While there is no common understanding of social software, the concept seems to center around collaborative and participatory online communication, and community-formation, but with none of these constructs clearing up what is novel and social about it. Conceptual understandings of social in relation to social software include the following:

- (1) Durkheim (1982) contends that all software must be considered social because: software is produced by people in a process that includes social relationships, software embodies societal knowledge, and because software is always used in social systems. Dourish (2001) adds that all digital systems are social in that they are objects of human intentions, goals, interests and understandings.
- (2) Sociologist Max Weber's constructs of social actions and social relations state that for any behaviour to be considered a social relation there needs to be communication i.e. there needs to be meaningful interaction between people (Fuchs, 2008). Based upon this understanding then Web 2.0 is a social system, as it is premised on applications that promotes communication between people. Communication on the Web is more than just simple activities such as using a word processor or reading online text which is what predominated on the Web previously (Fuchs, 2010a).
- (3) Another understanding of what is social is based on the concepts of community and cooperation as proposed by Ferdinand Tönnies and Karl Marx (referenced from Fuchs, 2008) which states that the concept of social is about people collaborating to produce a better quality society. This understanding of social when applied to Web 2.0 implies technologies that promote online virtual communities, like Facebook. Saveri, Rheingold, & Vian (2005, p. 22) contend that software can be considered as social if it enables the quick formation of "group-forming networks."

Other definitions of sociality include the concepts of strong and weak ties. Strong ties involve frequent contacts and strong emotions between people. Weak ties involve casual, superficial relationships, and an inability to create any form of community, they are nevertheless important because of their ability to circulate new information (Memmi, 2010).

In his reductionist description of the architecture of the Internet as an hourglass (discussed in section 2.3), Zittrain (2009) argues that the uppermost application layer can also be termed the social layer which in which people create new behaviours and relationships; all enabled by the lower technology layers.

The discussion above highlights the fact that there is no clear unified understanding of what constitutes social software. Using knowledge as a process of cognition, communication and cooperation, Fuchs (2010b) suggests, that because the Web can be described as a socio-technological system, the social processes of cognition, communication and cooperation manifest sociality on the Web. He further suggests the following taxonomy to describe these processes: Web 1.0 as a tool for cognition, Web 2.0 as a medium for human communication, and Web 3.0 as networked digital technologies that support human cooperation.

The next sections will explore the link between Web 2.0 technologies and advocacy more fully. It identifies online campaigns and looks at the communities that form online. It completes the link between the concepts already established.

2.6 THE NETWORKED SOCIETY

This section reflects on the theoretical foundations of the networked society and discusses the creation, development and sustainability of online communities. The concept of the public sphere, first explored in section 2.2, is expanded to describe the networked or technology-based public sphere.

2.6.1 A Knowledge-based Society and Economy

Throughout history knowledge has always been at the centre of economic growth. It is innovation and the ability to create new knowledge, which can be embodied in products, processes and organisations that fuels development (David & Foray, 2003). Knowledge has been defined as “the sum of what is known” (The Concise Oxford Dictionary, 2010) while the creation of knowledge itself is described as the process of adding value to previous knowledge through innovation and invention (Al-Hawamdeh, 2002; Narayanan, 2001). Schumpeter’s reference to “new combinations of knowledge” (1939, p. 57) as the essence of innovation and entrepreneurship is one of the earliest acknowledgements of the importance of knowledge in the economy.

The first industrial revolution was heavily reliant on information, and on the application and development of knowledge while innovation, research and development characterised the second industrial revolution (Castells, 2000). The current phase of human evolution is witnessing an increasing reliance on knowledge with the world entering what has been termed the knowledge-based society / economy. Castells (2000; 2007) argues that this new informational, global, and networked economy is (a) informational because the ability for organisations and countries to effectively compete is fundamentally dependent on their capacity to create, maintain, process, and apply information, (b) global because the production, consumption and circulation of goods and services are a global effort, and (c) networked

because production and competition occurs in a “global network of interaction between business networks.”

The United Nations Conference on Trade and Development (UNCTAD, 2007) argues that it is “now well established that the capacity to generate, assimilate, disseminate and effectively use knowledge to enhance economic development is crucial for sustained growth and development, since knowledge forms the basis of technological innovations.” The disparity in productivity and growth of countries has been attributed to a country’s ability to create new knowledge and ideas (David & Foray, 2003). Four major trends characterise the knowledge economy: (1) an immense increase in the creation of knowledge, (2) knowledge becoming important economically, (3) the increasing openness of borders which creates opportunities for obtaining and distributing knowledge on a global stage, and (4) the increasing privatisations and commercialisation of knowledge (UNCTAD, 2007).

The knowledge economy is typified by acceleration in the rate at which knowledge is created, collected and dispersed, which in turn is fuelled by the speed and rate of technological changes taking place (Powell & Snellman, 2004). Castells (2000, p. 100) proposes the concept of ‘informationalism,’ which is “the shift towards a technological paradigm based on information technologies,” as the foundation of this new knowledge-based economic era. At the heart of informationalism is the revolutionary change in information technologies and its appropriation by all sectors of society and importantly the extent to which these technologies form the basis of a global economy (Castells, 2000; Bell, 2007). These technologies, which include digitisation, the Internet and the Internet Protocol, advances in cellular technologies and the more recently, the emergence of Web 2.0, first emerged in the 1950s. Castells (2000) central theme is the effect of informationalism (a mode of development) on capitalism (a mode of production), which van Dijk (2010) considers to be a technological-determinist view, albeit a moderate one.

2.6.2 Technology-based Networks

While people may view the world in terms of groups, Wellman (2001) argues that a sense of community is found in networks and not in groups with networks providing a platform for collaboration and community building.

Networks are not new and there have been, presumably, social networks since the dawn of society, but it is technology-based networks – which first found their way into computing via the original development of the ARPANET – that have fundamentally altered the way society functions. The value in a network is not in the nodes but in the edges, that is, value does not reside in individuals as much as in the connections between them. McCarthy, Miller, & Skidmore (2004, p. 11) state the following with regards to networks:

“Networks are the language of our times. Think about Al-Qaeda. The internet, eBay, Kazaa. The mobile phone, SMS. Think about iron triangles and old school ties, No Logo and DeanforAmerica. Think VISA and Amex, the teetering electricity grid, the creaking rail network. LHR to LAX. Think about six degrees of separation. Think small worlds, word of mouth. Think about your networks. Your friends, your colleagues, your social circle. How new networks take shape through introductions at parties, over coffee breaks, via email. How your connections have helped you, supported you and hindered you.”

While conventionally networks can be thought of as merely as systems for conveying messages they are not transparent. One of Marshall McLuhan’s great contributions to the media age was the phrase ‘the medium is the message’ by which he meant that networks are not transparent (McLuhan, 2006). Television for example is not a window to the world, it does not simply show its audiences pictures of events happening elsewhere, but rather it has a role in determining what the audience sees and how they make sense of it (Woolley, 1992).

2.6.3 The Networked Public Sphere

Advances in interactive networked technologies has not only created new channels for distributing information but has also transformed the way people and organisations communicate, which has resulted in new forms of social involvement and relationships. A functioning public sphere, which entails a collection of communication spaces that promotes debate and the circulation of ideas, has always had a relationship and dependence on the mass media included the mass, and more recently, newer emerging technologies are conspicuous (Dahlgren, 2005). The effect of this has been the transformation of the public sphere into technology-enabled spaces, where the discourse has no geographic boundaries or any constraints of time and political interests (Mason & Hacker, 2003).

The World Wide Web is the platform used for communication in the networked public sphere, with blogs in particular extending the characteristics of Web sites into a media for the public sphere thereby creating a ‘writable Web’ (Benkler, 2006). boyd (2011) describes the concept of networked publics as public spaces restructured by and through networked technologies, within which a virtual collection of people, technology and practice interact. She further identifies three dynamics that play a central role in shaping networked publics: (1) participants in a debate do not all have to be present at the same time, and neither do all participants have to be online when a person contributes to the debate or posts a comment, (2) traditional spatial, social and temporal boundaries do not exist in cyberspace, which implies that online narratives do not maintain traditional social contexts, which in turn (3) distorts the line between what is public and what should remain private, i.e. the distinction between public and private are difficult concepts to maintain without any control over context.

Not everybody is positive about the networked public sphere with Poster (1995) as far back as 1995, arguing that Habemas' (1964) definition of the public sphere as an "homogenous space of embodied subjects in symmetrical relations," is not sustainable in cyberspace, i.e. if the discourse exists as "pixels on screens" then the question of talking and of meeting face-to-face is confused and complicated. Dahlgren's (2005) contention focuses on the fragmentation that occurs with the public sphere veering towards disparate islands of political discourse which may help foster intolerance.

2.6.4 Civil Society: Networked Adopters of Technology

Van de Donk, Loader, Nixon, & Rucht (2004) argue that the basic structure of civil society is that of a network of organisations and people, which maintain a sense of collective identity. Networked organisations carry out various functions that make them effective agents of change. They filter and amplify knowledge, facilitate learning, convene different audiences and develop communities who ensure that policy is implemented. Networks provide a space where the political discourse can occur and in which the actors negotiate a common understanding of what constitutes appropriate (Mann, 2008). Civil society in particular has been proficient at exploiting the network organisational structure to enable more flexible and responsive behaviour (Arquilla & Ronfeldt, 1998; Aaker & Smith, 2010).

Communication, both internal and external, is core to the effectiveness of civil society, and it is this centrality of communications that promotes the adoption of technology by CSOs. As Internet and mobile telephone usage increases so does the ability of CSOs to develop their network structures and strengthen their capacity to connect with organisations around the world. It suggests that there is a virtuous cycle between the network society and civil society. This is particularly important for those organisations that are situated geographically outside of the centres of power (Anheier *et al.*, 2001).

2.6.5 Virtual Communities

Many complex natural and social systems can be described as exhibiting a network-based structure. Real-world networks contain groups of interrelated nodes, which represent groups of communities, which may overlap or even be nested within other networks (Palla, Derenyi & Farkas, 2005). Certain parts of a network have nodes that are more closely related to each other than nodes in other parts of the network, which in turn is related to the distinction between community and society. Communities are those parts of a network where the nodes are more highly clustered. Communities are generally small stable groupings with members exhibiting strong personal links and intense direct person-to-person relationships; these relations in turn are stable, demand emotional involvement and foster a strong sense of group identity (Memmi,

2010). Wellman (2001) similarly defines communities as networks of interactive relationships that provide sociability, support, information, a sense of belonging and social identity.

Society links are less intense, less personal, and more functional than those of communities. Because it is more difficult to know a large number of people personally, in large modern groups roles replace relationships which implies that the functioning of the group must rather be guided by rules, guidelines, and regulations which in turn weakens the identity of the group (Memmi, 2010).

While there has been a clear evolution from community to society links, social groups often fall in between these two extremes (Brint, 2001) and the terms community and society will be used synonymously. Virtual communities (also called computer-mediated social groups) are novel social groupings that emerged with the advent of the Internet, and they have been made easier to set up and maintain because of social media (Memmi, 2010). As Rheingold (2002) points out advances in information technology and mobile telephony provide the infrastructure and the platforms for the creation of new knowledgeable communities that exist autonomously and united around issues that span local interests all the way through to global issues. Memmi (2010) identifies the following as the most prominent features of typical virtual communities:

- Group membership is frequently temporary and participation is often occasional with participants often times being anonymous
- While the group structure is unclear, flexible with little group awareness, they can be quite large, with both active and passive participants
- Contributions are often addressed to no-one in particular with the discussion style being mostly unemotional, and while personal relationships are rare, interactions revolve around a common object, goal or task

Parks (2011) describes a process that members of communities that exist on social networking sites must traverse in which they (a) gain the ability to engage in collective action, (b) develop and share their own socially regulated rituals, (c) develop patterns of interactions among members, (d) develop a sense of identity, belonging and attachment, and (e) finally reach self-awareness of being a community.

Memmi (2010) argues that social networking sites (which are typical illustrations of Web 2.0 services) are used mostly to maintain pre-existing ties, whether strong (close friends) or weak (acquaintances). The group feature on Facebook is an example of a virtual community where any Facebook user has the ability to form a group, with the only *proviso* being that the groups do not attack other people or other groups (Kushin & Kitchener, 2009; Facebook, 2012).

The questions arise as to the nature of these communities: Are they simply traditional social groups in an electronic guise or are they a totally new phenomenon? Are Web communities different from older virtual groups? What is their structure and are they cohesively densely knit groups or more loosely linked? Are they stable or do they evolve rapidly with time: what are the goals, needs and representations of participants in these communities; and can common goals be identified?

The advent of emerging interactive technologies that transcend boundaries, the ability to create virtual communities of interest, all within the concept of a globalised world has been described by sociologist Appadurai (2011) as global dimensions or 'scapes' that flow across cultural boundaries: ethnoscaping refers to all the people who make up the constantly changing world in which people exist; technoscapes are the global developed technologies that rapidly permeate borders (witness the global diffusion of social networking services); finascapes encompass global financial markets, currency speculation and transfers of capital; mediascapes encapsulates the production and distribution capabilities that disseminates information and the wide range of images generated by these capabilities; and ideoscapes being the ideologies and counter-ideologies of governments and movements respectively, around which nation-states organise their socio-political discourses.

2.7 CONTENTIOUS POLITICS ON THE NET

"Never be afraid to raise your voice for honesty and truth and compassion against injustice and lying and greed. If people all over the world...would do this, it would change the earth."

William Faulkner (GoodReads, 2011)

Van de Donk *et al.*, (2004) point out that civil society communications have always been accompanied by a variety of media including brochures, leaflets and newsletters with the intention of gaining access to greater numbers of people within the organisation and in the public domain. This section describes contentious politics on the Net and computer-mediated advocacy and describes important campaigns pre-Web 2.0 and also highlights important Web 2.0 led advocacy campaigns.

2.7.1 Technology-based Advocacy

The collective actions of civil society are as a result of communication between civil society actors to produce alternative discourses and oppositional debates in the public sphere (Fuchs, 2008). Internet-based technologies provide a platform for communication between different types of organisations thereby facilitating a diversity of views necessary to get beyond the already converted (Tandon, 2000). The attractiveness of Internet technologies lies in its distributed, decentralised, and relatively cheaply and easily deployable architecture, which

matches the organisational and political logic of global civil society networks (Deibert & Rohozinski, 2008).

Towards the end of the 1980's civil society organisations began adopting a computer-mediated communications strategy, with the Internet in particular being used to disseminate information. Initially these early networks were largely 'basement operations' supported by individuals who were willing to donate their time and sometimes equipment; but soon thereafter these networks became formally entrenched (Deibert & Rohozinski, 2008). Internet-enabled activism is situated in the broader context of the revival of participatory politics that took place in the 1960s and 1970s (Chadwick, 2009).

The Canadian Security Intelligence Service (2000) states:

“The Internet will continue to play a large role in the success or failure of anti-globalization protests and demonstrations. Groups will use the Internet to identify and publicize targets, solicit and encourage support, organize and communicate information and instructions, recruit, raise funds, and as a means of promoting their various and collective aims.”

According to Nugroho & Tampubolon (2008) the reinvention of global civil society is in large part due to the advent of the Internet and other advances in information technology, which has led to new ways of connecting with the public. In particular, the Internet facilitates the networking and mobilising functions of civil society (Selian, 2002).

It has long been recognised that the Internet and digital communication networks have the ability to circumvent barriers that may exist to transnational collective action; furthermore they expand the mobilisation capacity of movements across cultural and national levels and also ensure that the general public is easily able to participate (Hara & Shachaf, 2008). The Internet is also an effective platform for civil society and opposition movements to challenge repressive regimes and powerful corporates who display unethical behaviour.

The Internet has changed the actual interactions that occur within networks, by allowing geographically dispersed individuals and groups to interact meaningfully (Montanari & Saberi, 2010). The structure of the Internet gives CSOs the opportunity both for communication within an organisation, and also the ability to craft a more nuanced message to the public.

Internet-based advocacy has meant that ordinary people, and not only professional activists, can become involved in socio-political issues of the day. A United Nations Report (United Nations, 2011) into the impact of the Internet states:

“... the Internet is one of the most powerful instruments of the 21st century for increasing transparency in the conduct of the powerful, access to information, and for facilitating active citizen participation in building democratic societies.”

An Internet presence is also an expression of modernity with organisations wanting to project an image that they are modern in outlook and in touch with technology so much so that a modern expression of activism associated with the Internet is sought.

The distinction between advocacy and what has been termed online direct action is often blurred. Recalling from section 2.2.3, advocacy is concerned with a change in policy and is for the most part a longer-term engagement. In contrast online direct action uses cyberspace as a place of contestation in a more direct way and is also known as virtual activism, net protest, hacktivism and cyberjamming and uses tactics such as cyberpetitions, virtual protests, virtual sit-ins, virtual blockades, gripe sites, email bombs, web hacks and computer viruses (Rolfe, 2005). The next section discusses some seminal examples of Internet-based advocacy

2.7.2 Internet-based Advocacy

The 1992 United Nations Earth Summit in Rio de Janeiro is one of the earliest illustrations of the Internet's ability to improve civil society's organisational and networking capacities (Deibert & Rohozinski, 2008). The Earth Summit involved the extensive participation of global civil society and the UN established a network to disseminate official summit information by posting documents to a set of shared computers that gave thousands of civil society activist's access to information from the summit at very little cost. The fact that geographically dispersed civil society groups were able to participate, enabled the formulation of 'alternative treaties' which emerged from the NGO summit, called 'the Global Forum' which was held at the same time as the Earth Summit. Hinrichsen (1992) contends that the Global Forum was arguably more important than the main conference as activists from around the world, voiced their demands, debated the issues being negotiated and exchanged information, all of which served to deepen and strengthen their networks. Although civil society has participated in UN conferences for more than twenty years, the scale, variety, and sophistication of civil society involvement at the Earth Summit was unprecedented (Haas, 1992).

Other global justice activists trace their genealogy back to 1994 and the campaigns against the Mexican government. The Zapatista Army of National Liberation (Zapatistas) is based in Chiapas, southern Mexico. At the beginning of the 1990s the organisation occupied several Mexican cities as part of a land reform and human rights campaign for the indigenous Chiapas community. Although they were militarily inferior to the government, their creative use of the Internet served to popularise their struggle both nationally and internationally. Whilst they were

defeated militarily and pushed into the jungle, their effective use of the media soon made their struggle a cause *célèbre* both nationally and internationally and the Zapatistas are often credited as being the pioneers of using the Internet for activism. This small guerrilla movement created the first ever ‘netwar’ to popularise what was eventually a largely symbolic struggle (Morello, 2007; Mann, 2008).

In what came to be dubbed the ‘Battle for Seattle’ the 1999 World Trade Organisation’s (WTO) ministerial meeting in Seattle was brought to a standstill by organised protests (Van Aelst & Walgrave, 2002). Present in Seattle were numerous civil society organisations that, even though they had differing reasons and agendas for opposing the WTO talks, were able to use the Internet to coordinate their protests in a unified manner. Seattle, while not so much a cyber-battle, provides an excellent example of how the Internet can bring together groups with seemingly different agendas but ultimately having the same aim.

A simple search on Google for the term ‘human rights’ brings up 1,460,000,000 results. A search on ‘human right campaigns’ produces 401,000,000 results. It suggests that the Internet has benefitted human rights campaigners tremendously, by firstly giving them easy access to official information, and secondly by the ability to bypass traditional media companies that often act as gatekeepers who control access to the publishing of certain information. The Internet also allows activists to communicate easily amongst themselves and to share information with supporters.

As far back as 1992 Waterman used the phrase ‘Fifth International’ to describe emerging computer-mediated activism that was qualitatively different from anything that had gone before. Fast-forward to 2010 and Waterman (2010) succinctly states:

“Information and communication technology (ICT) is not simply a tool (a hammer, a sickle, a gun, a vaccine), nor simply an existing community (The Hague, the Andes, trade unionists, women, Marxists). It is also utopia – a non-existing but desirable place or to be constructed by those interested and capable. The Web is where capitalism increasingly lives and governs, and where increasing radical- democratic struggle occurs. And in relationship to that old world of institutions – of industrial, financial, military, national, religious, educational, inter-state agencies – our own region of cyberspace operates less to capture hegemonic heights than to circumvent, subvert, dissolve, decentralize, democratize, to connect, to advance a never-ending dialogue and dialectic of movements and civilizations.”

The next section identifies and details advocacy initiatives and campaigns that have been influenced by and propagated using social media. This section identifies both individual

campaigns and also aggregates the details of multiple campaigns using a specific social media service e.g. Twitter.

2.7.3 Web 2.0-based Advocacy

In January 2012 various sites on the Internet blacked out their services in protest against two bills that were up for adoption by the US government. The bills, SOPA (Stop Online Piracy Act) and PIPA (Protect IP Act), which were aimed ostensibly at curtailing online piracy, were deemed so vague that it would give copyright owners and the federal government expanded power to prevent Internet service providers, advertisers, search engines and payment processors from doing business with ‘offenders.’ Any complaining entity would be able to effectively shut down even the most popular ‘infringing site’ over minor or unintended copyright infringement, including any site that allows posting or uploading information like Facebook, YouTube, Wikipedia and Flickr (Reyes, 2012; Shirky, 2012). Internet sites led an unprecedented wave of protests against SOPA and PIPA with the Wikipedia page against the bills being accessed more than one hundred and sixty two million times during a twenty-four hour period (Wikipedia, 2012). A vote on the bill was eventually postponed until issues raised by the bill had been debated. As Fram (2012) writing in the Huffington Post states “Outspent but hardly outgunned, online and high-tech companies triggered an avalanche of Internet clicks to force Congress to shelve legislation that would curb online piracy. They outmanoeuvred the entertainment industry and other old guard business interests, leaving them bitter and befuddled.” Figure 13 illustrates the reaction to the bills as reported on an on-line news website.



Figure 13: Reaction to SOPA and PIPA (Poulter & Waugh, 2012)

Social media applications are used by ordinary people and the mainstream media alike, and have played a central role in breaking various news stories from the attack by American Special Forces on the hideout of Osama bin Laden to the tsunami and subsequent nuclear disaster in Fukushima. Both the United Nations conference on climate change in 2009 and the Davos

World Economic Forum meeting of 2010 were widely covered by social networks. Mobile phones have been used widely in environmental campaigns in the Philippines (Dongtotsang & Sagun, 2006) and social media has become a major tactical tool employed by civil society and non-profit organisations.

Many organisations and celebrities have embraced social media in their philanthropic activities. In 2009 Australian actor Hugh Jackman offered nonprofit organisations the opportunity to win a personal donation of AUS \$100,000 with the provision being that organisations could only use their Twitter accounts to put forward their case, which meant using only one hundred and forty text characters¹⁰ (Greenberg & MacAulay, 2009). In September 2007, YouTube announced the YouTube Nonprofit Program, which provided a dedicated channel that served as a hub for organisations' videos and also the chance for organisations to insert a Google Checkout donation button on their video (Bernholz, 2007; YouTube, 2011c). In 2009 several large civil society organisations including the World Wildlife Fund, The Humane Society, Livestrong and Oxfam America all initiated significant social media campaigns which prompted the website Mashable to describe that period as the 'Summer of Social Good' (Greenberg & MacAulay, 2009).

The inescapability of social media has resulted in a significant increase in Internet-driven campaigning. Environmental groups have become particularly adept at using social media such as blogs, video blogs, podcasts and wikis to advance their causes (Castells, 2009). Emerging technologies give CSOs the ability advance their own agenda's, and organisational websites, blogs and e-mail help in the mobilisation and coordination, not only of activists, but also of ordinary people who may have an interest in certain issues (Hara & Shachaf, 2008). In a Financial Times article Gapper (2009) argues that the balance of power between governments and citizens has fundamentally changed due largely to the ubiquity of social media with help CSOs to recruit, communicate, campaign and fundraise.

Social media facilitates political discussion and has become critical to American politics with ten percent of all Americans indicating that they use social network sites for some kind of political activity (Kushin & Kitchener, 2009; Roodhouse, 2009). Emerging technologies and particularly wireless communications provide civil society with a powerful autonomous political platform based on independent person-to-person and group-to-group channels of communication (Castells *et al.*, 2005).

¹⁰ Two U.S.-based charities split the proceeds of the donation: Operation of Hope, a California-based non-profit organisation (NPO) that provides facial reconstructive surgeries to children in war-torn countries; and Charity: Water, a New York-based development NPO that provides clean, potable water in developing countries.

2.7.3.1 Social Networking

In 2007 a campaign was developed by the Humane Society of America to protest the yearly Canadian seal hunt. The organisation started advocating on social networking site, MySpace, by using embedded media (videos, maps etc.), which attracted fourteen thousand unique visitors to the campaign. By the end of the campaign the website had attracted fifty percent more visitors and had signed up five hundred new people to its mailing list (Rigby, 2008).

The irony could not be wasted on anybody – the Internet’s largest and most successful social media site being targeted by social activists using the organisations own service. Greenpeace initiated the ‘Unfriend Coal’ campaign with the intention of getting Facebook to start using clean energy to power their data centers. After nearly twenty months of campaigning, in December 2011 agreement was reached, with Greenpeace and Facebook announcing a joint program that would see Facebook using clean energy, and also encourage other major companies to develop renewable energy options and programs that would enable Facebook users to save energy (Greenpeace, 2012b). This campaign forms part of the case study analysis and is discussed in more detail in chapter five, section 5.3.

2.7.3.2 Wiki’s

In 2007 Abbott Laboratories refused to make their HIV/AIDS drug, Kaletra, available in Thailand. Abbott was one of the leading pharmaceutical companies producing these kinds of drugs, and Kaletra was one of the few drugs that worked in hot climates. As a result of Abbott’s refusal the Student Global Aids Campaign (SGAC) set up a wiki displaying information about the company including which medicines it produced, an overview of Thai law, a timeline of the company’s actions, the demands from the company, and recommended activities for campaigners. In addition, the wiki also asked the public to put pressure on Abbott by posting stories, pictures and general information on the site. This was one element of a broad campaign to overturn Abbott’s decision not to sell the drug in Thailand – a campaign that was successfully won after five months (Rigby, 2008; Student Global Aids Campaign, 2011).

If Wikipedia is the Web’s most famous example of the use of the Wiki, then Wikileaks is surely the most notorious example. Created for the purpose of disseminating mostly classified information into the public domain, the site states “One of our most important activities is to publish original source material alongside our news stories so readers and historians alike can see evidence of the truth” (Wikileaks, 2012). It has become known for the release of confidential government documents including diplomatic communiqués and top-secret military documents. The release of the largest leak of classified US military documents has pitted the most dedicated hacker-activists who’s aim is to turn the Internet into a bastion of transparency and information freedom against the combined weight of different organs of the US state in an

attempt to clamp down on the Internet with censorship and encryption-banning laws (Kobeissi, 2010).

2.7.3.3 Blogging for Advocacy

In 2002 U.S. Senate Majority Leader Trent Lott's tacit approval of Senator Strom Thurmond's racial policies during Thurmond's 1948 presidential bid, by implicating stating that it may have been better for the United States had Thurmond been elected president, evoked the ire of bloggers who promptly broke the story. Major media organisations had missed the story and only reported the controversial comments after the blogs were posted. Bloggers also dug up addition evidence in the form of documents and recorded interviews, which created a major political crisis that ended with Lott eventually stepping down as majority leader (Rigby, 2008).

Civil society organisations are discovering that maintaining their own blogs strengthens community ties whilst all the time advancing issues that organisations wish to place in the public sphere. Amnesty International, which campaigns for human rights in over one hundred and fifty countries, has traditionally communicated with their approximately 2.2 million members by employing tried and tested media like newsletters and e-mail (Rigby, 2008). While effective in the past, the new paradigm of interactive communication has seen the organisation create and maintain its own blog with the aim of creating a two-way communications channel between the organisation and its supporters. The blog's intention is to attract casual readers and also to engage with supporters through their comments and in so doing create a dialogue. The blog also posts news on upcoming campaigns and provides information on how supporters can take action (Amnesty International, 2012). The website tckctck.org (2009), which was set up to coincide with the United Nations December 2009 Climate Change conference in Copenhagen, claimed to have mobilised more than four thousand seven hundred and ninety bloggers by 15th October 2009, reaching more than eleven million people in its campaign.

2.7.3.4 Case Studies on Text Messaging

Text messaging has become a vital communication tool and offers a real-time communications platform that is unmatched by any other services or technologies. Mobile messaging is an asynchronous¹¹ wireless communications service that incorporates the text-based short-messaging service (SMS) and the multi-media messaging service (MMS) with which audio and visual data can be transmitted between mobile devices. SMSs first emerged in 1992 and the service has become ubiquitous with approximately one billion SMSs being sent each month in 2011. Text messaging has afforded organisations a cost-effective tool for the recruitment and

¹¹ The term asynchronous is usually used to describe communications in which data can be transmitted intermittently rather than in a steady stream.

mobilisation of supporters, and also the ability to disseminate breaking news and announcements.

In the Philippines activists made wide use of mobile telephones to wage a campaign to overthrow then President Joseph Estrada. Thousands of people were sent messages “wear red, bring banners, come now” urging them to assemble at Manila’s People Power shrine (Rogers, Singhal, & Quinlan, 2009; Castells, 2007). The protest continued until eventually over seven hundred thousand people gathered forcing Estrada’s resignation. This campaign was fuelled by over forty-five million daily text messages being sent (compared to the normal 24.7 million) and resulted in Gloria Arroyo taking over leadership of the government (Castells *et al.*, 2005). Estrada is quoted as referring to his overthrow as a ‘*coup de text*’ (Rigby, 2008). The Estrada example supports Meier’s (2008) research, which suggests that mobile phones have the ability to be troublesome for repressive governments.

2.7.3.5 Case Studies on Twitter

Twitter, defined as a microblogging service, allows users to send and read messages up to a maximum length of one hundred and forty characters. These short messages, called ‘tweets,’ offer an immediacy of communication and the ability to transmit information in real-time. In what is considered to be the first Twitter debate, Preston (2011) reports that a number of Republican presidential candidates answered a wide range of questions via Twitter. The wide range of access options available to Twitter users makes it an extremely difficult service to disrupt short of denying access to large parts of the Internet. While the ability of every citizen to participate via Twitter may be one of its greatest strengths, this also makes it susceptible to malicious tweets and misinformation.

In 2008 Greek youths took to the streets in protest, ostensibly over the death of fifteen year old boy shot dead by a police officer, but which was in fact a protest against the deeper malaise of government corruption, economic frustration and unwelcome education reforms (The Boston Globe, 2008). Morozov (2008) describes the uprising as a “networked protest” and states that the Internet was a critical element of the protest with many protestors uploading photos and videos in real-time and creating “an illusion of remote participation” for the viewers of the uploaded content.

In Moldova it was again the youth who led protests and again it was social media tools that were complicit, with the protestors gathering the crowd by using text-messaging, Facebook and Twitter, which Barry (2009) terms generational tools. Social media services were used by groups on both sides of the protests; on the one hand for organising and mobilising civil unrest, and on the other for creating media content that attempted to influence the perceptions of the populace and in so doing, influence the outcome of conflict (Sigal, 2009).

The Uyghur are a Chinese ethnic group who live primarily in the Xinjiang Region in the China. In July 2009 the Uyghur people rioted in a protest that left approximately one hundred and forty people dead with the Twitter service being widely deployed during the unrest (Wines, 2009). The Uyghur protest is illustrative of the weakness inherent in the Twitter with its vulnerability to government censorship. While Twitter may have enabled the Uyghur's to post information about the protest (through reports and images) to the world, the Chinese government, which is possibly the regime that has deployed the most extensive Internet censoring campaigns, blocked Internet services and Twitter in particular, and removed non-government approved references to the violence from search engines (Heacock, 2009). The mobile networks as well as landline connections were also disrupted.

2.7.3.6 Social Media and the Environmental Movement

During the latter half of the 1980s there was a growth in use of technology by environmental groups. Initially the use was confined to email and newsgroups but around the mid 1990 the Web was adopted (Pickerill, 2006). In 1995 Friends of the Earth UK launched their Chemical Release Inventory on their website which allowed anyone with an Internet connection to find out which organisations are contaminating the local environment and what the contaminants are (Friends of the Earth, 1995). In what was almost surely a first, the website also generated electronic maps that identified the locations of polluting factories, all based on postcodes that users had entered (Pickerill, 2006; Friends of the Earth, 1995).

In an infamous British court case that ran for over two years, that came to be called The McLibel Trial, McDonalds sued two people for distributing libellous material. While the eventual judgement did not exonerate the two people on trial it was devastating for McDonald's (McSpotlight, 2011). The dedicated McSpotlight website was created specifically to support the defendants and posted the original libelous leaflet. The website was also one of the first civil society protest sites to provide a platform that enabled an online debate, and by 1998 contained over twenty thousand pages becoming a seminal example of the power of the Internet for campaigning, and a benchmark for many other CSOs (Pickerill, 2006).

In November 2004 the World Wildlife Fund South Africa (WWF), in collaboration with other partners, launched The Southern African Sustainable Seafood Initiative (SASSI), the intention of which was to provide information to wholesalers, restaurateurs and seafood lovers about the effects of over-fishing on the oceans of the world, which in many cases has led to the massive reduction in certain fish species, and also the collapse of many major commercially harvested fish stocks (The Southern African Sustainable Seafood Initiative, 2010). The system was eventually deployed onto a mobile platform, which gave a wider range of potential user's access

to more regularly updated data, and from late 2006 through to early 2008 the service received thirty thousand queries from over seven thousand individual users (Kincade and Verclas, 2008).

Climate Counts is an organisation whose stated ambition is to bring consumers and companies together in the fight against global climate change and to spur corporate climate responsibility and conscious consumption change by scoring the world's largest companies on their climate impact (ClimateCounts, 2006). The organisation has developed a scorecard that rates and compares different companies' environmental sustainability processes and makes this information available to consumers via a text message (Kincade and Verclas, 2008). A final example is that of the UK-based organisation, airTEXT that monitors air quality information in London and passes on this information, via voice or text message alerts, to users who sign up for the service. The service is particularly valuable for people who have breathing ailments and for whom high air pollution levels may be extremely detrimental.

2.7.4 Contentious Politics on the Net: Bringing It All Together

In 1989 large scale and prolonged pro-democracy demonstrations broke out in Mainland China, based largely in and around Tiananmen Square in the Chinese capital Beijing. The demonstrations lasted seven weeks and were eventually violently put down by the Chinese authorities. The entire protest became known as 'Tiananmen Square' or the 'Tiananmen Massacre.' There is not much evidence of the protests with very little media footage; the protests occurred prior to the widespread adoption of the Internet. One iconic photograph (Figure 14) and video (YouTube, 2005) that did appear was that of a lone protestor who emerged from the crowds and defied the tanks in the Square by standing in front of them.



Figure 14: The 'Tank Man' – Tiananmen Square (Google, 2011)

Every time the tank tried to move around him he blocked it until eventually he clamoured atop the lead tank. He was nicknamed the Tank Man, or the Unknown Rebel and while he was not

arrested on that day, has not come forward or been heard from again. Time magazine voted him amongst the top one hundred most influential people in the world (Iyer, 1998).

Fast-forward to Iran in 2009 when large-scale protests broke out in what was widely considered a flawed election process. The protests were accompanied by a widespread government clampdown on both the protesters and the media. Mainstream media found it increasingly difficult to get any news reports out of the capital, Teheran and eventually the only source of news became social media and in particular, Twitter. The following extract from a United Nations report shows the extent of the influence of social media in these protests (Coyle & Meier, 2009, p. 3):

“On 13 June 2009, thousands of Iranians poured into the streets to protest what they believed to be a flawed national election. Emerald green banners, the colour of opposition candidate Mir-Hossein Mousavi, lined roads clogged with people who held what became one of the most important tools for the grassroots movement: the mobile phone. With the Iranian regime restricting Internet access and banning journalists’ access to key demonstrations, communications via text messaging and social networks like Facebook and Twitter became a crucial tool for information sharing between the protesters and the outside world, and even a source for the news media. So critical was this source of information that the U.S. State Department asked Twitter to delay a scheduled network upgrade that would have shut down the site for some hours on June 15 and 16.”

In 2009 the cartoon¹² in Figure 15 appeared in the Atlanta Journal (2009) depicting a lone protestor blockading a row of tanks.



Figure 15: Cartoon – Twitter in the Iran Protests (Atlanta Journal-Constitution, 2009)

¹² Political cartoons have become widely exploited as a tool to influence public opinion (Duss, 2001) and have been described as an instrument of "democratic surveillance," (Foucault, 1980, p. 152-154). Cartoons represent the *zeitgeist* or the mood of the time.

It mimics the images of the tank man from Tiananmen Square with the difference being that the figure in the cartoon is holding a mobile phone and is sending a tweet. What is important about this example is the extent of assimilation of social media into mainstream media and the association of social media with the voice of protest.

The Internet provides a cheap, flexible, ubiquitous and distributed medium that has given opposition movements the ability to mount challenges on various fronts. This has manifested in a groundswell of citizen-led protests that has brought down long-established regimes and seemingly invincible political authority. Shirky (2010) argues that one way to look at social media is as a long-term tool that has the ability to strengthen civil society and to provide alternate discourses in the public sphere. The next section explores whether social media carries an implicitly positive social message.

2.7.5 Does Web 2.0 Carry an Implicit Social Message?

The issue of civility, which is about respecting peoples religious and political rights irrespective of race, colour or creed - is substantive to the idea of civil society (Nugroho, 2008). Civil society and civility are synonymous and the idea that civil society is a force for good is well established (Deakin 2001).

It seems almost seems implicit that Web 2.0 is used for good. Just as music has always been used as a form of protest – with President Barak Obama being called the first protest song president for using the words of a protest song by Sam Cooke in his inaugural speech (Lynskey, 2011) – it has been argued that just as rock and roll was considered counter-culture and revolutionary, social media carries the same implicit message (Shirky, 2010). Even the original Arpanet carried a seemingly liberal social message with some of the first postings by the original team containing anti-Vietnam war sentiments and calls for the impeachment of the then United States President, Richard Nixon, in the aftermath of the Watergate scandal (Hafner & Lyon, 2003).

Governor *et al.*, (2009) describe the current Web as a ‘Database of Intentions’ with users fashioning a new generation of openness, sharing and commuity that can be viewed as a counter-culture that defies established barriers and institutions in a fashion similar to what happened in the 1960s. The Web has become the most powerful, egalitarian, and knowledge-rich platform in human history and has become a force for good and the platform for the many socio-political protests and revolutions. Nowhere is this more evident than in the Middle East uprising, which has come to be known as the Arab Spring.

2.7.5.1 Arab Spring: The Protests in Egypt and Tunisia

A part of this section has been published in van Niekerk, Pillay, & Maharaj (2011). The ‘Arab Spring’ saw social uprisings and citizens-led protest in many countries in the Middle East. The protests started in Tunisia moved to Egypt and eventually impacted Libya, Morocco, Syria, Yemen and Bahrain. High levels of poverty and unemployment ignited the protests; the self-immolation of a Tunisian fruit seller, and a Wikileaks cable documenting the extravagant lifestyle of the Tunisian ruling family were the final catalyst that led to Tunisian youth taking to the street.

The Arab Spring is an excellent demonstration of the power of social media to mobilise and bring about social change with anti-government protests in both Tunisia and Egypt employing social media services extensively, to disseminate information and to coordinate the protests (Kessler, 2011). The demonstrators used blogs, as well as websites, videos and mobile phones, to spread news about the protests and to coordinate action (Bay, 2011; Kirkpatrick, 2011). In a region not well known for a liberal attitude towards women, the Arab Spring has also allowed for women to become more central players. Tawakkol Karman was recognised for her human rights work, using social media to push for progressive changes and the rights of women in Yemen, when she was honoured as a joint recipient of the 2011 Nobel Peace Prize. Karman used her blog, Women from Yemen, to give regular updates on the Yemeni protests (The Wadi, 2011). The governments of both countries tried unsuccessfully to sabotage Internet services, with Tunisian authorities hacking and deleting the social networking accounts of people involved in the protest (Madrigal, 2011), while authorities in Egypt attempted a wide-spread shut-down of the Internet and also tried to disrupt mobile services (Kessler, 2011; Kravets, 2011).

Arab nations, particularly Egypt, have always been at the forefront of adopting new technologies. Egypt has the highest Internet penetration rates in the Arab world (Abdulla, 2007) and Lynch (2007) points out that the most politically active bloggers in the Arab world are generally from Egypt. Etling *et al.*, (2010) contends that while the political discourse in traditional Egyptian public spheres may be highly regulated, it is very free and diverse in the blogosphere. The telecommunications infrastructure in Tunisia is highly developed and the country has one of the highest mobile penetration rates, supported by one of the lowest broadband prices in Africa. Ninety percent of its 10.2 million inhabitants own a mobile telephone and eight-four percent have access to the Internet at home (OpenNet Initiative, 2009).

The lack of an independent press can be countered by the use of emerging technologies, particularly the Internet and Web 2.0 (United Nations, 2011). It also benefits traditional media by giving them the ability to expand their audiences very cheaply.



Figure 16: Citizens ‘Bearing Witness’ (Davis, 2011)

The Internet provides a platform for the inexpensive and instantaneous flow of information and ideas across national boundaries helping to reveal previously hidden truths and in so doing progresses society as a whole.

2.7.5.2 The Other Side of Social Media Use

“Technology recognises no self-limiting principle - in terms, for instance, of size, speed, or violence.”

Schumacher (1974)

There are many unintended and even negative consequences of Internet adoption. While progressive civil society has adopted the Internet to advance globally acceptable norms, it has also been appropriated by a wide-range of repressive regimes, resistance movements, militant groups, criminal organisations, and religious and other extremists, which Deibert & Rohozinski (2008) term ‘dark nets.’ While much of the discourse about civil society assumes a ‘good civil society’ that acts on behalf of citizens against oppressive states and unethical companies, ‘bad civil society’ create their own debates in counter-public spheres (Chambers & Kopstein, 2001; Downey & Fenton, 2003). The *de facto* reaction of many repressive governments to opposition politics has been to increase censorship on the Internet by deploying increasingly sophisticated blocking and monitoring technologies in a concerted effort of using the Internet to identify activists.

The ousting of Indonesia’s totalitarian government and forced resignation of President Suharto was characterised by the creation of public spheres, particularly in Internet and cyber cafes, where the unfolding event were debated, and through which information was disseminated (Deibert & Rohozinski, 2008). In the vacuum (or ‘legitimation deficit’) that followed the fall of Suharto, the Troopers, a fundamentalist group sidelined under the previous regime, mirrored the

strategy of the opposition movement and used the Internet to create a counter-public sphere that advocated violence and threatened civil society; which was in complete contrast to the positive role of the Internet in the fight for a democratically elected government (Lim, 2002; Lunat, 2008; Deibert & Rohozinski, 2008).

In the war against Russia, Chechen rebels took to videotaping their attacks on the Russian military, which when posted on the Internet, created the impression that the Russian military was being defeated, the value of which became more important than the actual military attacks (Deibert & Rohozinski, 2008). Hizbullah, the Islamic resistance movement opposed to Israel's opposition of Palestine and Lebanon has established various websites, which they consider an important part of their strategic communications and information warfare strategy (Deibert & Rohozinski, 2008). In similar but slightly more refined fashion to the Chechen tactics, Hizbullah has produced videos that combine music with footage of skirmishes between Hizbullah and the Israeli army, and also of clashes between Palestinian citizens and Israeli soldiers. These videos were broadcast across its television station *al Manar*, and were also made available for download from the Web in what has been described as "powerful montages of incitement" (Jorisch, 2004). More recently Hizbullah has used its websites to stream audio and video content, provide documents, and has set up RSS services that has helped the group evolve and expand its political reach from what Ajemian (2008) believes was a purely Lebanese-based resistance organisation to an Arab nationalist movement with a regional agenda.

But this has not been restricted to government and anti-government forces, with Twitter and other social media feeds like Facebook, MySpace, and YouTube being increasingly adopted by several al-Qaeda groups. For example, the al-Qaeda group based in Yemen successfully exploited social media services to disseminate information, rhetoric and Islamic teachings. Social media has also aided in the efficient distribution of propaganda and has helped extremist groups to recruit and fund-raise (Collings & Rohozinski, 2008).

Mexican drug cartels, notorious for gratuitous acts of violence, have also begun using social media and specifically YouTube to show real scenes of torture and murder in an attempt to scare rival cartels and potential informers. An article in the Buenos Aires Herald (2011) describes the murder by these cartels of a blogger in Mexico who went by the name *NenaDLaredo* (or Laredo Girl). She had been using the Internet to denounce the drug lords and had been an active contributor to chatrooms where she posted information about crimes and urged fellow citizens to do the same. Her death was widely announced on social media sites.

2.7.5.3 Internet Freedom

Social media also holds the potential to be used as a tool for increased repression, with Gapper (2009) for one arguing that “every Twitter follower and Facebook user who signs up for updates about popular protests in Iran or China, or uploads videos, signals his or hers revolutionary sympathies.” While the ability to use pseudonyms on the Internet creates an environment for individuals to engage in public debate while retaining their anonymity, the Internet paradoxically also presents new tools and mechanisms for government and private companies to monitor Web activity and gather vast amounts of people’s personal information, their patterns of communication, and also about their activities on the Internet. Irrespective of medium of communication, people are always more willing to engage in controversial debates in the public sphere if anonymity is guaranteed, and violations of privacy serve only stifle the free flow of information and ideas. Traditional tools such as proxy servers, which have the ability to circumvent state censorship, can be easily shut down with impunity, but social services that are more embedded in society are harder to censor, if at all (Shirkey, 2010). The intention of censorship on the Internet (called blocking) is to prevent certain information from reaching specific audiences. Blocking can be achieved by preventing access to websites, IP addresses and domain name extensions. Websites can also be removed from the web servers that host these sites, and filtering technologies can ensure that websites that contain certain keywords or phrases can be excluded.

The United Nations (2011) lists several countries who continue to block access to social media services with China being identified as the country having deployed the most sophisticated and wide-ranging filtering technologies that, for example monitor and block access to websites which contain terms such as ‘democracy’ and ‘human rights’. As a counter measure to the global ‘Occupy Movement’ China’s largest microblogging service, Sina Weibo recently begun filtering for phrases that use the Chinese word for ‘occupy’ suggesting a wariness in the ruling party that similar protests do not start occurring in China (United Nations, 2011). Even with its well-established history of online censorship microblogging sites such as Sina Weibo have proven to be particularly problematic to the Chinese government who have expressed an intention to clamp down on ‘Internet rumours’ on microblogging sites (HarvardLaw, 2011). Figure 17 depicts the relationship between Internet penetration rates and the level of digital media freedom as assessed by the Freedom on the Net study (2011).

The resulting graph points to several patterns: a cluster of economically developed democratic states with high penetration rates and relatively high levels of internet freedom (green circle); a grouping of lower income democratic states, with relatively lower penetration rates but limited restrictions on other aspects of internet freedom (orange circle); a cluster of lower income

authoritarian states, with almost no internet access, as well as heavy restrictions on other aspects of internet freedom (purple circle); and a number of states with middling levels of internet penetration and a range of performance on internet freedom.

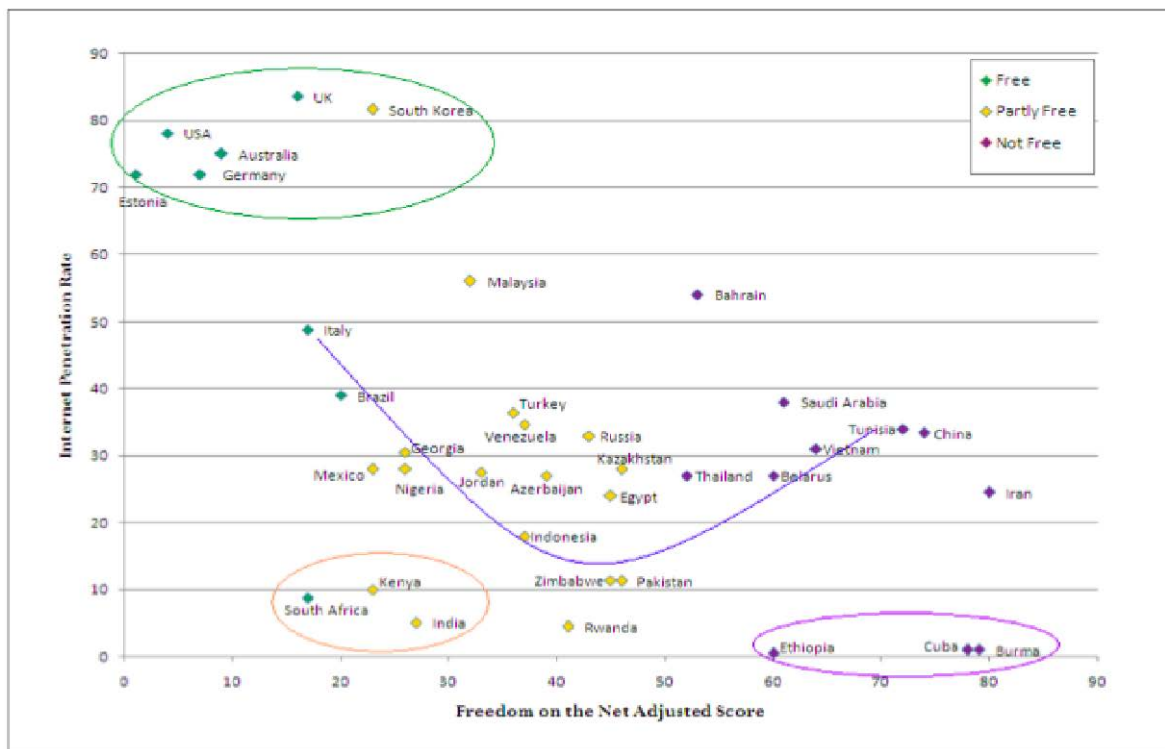


Figure 17: Freedom on the Net (FOTN, 2011, p.18)

The benefits of the Internet are found in its speed, worldwide reach and the possibility of anonymity, which translates into an ability for groups and individuals to mobilise masses of people, and also to disseminate information in real-time. While the Internet may be a powerful tool for the marginalised and oppressed, it also makes an effective tool of oppression. As Kahn & Kellner (2004) state whether the Internet is used in global protest, or to divert corporate agendas, or whether it is used to simply encourage alternate debates the emerging communication technology paradigm is indeed revolutionary.

The antagonisms between alternate ‘good’ and ‘bad’ uses of social media, or what Fuchs (2008) terms eParticipation and eDomination is illustrated in Figure 18.

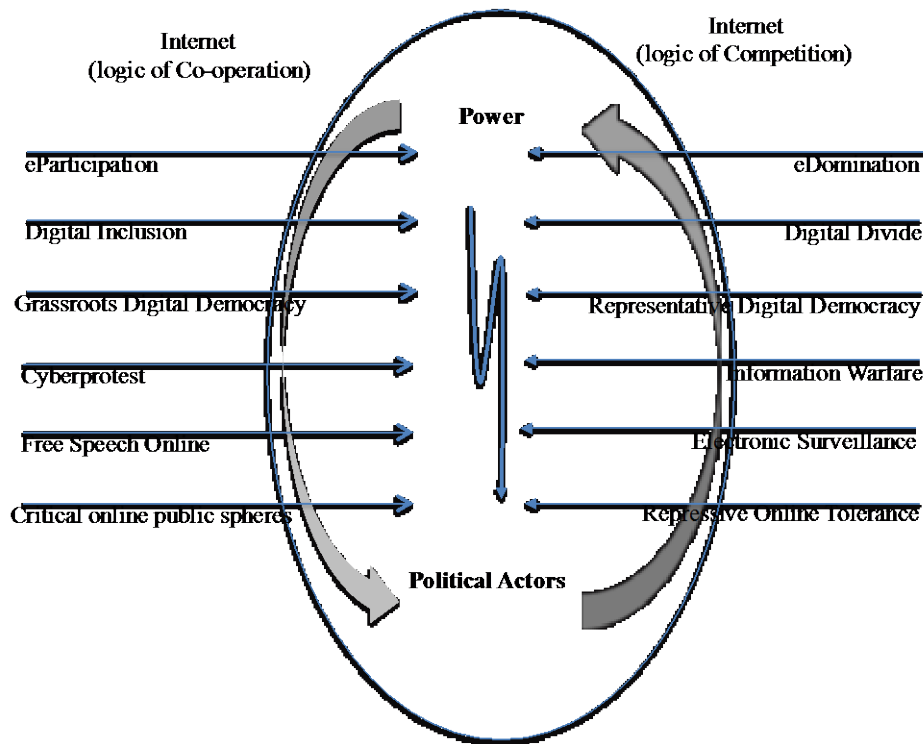


Figure 18: eParticipation versus eDomination (Fuchs, 2008, p. 298)

The next section will present some counter views of the effects of social media, both in the way it affects society at large and specifically with respect to its use as a tool for advocacy.

2.7.6 A Brief Critique of Web 2.0

This section reflects briefly on the impact of technology on society and draws firstly on some philosophical viewpoints, then discusses a more recent post-modern perspective and ends with a current sociological perspective. The discussion on these perspectives draws parallels that are transferable to a discussion of the Information Age.

The first perspective relates to the writings of Danish philosopher Soren Kierkegaard (1813 - 1855) who shows a concern for what he considered an increasing inability of his fellow citizens to distinguish between what he considered meaningful information and information that was trite and insignificant. Specifically Kierkegaard argued that the technologies of the day encouraged the large-scale dissemination of information, which helped make people detached from that information (Prosser & Ward, 2000). The consequence of people being interested in everything was an inability to commit to something specific, resulting in the inability to differentiate between important and trivial. For Kierkegaard, who lived in the 19th century, the technologies embodied predominantly in the mainstream newspapers were of greatest concern: "evaluation by newspapers will gradually be extended to cover subjects never dreamed of" (Ward and Prosser, 2003, p. 10). Dreyfus (n.d.) contends that Kierkegaard's concerns regarding

technology's role in the undiscerning dissemination of information is being fully realised on the Web with no meaningful difference between what may be relevant and/or significant, and where nothing is trivial enough to be ignored. Prosser and Ward (2000) argue the effect of the Internet is equivalent to that of the 19th century press exaggerated by rapid advances in technological innovation.

A second perspective relates to the writings of post-modern philosopher Jean Baudrillard who on the eve of the first Gulf War in 1991 published an essay called 'The Gulf War Will Not Take Place' (Baudrillard, 1995; Hegarty, 2004). This was not meant to infer that fighting did not occur or that soldiers were not being killed, but rather to suggest that this was a mediated war, incessantly covered by the media, with television coverage in particular being tailored and presented so as to entice audiences to watch, an exhibition of McLuhan's expression "the medium is the message." The 'news' was less about what was actually happening on the front lines and more a commodification of real-life event; what was being viewed on television was an approximation of reality in what Baudrillard terms a 'hyperreality,' the purpose of which being to stimulate rather than inform. Baudrillard further argues that the speed of innovation and ubiquity of communication technologies is what promotes mediated images and is one of the key influences of the current generation; people have the ability to create virtual worlds that provide experiences that are more exciting than everyday life, i.e. hyperreality has the ability to replace reality.

Baudrillard's disquiet of this age of hyperreality is especially relevant to the adoption of social media, where friends are no longer 'real' and where advocacy is from the comfort of the home. Professor of Social Studies of Science and Technology at Massachusetts Institute of Technology (MIT) and Director of the MIT Initiative on Technology and Self, Sherry Turkle (Turkle, 2011, p. 153) echoes similar sentiments and postulates that when part of a person's life is lived in virtual places like a social networking site, a troubled relationship develops between what is true and what is simulated truth. On social networking sites people are meant to be presenting themselves but profiles often do not match the real personality of a person and people end up as somebody else; distinctions blur with virtual places offering 'connection with uncertain claims to commitment.' She adds, "we use the network to control the intensity of our real-world connections" and "a place used to be a physical space, but even people who are physically present have their attention on the absent" e.g. a subtle glance at their mobile phone during a meeting. Humans do not stop working on developing their identity – they simply rework it with the materials on hand, and online social networks provide new materials that allow people to transform themselves.

Whether it is used for good or for reactionary purposes, whether it used to oppose autocratic

governments or whether it is used to fight big corporations disdain for the rules, social media manages to play a decisive role. And while there is no doubt about the impact of social media there is no universal understanding that its impact is always good.

2.8 THE IMPLICATIONS OF WEB 2.0 FOR CIVIL SOCIETY

The adoption of digital communications technologies affects transnational advocacy in a number of ways, including changing organisational structures and dynamics, the nature of the political relationship between members of various organisations, and the dynamics between the target of a campaign and the public (Bennet, 2004). This section discusses the reciprocal structural, operational and cultural impact of social media adoption in civil society organisations.

2.8.1 Structural Re-configuration of Civil Society Organisations

This section has been published in part in Pillay and Maharaj (2010). A number of online CSOs have been formed as a result of advances in technology. This section describes three of these organisations.

One of the best examples of a web-based CSO is the global organisation Avaaz (which means ‘voice’ in many Asian and Middle Eastern languages) whose stated aim is to “close the gap between the world we have, and the world most people everywhere want” (Avaaz, 2011). Avaaz is the biggest online CSO in the world, with a membership of thirteen million people.



Figure 19: Avaaz Homepage (Avaaz, 2011)

The existence and growth of the organisation is due mainly to the emergence of new communication technologies, in particular the Internet. The use of the Internet as its main campaigning tool gives the organisation an element of agility and flexibility, which in turn allows it to effectively mobilise on a global scale. Avaaz campaigns span a wide range and include human rights issues, the environment, and poverty alleviation. Examples include their campaigns to protect gay rights in Uganda, against the proposed SOPA and PIPA legislation, and protests against the trade in blood diamonds and ivory (Avaaz, 2011). Avaaz reports to have taken on many actions that have used the Internet to collect millions of dollars to campaign for democracy and human rights. Nobel Prize winner and environmental campaigner Al Gore describes Avaaz as “inspiring, and has already begun to make a difference.”

A second example was the formation of the Independent Media Centre (IMC or IndyMedia), which took place during the protests against World Trade Organisation’s (WTO) annual meeting of ministers in Seattle. The organisation was founded on a principle of open publishing, and on the premise that the process of producing and distributing media should be a many-to-many process rather than the traditional one-to-many approach. The implication of this philosophy is that all people can directly post information online without censure and free of any limitations. In the Seattle protests (or the ‘Battle for Seattle’) this meant an almost real-time distribution of documents, photos, video and audio content explaining the rationale for the protests and also regular updates regarding the state of the protests and the impact they were having on the city. The IndyMedia model has been adopted by other global CSOs and a few years after the organisation started it had mushroomed to well over one hundred and thirty global IndyMedia websites (Pickerill, 2006).

The MoveOn civil society organisation was set up in 2001 with the aim to giving the public a voice to counter the political processes dominated by corporates and institutional lobbyists (MoveOn, 2012). It has over five million members across America. In a new initiative MoveOn developed an online petitioning tool, called SignOn, which allows the public to produce individualised campaigns that copy MoveOn campaigning techniques, and by so doing involve themselves in issues of concern in their local communities. Surman and Reilly (2003) contend that if the main aim of an organisation’s campaign is simply to get people involved at a most basic level, like sending an email to their local government representative, then organisations like MoveOn.org are important. In the wake of the World Trade Center attacks and resulting global ‘war against terror,’ the anti-war movement emerged as a significant opposition group to the then US administration’s policies on Iraq. This resulted in escalating oppositional politics between the Bush administration and political activist groups such as MoveOn, who used the

Internet extensively to distribute anti-war rhetoric and information, to coordinate large anti-war protests, and other diverse anti-war activities (Kahn and Kellner, 2004).

2.8.2 Re-orientating Civil Society

A number of CSOs have used the Internet effectively to strengthen their organisations. The Internet gives the public a space to become involved in the issues facing society, which in turn allows CSOs to expand their networks and widen participation in their causes. Technology has an ability to influence both the coherence (strategic priority) and cohesion (*esprit de corps*) of an organisation (Nugroho, 2008). In building its coherence, the organisation may use technology to tweak its objectives and strategies in order to change its identity, focus, and at times build credibility. Technology may also be applied to make the organisation more cohesive by, for example, strengthening the collective identity of the organisation through emphasising the importance of its role to its members and supporters.

However in addition to the obvious benefits of Internet usage, CSOs at times also face unintended impacts and implications at both the intra- and inter-organisational levels. The issues of access have implications for CSOs and any technology-based transnational advocacy initiatives may, intentionally or unintentionally, result in fundamental changes in the role and operational focus of the organisation. Technology both alters, and is altered by, the perspectives and working mechanisms of the organisation. If employed effectively it has the ability to broaden the scope of both support base and activities of the organisation (Nugroho, 2008).

Technological change has affected the structure and tactics of civil society with websites operating with information, mobilisation or community-orientated functions (della Porta & Diani, 2006). The questions that are important for CSOs include understanding how technologies influence the operational contexts of CSOs and importantly how CSOs are influenced and influence this process of technology appropriation.

2.8.3 The Digital Divide

The concept of a 'digital divide' relates simply to the gap between people with, and people without (or with limited) access to ICTs, in particular the Internet. While developed countries have an Internet penetration rate of approximately 71.6 users per hundred people, developing countries on the other hand have an average of approximately 21.1 Internet users per hundred citizens (Esselaar, Gillwald, Moyo & Naidoo, 2010). Access to ICTs is influenced along the lines of wealth, gender, geographical location and social standing. Wealth is the most significant factor in determining access, with access to Internet services in particular being concentrated amongst the wealthy, especially in countries with low Internet penetration. People in rural areas often face greater hurdles to effective access e.g. lack of technological infrastructure, slower

connection speeds, and higher costs. Other marginalised groups include persons with disabilities and ethnic minorities. A United Nations report (2011, p. 16) states, “The Internet, as a medium by which the right to freedom of expression can be exercised, can only serve its purpose if States assume their commitment to develop effective policies to attain universal access to the Internet. Without concrete policies and plans of action, the Internet will become a technological tool that is accessible only to a certain elite while perpetuating the digital divide.”

Civil society has long been thought of as non-profit organisations operating in a local or national context. However, in reality organisations have been networking across country borders for centuries. Anheier *et al.*, (2001) point out that environmental organisations have always argued that green issues are global issues, and insisted their campaigns be conducted globally and not exclusively at a local level. The advances in technology have made this cooperation increasingly easy in recent times. Such transnational advocacy is of course subject to the effects of the digital divide. While it may be easy to dismiss the digital divide as a matter related only to technology access, theoretical frameworks demonstrate the importance of technology for social networking, and how this lends itself to new and innovative ways of networking and organising around social issues (Mason & Hacker, 2003).

Emerging technologies such as the Internet allow the voiceless to have a voice and by so doing immediately changes the power dynamics in society, for even though the powerful may gain more power through these technologies, so too do the powerless. The ease and accessibility of the Internet ensures that those who would previously not have had a forum to air their views now find it possible to do so (Mason & Hacker, 2003). Gitelman & Pingree (2003) argue that the role of emerging technologies in the socio-political sphere is at first not well defined, and that their ultimate role and meaning occurs with use and over a period of time; and is strongly influenced by society’s existing relationship with the media, by a need for new uses, and the interaction that occurs in a process of adaptation between the two.

According to Ward (2001) the role of emerging technologies is related to whether a social shaping or a more technologically deterministic view is taken. On one end of the spectrum is the view that technology will dilute the influence of representative institutions and organisations; another view argues that emerging technologies have a novelty value at best and will not transform society in any significant way; and a final view predicts the flattening of organisational structures as a direct consequence of direct citizen input which could see the end of traditional representative institutions and organisations (in this scenario more structured organisations would be affected first).

2.9 CONCLUSION: BRINGING IT ALL TOGETHER

Internet and social media advocacy spans the entire political spectrum from the left-leaning Zapatistas through to American right-wing organisations. Advocacy is also not the sole preserve of CSOs and non-government organisations either. A White House blog post illustrates the importance that the current American administration gives to social media and to what it calls ‘context-driven government’ and contends that Web 2.0 innovation has presented citizens with an opportunity to connect with government and to participate in policy setting. In response to this dynamic the White House has created numerous online communities on Twitter, Facebook, MySpace, YouTube and Flickr and has also created the Open Government blog to encourage public engagement. The blog further states that these Web 2.0 technologies are indicative of the new media that improve communication, empowers users, enhances information-sharing while promoting collaboration and specifically refers to social networks, blogs, and wikis (The White House, 2009).

In an interview with Alliance Magazine, Kumi Naidoo, Executive Director of Greenpeace International, when asked how effective civil society lobbying was prior to UN climate change conference in Copenhagen and whether there was still a continuing advocacy role for CSOs, responded that while CSOs still had an advocacy role to play, they needed to enhance the traditional methods of letter writing and meetings (Naidoo, 2010). This view is echoed in a United Nations (2011) report, which recognises the Internet as one of the most influential innovations of the twenty-first century, singling out in particular its ability to increase transparency, facilitate greater access to information, and promote meaningful citizen participation in building a democratic society.

This chapter brings together two disparate groups of concepts both of which premise this research i.e. the public sphere, civil society and advocacy on one side and the technology that enables a networked public sphere and allows for contentious politics on the Internet, on the other hand. It has also catalogued examples of technology-based advocacy and campaigning. In chapter three the theoretical frameworks that underpin this study are explored. The chapter ends with an illustration (Figure 20) of the concepts covered by using the word cloud first introduced in chapter one. The next chapter discusses research methods that were employed in this study.

CHAPTER THREE: RESEARCH METHODOLOGY

A multidisciplinary approach to research into social media and advocacy

It is not the victory of science that distinguishes our nineteenth, twentieth and twenty-first centuries, but the victory of scientific method over science

Nietzsche

3.1 INTRODUCTION

This chapter describes the pluralistic nature of the research. Figure 21 illustrates where this chapter is situated within the overall research strategy.

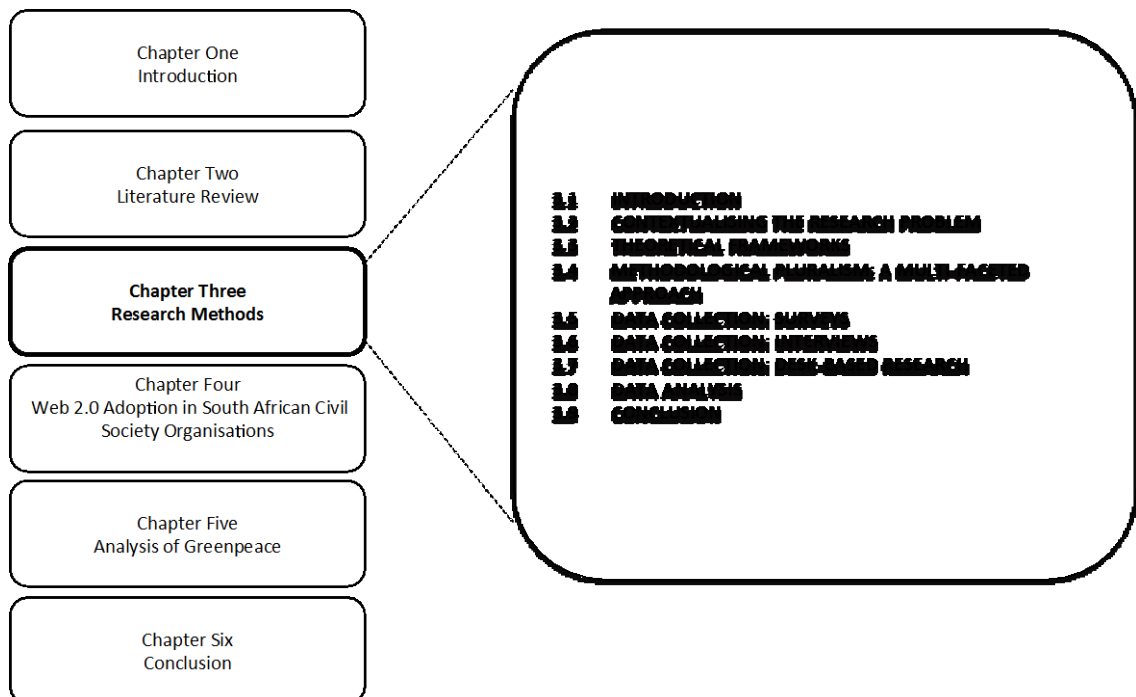


Figure 21: Chapter Three within the Overall Research Study

Chapter three contextualises the study, states the research problem, rearticulates the research objectives and poses the research questions. This is followed by a description of the multi-method approach and the theoretical frameworks underpinning the research. The research methods, data collection instruments used to capture the empirical data, and the data analysis strategy employed, are then presented. The chapter concludes with a description of how the results of the data analysis will be presented in chapters four and five.

This study was conceptualised and then further developed from an initial research premise around CSOs and their use of emerging technologies. The concept was expanded during a preliminary literature review, which demonstrated the viability of the study. A research proposal was formalised and defended and ethical clearance was sought and obtained. An in-depth literature review was conducted which provided a basis for the study and also for the collection

of the primary data. Two surveys and two distinct sets of interviews were then conducted. The results were analysed and contextualised with regards to the theoretical frameworks that underpin this study. A model for the strategic use of technology, which was tested statistically, emerged from the data analysis.

The administrative process at the Faculty of Management Studies at the University of KwaZulu-Natal demands two significant deliverables prior to undertaking research. First is the defence of a research proposal and secondly is the obtaining of ethical clearance. The proposal was successfully defended and formal acceptance was received on the 01st April 2010 (a copy of the acceptance letter is provided in Appendix A). The ethical clearance process ensures that the researcher firstly understands, and secondly undertakes research in an ethical manner. The researcher has to apply for ethical clearance from the Faculty within which the research is situated, and the Faculty in turn recommends the application for final approval to the University Ethics Committee. As part of the ethical clearance process respondents for the interviews were identified. Since all respondents were considered leaders they did not have to seek further organisational approval and merely had to complete consent forms at the time of the interview. A gatekeeper's letter was also sought from the Greenpeace executive, which was received on 01st July 2010. Ethical clearance was obtained on the 10th August 2010. Copies of the ethical clearance document and the Greenpeace gatekeeper's letter appear in Appendices K and B respectively.

3.1.1 Research Approach

Research into the adoption of technology by civil society organisations (CSOs) is by nature multi-faceted (Nugroho & Tampulbon, 2008). Consequently, this study has adopted a multi-method approach for the gathering of empirical evidence. The theoretical frameworks that underpin this study are Diffusion of Innovations (Rogers, 2003), Structuration theory (Giddens, 1984) and in particular Adaptive Structuration Theory (Orlikowski & Baroudi, 1991). The use of the Diffusion framework and Structuration theory in the study of technology adoption has been established in research, in particular by Nugroho's (2007) study into the effects of Internet adoption in Indonesian civil society. Diffusion of Innovations provides a theoretical framework for the identification and understanding of the constructs that impact the adoption of Web 2.0 in CSOs. From a structuration perspective the study aimed to understand the dialect at play between technology appropriation and organisational behaviour during the adoption and implementation of Web 2.0. A framework for the understanding of the strategic use of networked technologies as proposed by Surman & Reilly's (2003), and specific constructs to analyse the multi-dimensional interactions of civil society as described by Yang (2009) was also employed.

3.2 CONTEXTUALISING THE RESEARCH PROBLEM

The resurgence of civil society (which has been aided by an increase in resources, technology and money) has been attributed to the sector's ability to exploit new emerging interactive technologies, and its ability to adapt its communication and mobilisation strategies in the emerging technological paradigm (Castells, 2004; Anheier *et al.*, 2001). While the literature shows that social movements have been widely studied by social and political scientists, it also suggests that the role of technology, and in particular mobile phones and emerging technologies, has often been neglected (Hara & Shachaf, 2008).

South African civil society has been well researched in the recent past (Freedom House, 2011; Habib, 2003; Ranchod, 2007) and research into the adoption of Information and Communication Technologies (ICTs) in South African CSOs has also been well represented. In particular two surveys, one in 2007 and the other in 2009, on the adoption of ICTs and the Internet by civil society were undertaken by the non-governmental organisation The Southern African NGO Network (SANGONeT) in conjunction with the Internet research house World Wide Worx (World Wide Worx, 2009). While there has been research into the adoption of social media in international CSOs (MobileActive, 2010; NTEN, 2010; NTEN, 2011a; NTEN, 2011b) no published research into the adoption of social media in South African civil society has been undertaken to date¹⁴.

Furthermore while much research has been conducted into Internet-based advocacy campaigns, no detailed analysis of social media led advocacy campaigns exist in the literature. This study's analysis of three of Greenpeace's social media-led campaigns is a first, both in terms of the actual campaign analysis itself, and also for the insights gained from the access to the Greenpeace senior management team and Greenpeace campaign managers. Conducting research into technological innovation and social media in particular has the potential to provide new points of view to current theoretical frameworks.

In a report commissioned by the Social Sciences Research Council Information Technology and International Cooperation Program, the authors Surman & Reilly (2003, p. 4) state:

“As civil society, we are confronted with an opportunity – to use the Internet and other emerging network technologies to support our quest for global peace and social justice. Consider that we live in a world where almost anyone located in an urban centre can share their message globally with a free blog and a few dollars spent at an Internet cafe. The more pressing need is for civil society to learn how to appropriate the technologies

¹⁴ The detailed search strategies for the literature review are described in Section 2.1

that we now have access to, bending and moulding them so that they can be used more strategically and politically.”

While some of the actual services that constitute Web 2.0 may have emerged even earlier, the term Web 2.0 and what it has come to represent dates back to 2004. The impact and consequences of social media adoption on society are only just being realised and studied in detail, and there is no universal agreement as to its effects. Roodhouse (2009), for example suggests that blogs (collectively called the blogosphere) has given ordinary citizens the opportunity to act as gatekeepers of the news, a task previously the sole domain of professional journalists. This in turn has shifted the discourse to outside of the mainstream media. Blogs in particular have proven to be a powerful new weapon for exposing scandals (see section 2.7.3.3) and giving ordinary citizens an opportunity for socio-political activism (Prior, 2008). Alternate viewpoints are less optimistic. People generally restrict themselves to points of view to which they already subscribe, for example in the newspapers and magazines that they read, and Kerbel & Bloom (2005) warn that this has the potential to fragment the blogosphere into camps of ideologically polarised opinions. Blogs may very well ‘preach to the converted’ further stratifying people.

The effect of a technology-enabled public sphere is contentious with some arguing that it may strengthen democratic ideals (Benkler, 2006) with others predicting that technology will splinter the public sphere (Sunstein, 2001). Even the reasons why some social networking sites are popular, and in some instances popular in specific regions only, remain elusive. Empirical evidence is still required to ascertain why some applications are accepted and some rejected (Neale & Russel-Bennet, 2009).

Even the practical use of Web 2.0 does not provide any answers. There was a noticeable difference in the way social media was used strategically by presidential hopefuls Barak Obama and Mitch Romney in the lead-up to the 2009 American elections. The Obama campaign for example, used a blogging strategy that encouraged supporters to open their own blogs. These community blogging forums provided real-time information on the campaign, which helped capture the *zeitgeist* of the supporters (Rigby, 2008). The top-down approach of the Romney campaign in contrast offered little opportunity to shape the campaign based on information available from its followers and from the field. The Obama campaign profited enormously from its approach, which is credited with playing a significant role in ensuring an Obama victory (Rigby, 2008). All of which raises important questions about the effective and strategic use of social media technologies.

3.2.1 Problem Statement

Many commentators have eloquently described the current stage of human development, characterised by constant technological revolution and centered largely on information technologies, which are reshaping the very fabric of our society. These innovations focus, in particular, on the development and deployment of mobile phones and also on innovations relating to the Internet. One significant consequence of these emerging new communication technologies, in particular the Internet, has been a growth of civil society, which has given CSOs an element of agility and flexibility, allowing them to effectively mobilise on an international scale, important in an increasingly connected and globalised world.

The power of advocacy organisations to fundamentally alter the status quo cannot be underestimated with CSOs having a profound impact in both developed and developing countries. Fundamental social issues such as slavery, apartheid, gender emancipation and environmental justice have been significantly influenced by civil society.

A consequence of increased technological innovation has been the rise of distinctly new types of civil society organisations that can only exist in a digitally connected world. Ushahidi (Ushahidi, 2011) and Avaaz (Avaaz, 2011) are examples of a new breed of flexible and adaptable civil society organisations that have embraced technology as the cornerstone of their strategy, with Garret (2006) for one contending that they will gradually eclipse traditional CSOs. Traditional civil society organisations like Greenpeace and Amnesty International are increasingly considering how traditional advocacy, and indeed the very structure of traditional advocacy organisations, need to embrace the new technological paradigm. The structural, cultural and operational transformation to organisations arising from their decision to embrace social media is also worthy of consideration.

All of which are important considerations for civil society organisations. This study explores the extent to which civil society organisations adopt and deploy Web 2.0 social media for transnational advocacy. The study further investigates the reciprocal impact of this technology appropriation on civil society roles, structure and orientation.

The study firstly analyses the adoption of social media in South African CSOs; as a counterpoint, the environmental justice group Greenpeace is researched to gain a global understanding of social media adoption in civil society. Various theoretical frameworks are employed to make sense of the empirical data gathered through a multi-method research approach that includes surveys and in-depth interviews.

3.2.2 The Research Questions

Research questions have been adapted, augmented and ultimately developed from various studies (Nugroho, 2007; MobileActive, 2010; NTEN, 2010; NTEN, 2011a; NTEN, 2011b) and as a consequence the following key research questions, in respect of the central theme of diffusion and adoption of Web 2.0 technologies in civil society organisations, are posed:

Research Question 1: What is the extent of Web 2.0 adoption in South African civil society organisations?

- a) To what extent are Web 2.0 social media services being adopted by civil society organisations?
- b) For what purposes are Web 2.0 social media services being adopted by civil society organisations?
- c) Which Web 2.0 social media services are being adopted by civil society organisations?
- d) What are the attitudes and perceptions towards the current and future use of Web 2.0 social media?
- e) How is Web 2.0 being deployed strategically to further the aims of the organisation?

Research Question 2: What are the implications of Web 2.0 adoption on civil society organisations?

- a) What transformation does Web 2.0 adoption bring to civil society organisations at both the inter-organisational and intra-organisational levels?
- b) How does the adoption of Web 2.0 affect the multi-dimensional interactions that both enable and constrain online advocacy, civil society organisations, and campaigning?

Secondary objectives include cataloguing social media-led advocacy campaigns, understanding the dynamics behind the creation and lifespan of online communities, the role of these communities in advancing advocacy initiatives and identifying how advocacy campaigns benefit from online communities.

3.3 THEORETICAL FRAMEWORKS

Castells (2004) argues that much of the success of a new resurgent civil society is due to its ability to adopt the technologies within the new technological paradigm. This study focuses on the adoption of social media as an effective strategy for civil society organisations. Theoretical frameworks, constructs and concepts assist in the analysis of the empirical data and in the answering of the research questions. This study employs diffusion of innovations, structuration and civil society theories and frameworks.

3.3.1 Innovation, Diffusion and Adoption

Fichman (2000) describes diffusion as the process by which a technology spreads across a population of organisations, whilst adoption and appropriation are socio-cultural concepts linked to the dialectic relationship between humans and technology (Delney, Timbrell & Chan, 2008). Rogers *et al.*, (2009, p. 420) define innovation as “an idea, practice or object that is perceived as new by potential adopters and is communicated through certain channels over time by members of a social system.” Invention and innovation have an important distinction with invention being defined as the first manifestation of an idea, product or process, while innovation is the first attempt to implement it in a practical situation (Fagerberg, 2006). While the difference between invention and innovation may not always be clear, the adoption of an innovation is the decision to make maximum use of an innovation (Rogers, 2003). Incremental innovation describes the process of continuous improvement, while radical innovation (also termed technological revolutions or a disruptive innovation) has a far-reaching impact and is deemed such a major change that it represents a new paradigm for carrying out some task (Fagerberg, 2006; Rogers, 2003). Risk is closely related to innovation and should not always be minimised with the actual embracing of risk being seen as one of the driving forces of a globalised economy (Giddens, 1999).

Schumpeter (1939) defines technological innovation in terms of the laws of physical returns and argues that in the absence of technological innovation productivity inevitably decreases, and that technological innovation reverses this trend. Rogers (2003) uses the words ‘innovation’ and ‘technology’ synonymously. Because technological innovations are spread through a network of individual interactions, the Internet, by providing an ecosystem for collaboration and interaction, has evolved into a unique platform that promotes the development and diffusion of innovations resulting in the creation of economically powerful organisations such as Google, Amazon, Yahoo!, eBay, Facebook, Twitter, Skype, and YouTube, which are now household names with some having become verbs in official dictionaries (Montanari *et al.*, 2009).

A significant trend of the knowledge economy is the growth in innovation, either through formal research or development (David & Foray, 2003). Innovation is rapidly becoming the only way for organisations and nations to endure and ultimately flourish, especially in highly competitive and globalised economies. The reasons for this twofold: firstly the larger the number of potential adopters the easier it is to recoup any initial financial outlay, and secondly innovations also have the potential to reach more people more quickly, an argument put forward by proponents of globalisation (Reinert, 2007).

The creation of knowledge, described as the process of adding value to previous knowledge, (Al-Hawamdeh, 2002; Narayanan, 20021) works better when more companies – both

complementary and competing – work together in networks. While knowledge maybe vital it is not central to the current technological revolution, it is rather the application of knowledge in a virtuous circle of innovation that characterises the knowledge economy (Castells, 2000).

3.3.2 Diffusion of Innovations

Diffusion theory is an amalgamation of a number of different theories from various disciplines, each concentrating on various aspects of the diffusion process, combining into what has been termed a meta-theory (Surry, 1997). Diffusion studies form the basis for a more rigorous approach to theories of social change and have become an extensive research area in sociology, economics, political science and communication (Wejnert, 2002). Diffusion theory has only recently been applied to the understanding of technological innovation and the role of technology in bringing about social change.

The discussion around diffusion and innovation begins with a detailed discussion of Rogers' Diffusion of Innovations framework. The discussion then describes the diverse variables, concepts and processes that exist within an integrated model of diffusion. The section ends with a discussion of innovation within organisations and summarises some of the criticisms of diffusion theory.

3.3.2.1 Rogers Diffusion of Innovations

Researcher, Everett Rogers, is credited with doing the most to synthesise all of the prevailing diffusion concepts, and his book 'Diffusion of Innovation' is the nearest any researcher has come to describing a unified theory of diffusion (Surry, 1997). The constructs that underpin Rogers' diffusion of innovations are: The Innovation Decision Process, Innovativeness and Adopter Categories, Rate of Adoption and Perceived Attributes of Innovation.

3.3.2.1 (a) *The Innovation Decision Process*

Rogers (2003) defines the Innovation Decision Process as follows: first knowledge gained of the existence of the innovation (knowledge); attitude formation towards the innovation (persuasion); the process that precede a decision to adopt or reject the innovation (decision); and the use of the innovation, and confirmation of the decision by seeking evidence that reinforces the decision, which can include reversing the decision previously taken (implementation). The process seeks information in order to decrease uncertainty about the innovation and continues until all steps have been completed.

3.3.2.1 (b) *Innovativeness and Adopter Categories*

Innovativeness is the extent to which an innovation is adopted in relation to other potential adopters and is made up of the following categories: innovators, early adopters, early majority,

late majority and laggards (Rogers, 2003). When these categories are plotted on a graph a Bell-shaped curve emerges (Figure 22). The creation of innovations is not an isolated event the occurrence of which is evenly distributed over time, but they tend rather to cluster in groups (Schumpeter, 1939).

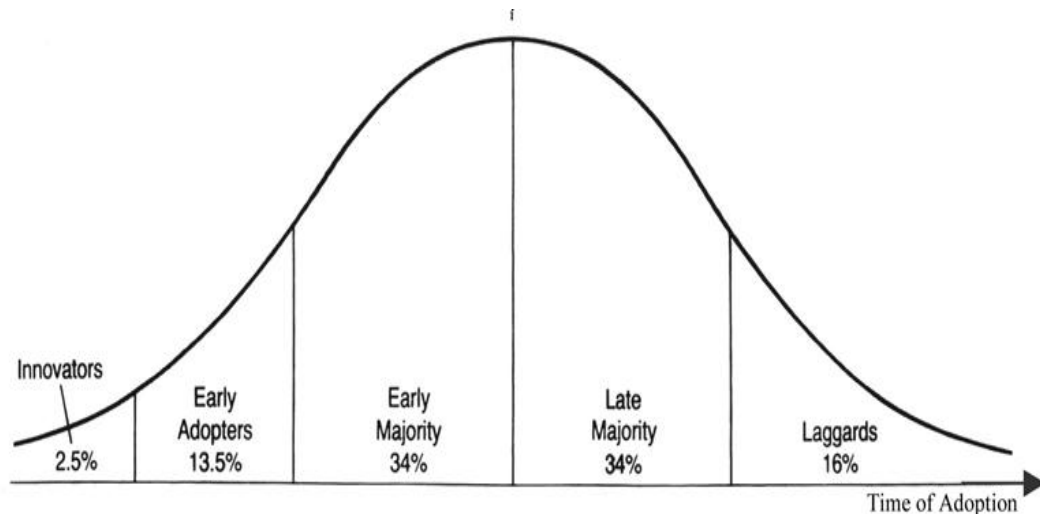


Figure 22: Adoption Bell-Curve (Rogers, 2003)

Innovators actively seek information about new ideas and are able to handle a high level of uncertainty regarding their choice. Looking at the Bell-curve and starting from the left, innovators occupy the first 2.5 percent, early adopters occupy the next 13.5 percent, the early and late majorities occupy thirty-four percent each, and the laggards occupy the last 16 percent to the right of the mean (Rogers, 2003, p. 267-299). This distribution closely mimics the empirical rule for a normal distribution where sixty-eight percent of the data points lie within one standard deviation of the mean, ninety-five percent lies within two standard deviation of the mean and 99.7% within three standard deviation of the mean.

3.3.2.1 (c) Rate of Adoption

Individuals, informal groups or organisations (or social systems) are that set of interrelated units that are united in an effort at problem solving to accomplish a common goal (Rogers, 2003). The rate of adoption is the relative speed with which members of a social system adopt an innovation. The rate of adoption is calculation based on the time necessary for a certain percentage of a social system to adopt the innovation (Rogers, 2003, p. 267-297). While exceptions exist, most innovation adoption when plotted on a graph, results in an S-shaped curve (Figure 23). This S-shaped curve is the same as the cumulative distribution function for the normal distribution, and is just the area under the normal distribution curve.

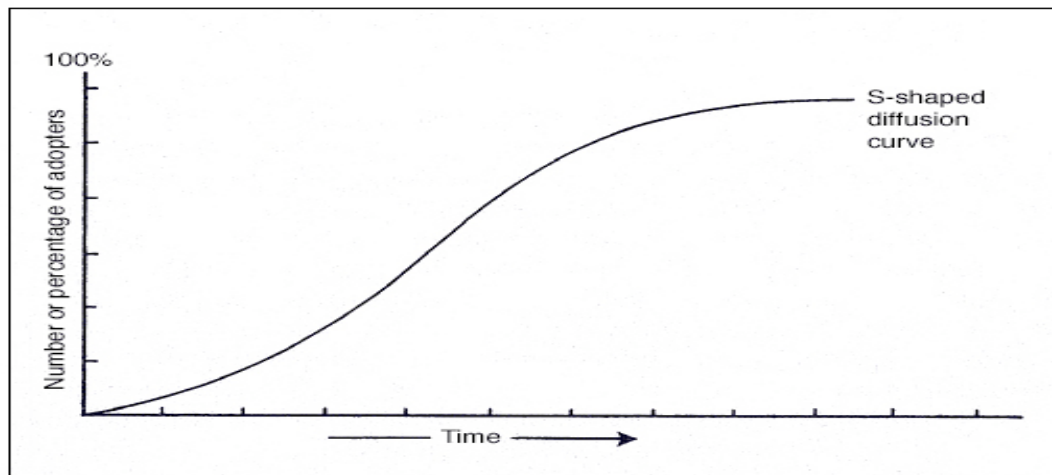


Figure 23: S-shaped Diffusion Curve (Rogers, 2003)

3.3.2.1 (d) Perceived Attributes of Innovations

The choice of whether to adopt or reject an innovation is based on five perceived attributes (Rogers, 2003, p. 219-266):

- (1) Relative advantage is the perception of whether an innovation being contemplated is better than the innovation it replaces. The innovation does not have to have a real advantage over its predecessor, and it only matters that the potential adopter need perceive an advantage.
- (2) Compatibility is the extent to which the innovation matches the culture, norms, standards and skills of the adopter. Innovations that are not a complete match may still be adopted, although not always as fast.
- (3) Complexity is the degree of difficulty in understanding and using the innovation.
- (4) Trialability, which reduces uncertainty, is the ability to evaluate, test and experiment with an innovation prior to when a final decision to adopt is required.
- (5) Observability states that the likelihood of innovation increases if the results of the adoption are clearly visible.

3.3.2.1 (e) Innovation in Organisations

Rogers (2003) describes organisations as a group of individuals united to achieve common goals, and often adopt innovations prior to individuals. Research into the adoption of emerging communication technologies can provide insight into the innovation process in organisations, which occurs in five stages under the headings of initiation and implementation.

Initiation

- (1) Agenda setting defines the organisational problem that creates the need for an innovation (Dearing & Rogers, 1996). Performance gaps or discrepancies between expected and actual performance is the motivation for the innovation process.
- (2) Matching occurs when the defined problem matches an innovation. Effective matching of the innovation to the needs of the organisation is necessary for the sustainability of the innovation and includes anticipating the benefits and barriers.

Implementation

- (3) Redefining / Restructuring occur when the innovation is changed to closely match the organisation, at which time change will occur to both the organisation and the innovation. Examples include the creation of a new organisational unit, or the use of email, which affects the entire organisation by giving all employees access to each other.
- (4) Clarifying occurs when the innovation is spread widely throughout the organisation with individuals gaining a common understanding of the innovation i.e. the impact of the innovation and what it eventually comes to represent to the organisation is understood over a period time, and this occurs through the many interactions with the innovation.
- (5) Routinising / Sustainability occur when the innovation becomes an accepted part of the organisation or the extent to which an innovation is used after being implemented. The more members that participate in the innovation process, the higher the chance of the innovation being sustained.

The characteristics of organisational innovativeness are¹⁵:

- (1) Organisation size (+): The research points to larger organisations being generally more innovative (Rogers, 2003). Size has been described as a replacement for a number of other dimensions including total resources, slack resources and technical expertise (Rogers, 2003).
- (2) Centralisation (-): The greater the extent to which power and control is exercised by a small number of people, the less innovative the organisation.
- (3) Complexity (+): High-level knowledge and expertise amongst members of an organisation encourages innovation.
- (4) Formalisation (-): The greater the bureaucracy in an organisation the lower the innovativeness.

¹⁵ A (+) sign indicates influences positively, while a (-) sign indicates influencing negatively

- (5) Interconnectedness (+): The more organisational units are linked the easier it is for new ideas to flow, which in turn promotes innovativeness.
- (6) Organisational slack (+): Measures the number of resources not actively engaged in meaningful work and is positively related to innovativeness (Rogers, 2003).

Two other organisational characteristics that are important to innovation adoption are:

Champions (+) in organisations are people whose role is to overcome resistance to innovation adoption. They are often senior officials in an organisation but may also exist in the middle strata of organisations. Howell & Higgins (1990) found that champions were often risk takers and more innovative.

System openness (+) states that the greater the extent to which members of a system are related to external members, the better the environment for the promotion of innovation adoption.

3.3.2.2 An Integrated View of Diffusion Constructs

Diffusion studies have tended to analyse diffusion in isolation. Wejnert (2002) proposes an integrated model of diffusion that contains the following constructs: characteristics of innovations (public versus private consequences of adoption, benefits versus costs); characteristics of innovators (social entity, level of knowledge of the innovation, socioeconomic status, status in a personal social network, personal characteristics); and environmental context (geographical settings, cultural values, socio-political conditions).

Because of the wide nature of diffusion research any attempt at an integrated model will result in a wide range of variables as witnessed from the above list. The variables relevant to this study will be described in greater detail in the discussion of the results.

3.3.2.3 Some Criticisms of the Diffusion of Innovations

Like all frameworks and theories, and more especially meta-frameworks like Rogers', criticisms have been levelled. Fichman (2000) argues that the classical innovation model is based on research that focused primarily on simpler innovations and therefore Rogers' framework is less suitable to more complex technologies. Halls' (2006) criticism is that in Rogers' theory neither the innovation nor the technology it replaces changes during diffusion process. Rosenberg (1972) supports Hall and maintains that not only is new technology improved by a process of user experience and feedback but often the technology being replaced receives a 'last gasp' improvement due to competitive pressure. Despite the criticism levelled at Rogers work, classic diffusion theory remains an important framework for the analysis of the diffusion of innovation.

3.3.3 Structuration Theory

This section begins with a general discussion on Structuration theory and draws extensively on the work done by Giddens (1984). It then discusses the structural model of technology as proposed by Orlikowski (Orlikowski & Robey, 1991; Orlikowski, 1992; 2000), and concludes by describing the Adaptive Structuration Theory (DeSanctis & Poole, 1994; Poole & DeSanctis, 2004).

While an in-depth analysis of each theory is out of the scope of this study, relevant constructs within each of these theories will be identified and described and later drawn upon in the analysis of the empirical data. Three models of structuration, each with their own variations will be presented, with Delney *et al.*, (2008) arguing that there is still a requirement for unity and a foundational approach to Structural theory.

3.3.3.1 Giddens' Structuration Theory

Rose (n.d.) characterises two major schools of sociological enquiry, those mainly linked to structure (loosely associated with society) and those mainly linked to agency (loosely associated with individuals). Giddens (1984) argued that these two traditions were incompatible and proceeded to describe how the actions of individuals (agency or action) relate to the structural features of society (structure). He further suggested that this relationship is recursive i.e. structure imparts meaning to social life and exists only as a result of human agents.

Structures, as defined by Giddens, are not external constraints but rather rules of behaviour (Doolin & McLeod, 2005; Walshman, 2002) and must be seen as a general construct that is only revealed through the structural characteristics of social systems (Orlikowski, 1992). Human agency is described as the ability to effect change and is related to power (in contrast the inability to make a difference is the equivalent of powerlessness). Power involves both the capacity to co-ordinate human actions, and the control of natural or material products and resources (Giddens, 1984).

The 'rules' and 'resources' in Giddens' framework are recursively linked to social action through three constructs namely interpretive schemes, resources (or facilities) and norms (Doolin & McLeod, 2005). Interpretive schemes are the sum total of knowledge available to people to make sense of behaviour and events in social interactions, and in doing so they enact structures of meaning (Giddens, 1984). Resources (or facilities) are the capabilities available to human agents to act intentionally and exercise power over people (authoritative resources) or material objects (allocative resources) and disparities of resources become institutionalised as 'structures of domination.' Norms are conventions governing legitimate human contact, which are drawn upon to sanction actions and in so doing reproduce "structures of legitimation" (Giddens, 1984, p. 37). Figure 24 illustrates these concepts.

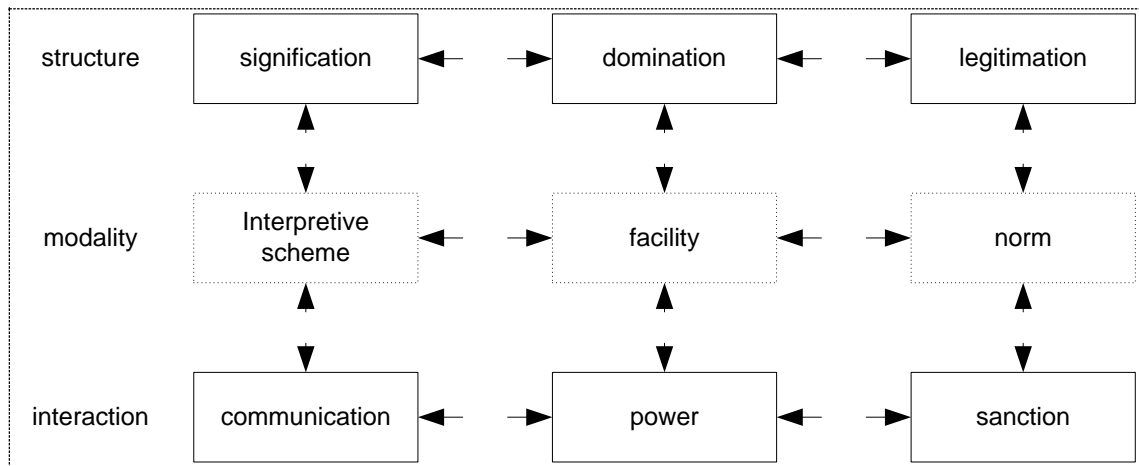


Figure 24: Giddens Theory of Structuration (Giddens, 1984)

Giddens' structuration theory is an attempt to create an integrated theory that combines the subjective and objective schools of thought in the treatment of information technology and is also allows for analysis at the individual, group and social system level (Orlikowski & Robey, 1991).

3.3.3.2 The Structural Model of Technology

While structuration theory itself did not explicitly consider information and communication technologies, subsequent research has sought to address the Information System (IS) field. One significant interpretation is that of Orlikowski who integrates an explicit consideration of technology into structuration theory (Orlikowski & Robey, 1991; Orlikowski, 1992, 2000). Orlikowski's framework, The Structural Model of Technology, identifies the dichotomy between information technology and organisations, and describes the deployment of information technology in organisations as a social phenomenon in which the organisational consequences of technology are products of both material and social dimensions (Orlikowski & Robey, 1991).

Two premises underpin Orlikowski's model. These are the duality of technology and the interpretive flexibility of technology. The former states that even though technology is produced of people, it has the ability to take on structural properties, and once developed and deployed it loses its connection with its original constructors and appears to be part of structural properties of the organisation (on the one hand technology is developed and transformed by the actions of people, and on the other it is also assists people achieve a goal).

The interpretive flexibility of technology states that the meaning attached to a technology at the time it was developed is different to the meaning attached to it when it is deployed e.g. there would be different interpretations of the same technology at a vendor and at a customer site

(Orlikowski, 1992). The structurational model of technology, depicted in Figure 25, comprise of the following components: human actors, information technology and institutional properties.

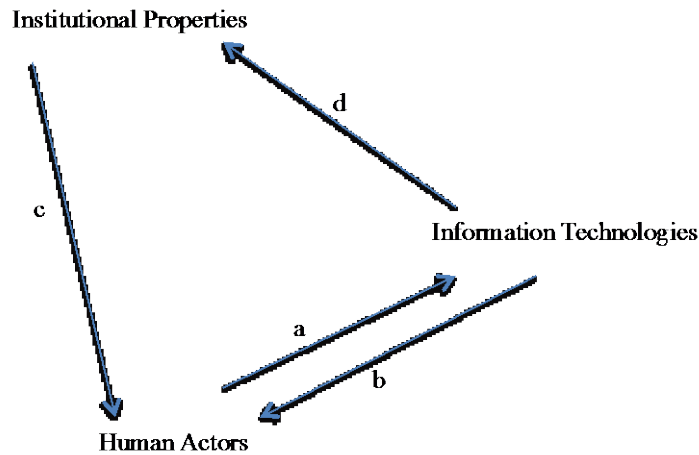


Figure 25: Components of the Structurational Model of Technology (Orlikowski, 1992, p. 410)

The components of the model and the nature of the influence are described in Table 6.

Arrow	Type of Influence	Nature of Influence
<i>a</i>	Technology as a Product of Human Action	Technology is the outcome of human design, development, appropriation and modification
<i>b</i>	Technology as a Medium of Human Action	Technology facilitates and constrains human action through the provision of interpretive schemes, facilities, and norms
<i>c</i>	Institutional Conditions of Interaction with Technology	Established properties like intentions, professional norms, state of the art materials and knowledge, design standards, and available resources (time, money, skills) influence how people interact with technology
<i>d</i>	Institutional Consequences of Interaction with Technology	Interacting with technology effects and organisation by either reinforcing or transforming the organisations structural properties e.g. organisational meaning, domination, and legitimation

Table 6: Structuration Model of Technology (Orlikowski, 1992, p. 410)

3.3.3.3 Adaptive Structuration Theory

Adaptive Structuration Theory (AST) is a framework that describes the multiple relationships that exist between advanced information technologies (AIT), social structures, and human

interactions and uses the concepts of social structures, rules and resources similarly to Giddens original descriptions (DeSanctis & Poole, 1994).

During the development of an advanced technology, structures found in institutions (e.g. reporting hierarchies, standard operating procedures) are modified, enhanced, or combined with manual procedures, and then incorporated into the technology, thereby creating new structures. These technology and action structures are related recursively. The social structures of AITs have also been explained in relation to their ‘spirit,’ which is “the general intent with regard to values and goals underlying a given set of structural features” (Poole & DeSanctis, 2004, p. 99). Webster (1998) also defines spirit using the terms ‘general intent’ and refers to it as the official behaviour expected when using the system, how to understand the characteristics of the system, and how to ‘fill in the blanks’ if the workings of a procedure have not been explicitly described. Giddens (1984) take on the concept of ‘spirit’ is that it legitimises the technology. The propositions represented within AST are shown in Figure 26.

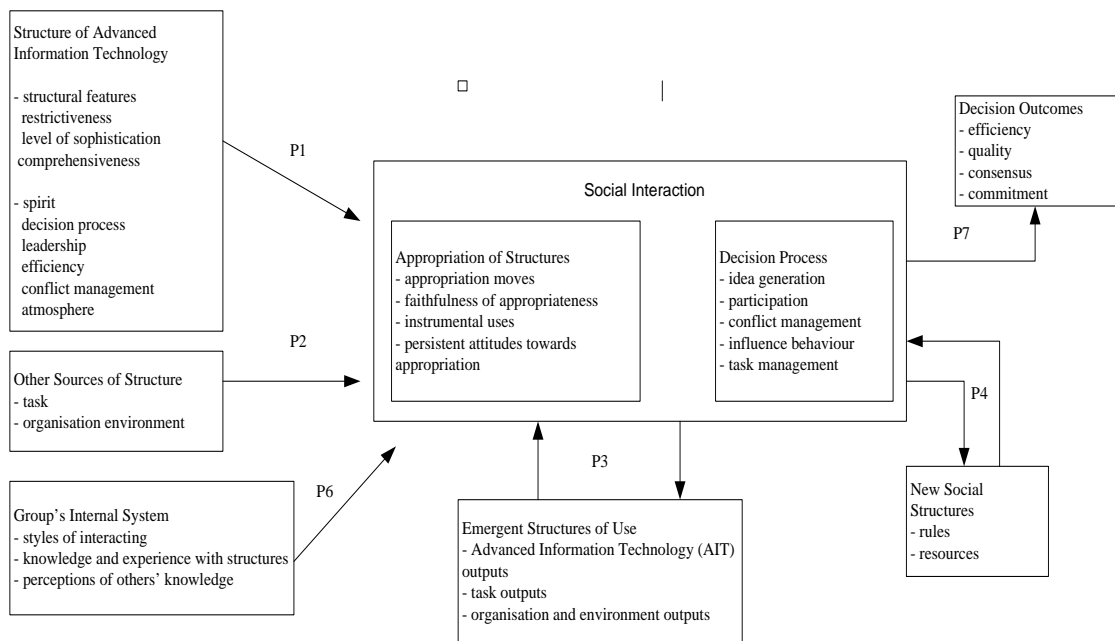


Figure 26: Adaptive Structuration Theory (DeSanctis & Poole, 1994)

Proposition 1: Advanced Information Technologies (AIT) provides social structures that can be described in terms of their features and spirit. AITs exhibit variations in their spirit and structures, which in turn encourage different forms of social interaction

Proposition 2: Use of AIT structures may vary depending on the task, the environment, and other possibilities that offer alternative sources of social structures

Proposition 3: New sources of structure emerge as the technology, task, and environmental structures are applied during the course of social interaction

Proposition 4: New social structures emerge during group interaction as the rules and resources of an AIT are appropriated in a given context and then reproduced during group interactions over time

Proposition 5: Group decision processes will vary depending on the nature of AIT appropriations

Proposition 6: The nature of AIT appropriations will vary depending on the group's internal system

Proposition 7: Given AIT and other sources of social structure, ideal appropriation processes, and decision processes that fit the task at hand, desired outcomes of AIT use would result

Rose (n.d.) argues that AST identifies finite lists of concepts that form the basis for the research of micro level actions. However this approach has come under attack from Jones & Karsten (2008) who argues that 'spirit' and 'appropriateness' are underspecified concepts that has no theoretical basis.

3.3.3.4 Appropriateness of Structuration Theory to this Research Study

The interactions that exist between human behaviour and technology are central to IS research (Cousins & Robey, 2005; Beaudry & Pinsonneault, 2005; Jones & Karsten, 2008). The Internet and the Web in particular, has been described as a system where human interactions are premised on technology-based networks (Fuchs *et al.*, 2010). Both the Internet and the Web belong to the technological infrastructure of society, which can only be studied as a dialectical relationship between human social agency and its intended and unintended consequences. Fuchs *et al.*, (2010) argue that it is this dualistic nature of technology and society that sees Giddens' structuration theory capable of analysing the common shaping approach.

3.3.4 Civil Society Frameworks

Two additional frameworks have been incorporated within the overall diffusion and structuration study, both of which emphasise civil society's interaction with technology and the effects thereof. These frameworks first explore the multi-dimensional aspects of civil society interactions, and secondly describe a technology appropriation model in civil society for the strategic use of technology.

3.3.4.1 Multi-dimensional Aspects of Civil Society Interaction

Any approach to the analysis of online activism must be able to capture the multi-dimensional interactions that both enable and constrain online activism. Drawing extensively on research done by Yang (2009) the following aspects of civil society interactions are identified and

described: state power, culture, the market, civil society i.e. the mutual constitution of online activism and civil society, and transnationalism.

3.3.4.1 (a) State power

State power has the potential to channel online activism, with politically tolerable issues having more chance of entering the public sphere and become contentious events. But even as power attempts to shape contention (by for example attempting to control the Internet) activists are not “captive audiences” but “skilled actors” who have the ability to respond creatively and are able to operate close to the boundary of acceptable channels (Yang, 2009, p. 13). While power constrains contention, it also responds and adapts to it.

3.3.4.1 (b) Culture

The dissemination of symbols, imagery, rhetoric and sounds (which appeal especially powerfully to people’s moral sensibilities) are the tools that frame online activism and mobilises collective action i.e. collective action mobilises emotions within a cultural context (Yang, 2009).

3.3.4.1 (c) Markets

The ability of propaganda to control information has decreased over time mostly due to the commercialisation of the media, the effects of globalisation, the sophistication of technology and the increased awareness of the public (Yang, 2009). The question that arises is whether business indirectly promotes democratic participation and is civil society in danger of being manipulated by commercial interests?

3.3.4.1 (d) The mutual constitution of online activism and civil society

Yang (2009) argues that there is a dialect at play with civil society generating online contention, with contention in turn galvanising civil society, which encourages its development and begs the question of the exact nature of communities that emerge online.

3.3.4.1 (e) Transnationalism

The crossing of borders is most commonly seen in the flow of goods, money, cultural products, symbols and ideas (see section 2.6.6 for a discussion on similar concepts proposed by sociologist Appadurai). One of the conditions for transnational activism involves the use of transnational strategies such as Internet-based mobilisation e.g. the circulation of blogs (Yang, 2009). Transnationalism is directly related to the changing power of the state and while it does not imply a decline of the state, it does raise new questions about how activists challenge and negotiate state power by seizing new “political opportunities, resources, alliances, cultural framings and communication technologies in the age of information” (Yang, 2009, p. 18).

3.3.4.2 The Strategic Use of Social Media in Civil Society Organisations

Surman & Reilly (2003) define a spectrum that CSOs must traverse as they gain knowledge, evaluate and eventually adopt an emerging technology. The first step relates to basic access e.g. an office with an Internet connection and / or use of a cell phone. The second step, termed adoption, stresses the need for the necessary skills to use the technology optimally. The final step, appropriation, occurs when an organisation becomes proficient enough to ensure that technology is able to be used strategically to further the aims of the organisation. The main areas where networked-technology is used strategically are collaboration, publishing, mobilisation and observation (Surman & Reilly, 2003).

3.3.4.2 (a) Observation

Online observation spans a range of activities that include research and intelligence gathering. Within CSOs specifically it involves the collection and pooling of information (Surman & Reilly, 2003). The emerging interactive and collaborative communications paradigm makes more information readily available, whilst demanding greater transparency from governments and corporations (Wikileaks is a case in point).

3.3.4.2 (b) Publishing

One of the most fundamental tasks of CSOs is to publish information i.e. books, articles, reports, news releases, alerts, policy statements, pamphlets, posters, radio programs and videos (Surman & Reilly, 2003). The ability to post content online in real-time, not only poses a challenge to print media, but in many cases replaces it. The advent of social media means that online publishing is more than just about the web and e-mail, but rather encompasses blogs, and the uploading of audio and video content. Civil society organisations have always been able to adapt to new communication and technological opportunities (Castells, 2004; Anheier *et al.*, 2001; Surman & Reilly, 2003).

3.3.4.2 (c) Mobilisation

Surman & Reilly (2003, p. 46) define online mobilisation primarily as the “efforts to move people to action – to protest, intervene, advocate, support.” Networked technologies provide the ability to mobilise globally, directly and quickly while lessening the dependence on mainstream media channels, which in turn combines the advantages of broadcast and many-to-many media.

3.3.4.2 (d) Collaboration

While civil society organisations have always cooperated with each other, the recent past has witnessed increased levels of consensus, cooperation and collaboration (Anheier & Themudo, 2002) enabled in the main by inexpensive, worldwide, networked communications infrastructures that enable a many-to-many paradigm. It has become easier to communicate

decisions and to engage with members on a regular and ongoing basis. It is easier to place staff in various parts of the world and still effectively engage with them; it is also easier to coordinate the work between multiple offices. Online collaboration offers the possibility of increased information sources, which produces better quality information, more support and a discernible impact on the political environment (Surman & Reilly, 2003).

3.3.5 Mapping Research Questions to the Theoretical Frameworks

Table 7 matches the research questions to the research method adopted and also to the theoretical frameworks employed.

Research Question	Research Method	Research Instrument	Framework
<p>Research Question 1: What is the extent of Web 2.0 adoption in South African civil society organisations?</p> <p>a) To what extent are Web 2.0 social media services being adopted by civil society organisations?</p> <p>b) For what purposes are Web 2.0 social media services being adopted by civil society organisations?</p> <p>c) Which Web 2.0 social media services are being adopted by civil society organisations?</p> <p>d) What are the attitudes and perceptions towards the current and future use of Web 2.0 social media?</p> <p>e) How is Web 2.0 being deployed strategically to further the aims of the organisation?</p>	Quantitative	Survey	<p>Diffusion of Innovations</p> <p>Surman and Reilly's strategic use of technology</p>
<p>Research Question 2: What are the implications of Web 2.0 adoption on CSO organisations?</p> <p>a) What transformation does Web 2.0 adoption bring to CSOs at both the inter-organisational and intra-organisational levels?</p> <p>b) How does the adoption of Web 2.0 affect the multi-dimensional interactions that both enable and constrain online advocacy, civil society organisations, and campaigning?</p>	<p>Qualitative</p> <p>Quantitative</p>	<p>Interviews</p> <p>Survey</p> <p>Organisation documents</p> <p>Analysis of social media landscape</p>	<p>Adaptive Structuration Theory</p> <p>Yang's framework of multi-dimensional interactions</p>

Table 7: Mapping of Research Questions

The first research question employs a survey for the collection of the data. The data is then analysed using the constructs from the diffusion of innovations framework and the strategic framework as proposed by Surman and Reilly (2003). The second research question interrogates the implications of social media appropriation on CSOs and employs interviews and results from a targeted survey to collect the data. The data is analysed within the context of the Adaptive Structuration Theory, the framework for the analysis of the multi-dimensional interactions and also Surman and Reilly's strategic constructs.

3.4 METHODOLOGICAL PLURALISM: A MULTI-FACETED APPROACH

Research entails undertaking certain activities in the pursuit of collecting empirical data referred to as either research methods or techniques. Research methodology is used to describe the general approach to the research, for example a qualitative research methodology.

This research followed a phased process: (1) the first step is a good understanding of the research context by the researcher, by participants involved in the research process, previous literature, and of concepts and frameworks (2) second is an analysis of the empirical data to understand how it has been generated, and the context within which it existed and was maintained (3) next is the assessment of the assumed explanations and other possible alternative explanations and (4) finally a plan of action to report on, and distribute the results (Tashakkori & Teddlie, 2003).

Researchers in Information Systems (IS) are encouraged to choose methodologies appropriate to the nature of the task (Galliers, 1991). Mingers & Stowell (1997) argue that the discipline of Information Systems, within which this study is framed, is now so entrenched and fundamental within society that it must draw upon many disciplines, all characterised by a plurality of research paradigms. Avgerou, Ciborra & Land (2004) note that IS are positioned between the disciplines of management studies and applied computing, where it is influenced by various "kindred and reference disciplines."

This research adopted a multidisciplinary approach using both qualitative and quantitative methodologies, and associated research methods. Advantages of the multi-method approach include (1) triangulation which validates the data and the results by using a variety of data sources (2) creativity which is described as discovering contradictory influences that point to further work and (3) expansion which entails increasing the range of the research to include wider aspects of the research situation (Tashakkori & Teddlie, 1998). Robey (1997) contends that the discipline of IS demands a diversity of research methods which will contribute a wider range of knowledge on which research and theories can be based. Rogers *et al.*, (2009) argue for more ethnographic research methods, like in-depth interviews, to complement the largely quantitative analysis currently employed in organisational innovation studies.

Quantitative research is a time-honoured approach to investigating Information Systems (IS) and organisational phenomena. In quantitative techniques numbers are the equivalent of values, and they also represent different levels of abstraction of theoretical constructs; the analysis of these values is provides as convincing scientific evidence of the workings of a phenomenon (Straub, Gefen & Boudreau, 2005). Quantitative methods are useful in describing the ‘big picture’ and by their very nature are broad in their application and outlook (Leedy & Ormrod, 2010).

A qualitative design allows for in-depth probing of issues and greater detail in responses (Denzin & Lincoln, 1994). Qualitative methods, for example in-depth interviews, provide a more nuanced and detailed account that would not otherwise emerge from a survey. It enables interaction with the participants in a natural setting and allows for follow-up questions. Avison, Lau, Myers & Nielsen (1999, p. 94) state that one of the strong points of qualitative methods is their “value in explaining what goes on in organisations” while Kaplan & Maxwell (n.d.) argue that qualitative methods are particularly helpful to understand and explore what technology means to people. Both points are particularly relevant to this study of Web 2.0 adoption in CSOs.

3.4.1 Overview of Research Approach

The empirical research was split into two distinct phases as depicted in Figure 27. The numbering of the phases as one (I) and two (II) does not imply a temporal order with both phases of the research occurring simultaneously in some instances.

Phase One was quantitative and made use of a survey to collect the empirical data. The results of the survey were expected to paint a picture of the extent of adoption of Web 2.0 services across South African civil society, the reasons for such adoption, and the benefits (both perceived and realised) of such adoption. The surveys gave a broad overview of usage whilst describing the actual services being deployed. The survey targeted eligible South African CSOs i.e. operational CSOs with an Internet presence and a valid email address. The process to determine eligibility of CSOs is described in section 3.5.3 of this chapter.

The population of South African civil society organisations is most comprehensively embodied in the Prodder database. The Prodder database is maintained and administered by the non-government organisation (NGO) SANGONeT, whose main function revolves around ICT-related services to the broader NGO sector. Founded in 1987, the SANGONeT mission is to provide education and support services to ensure that civil society organisations based in Southern African have the ability to deploy ICTs effectively (SANGONeT, 2011). The intention of maintaining the Prodder database is to provide contact and other demographic information about the organisations that operate in the civil society sector (Barnard, 2008). The database

highlights the scale and scope of the civil society sector as a whole, and also provides information on the specific initiatives undertaken by organisations, which provides valuable information for donors, supporters, government departments and other stakeholders who may want to interact with the sector (SANGONeT, 2011).

Phase Two was a case study analysis of the global environmental organisation Greenpeace. The approach was quantitative and qualitative and employed surveys and multiple in-depth interviews. Organisational documents were also collected, which as Yin (2003) argues are a good source of evidence in that they are stable, unobtrusive, exact and have broad coverage.

The case study approach is considered an intensive and deep examination into one example of a phenomenon and is often used in exploratory research (Hussey & Hussey, 1997). The case study approach is a well-represented qualitative research method in the IS discipline (Alavi & Carlson, 1992; Orlikowski & Baroudi, 1991). Yin (2003, p. 13) describes the scope of a case study as "...an empirical inquiry that investigates a contemporary phenomenon within its real-life context, especially when the boundaries between phenomenon and context are not clearly evident." The use of a case-study as a research approach imposes a methodology that covers the design of the research, how the data will be collected, and any specific techniques that may be employed in the analysis of the data (Yin, 2003). The case study is not merely about defining specific aspects of the research, like the collection of data, but must be considered as an all-encompassing strategic approach to research (Stoecker, 1991).

The actual research unit under investigation is the individual 'thing' or 'case,' which may be an individual but can also be some other entity (Neuendorf, 2002). Because the major questions for this study remain at the organisational level the unit of analysis were Greenpeace offices that are actively campaigning using social media. Rogers *et al.*, (2009) argue that the focus on individuals as the unit of study should be broadened to the levels of organisations.

The use of a case study encompasses both single instances and multiple case studies, which are design variations within the same methodological framework. Multiple case study design occurs when the research investigates more than just one case, and while every unit is considered an individual instance (or case study) of the innovation being adopted, the study as a whole covers all of the units (Yin, 2003). A further definition of case studies states that the research design employed is an example of an *embedded case study* where attention is given to subunits within a single case, which is contrasted to holistic case studies that focus on the global nature of the organisation. Herriot & Firestone (1983) write that multiple cases provide evidence that is often more convincing which ensures that the study as a whole is more robust. This research adopted an interpretive case study approach, which as Walshman (2006) argues is based on designing and implementing fieldwork.

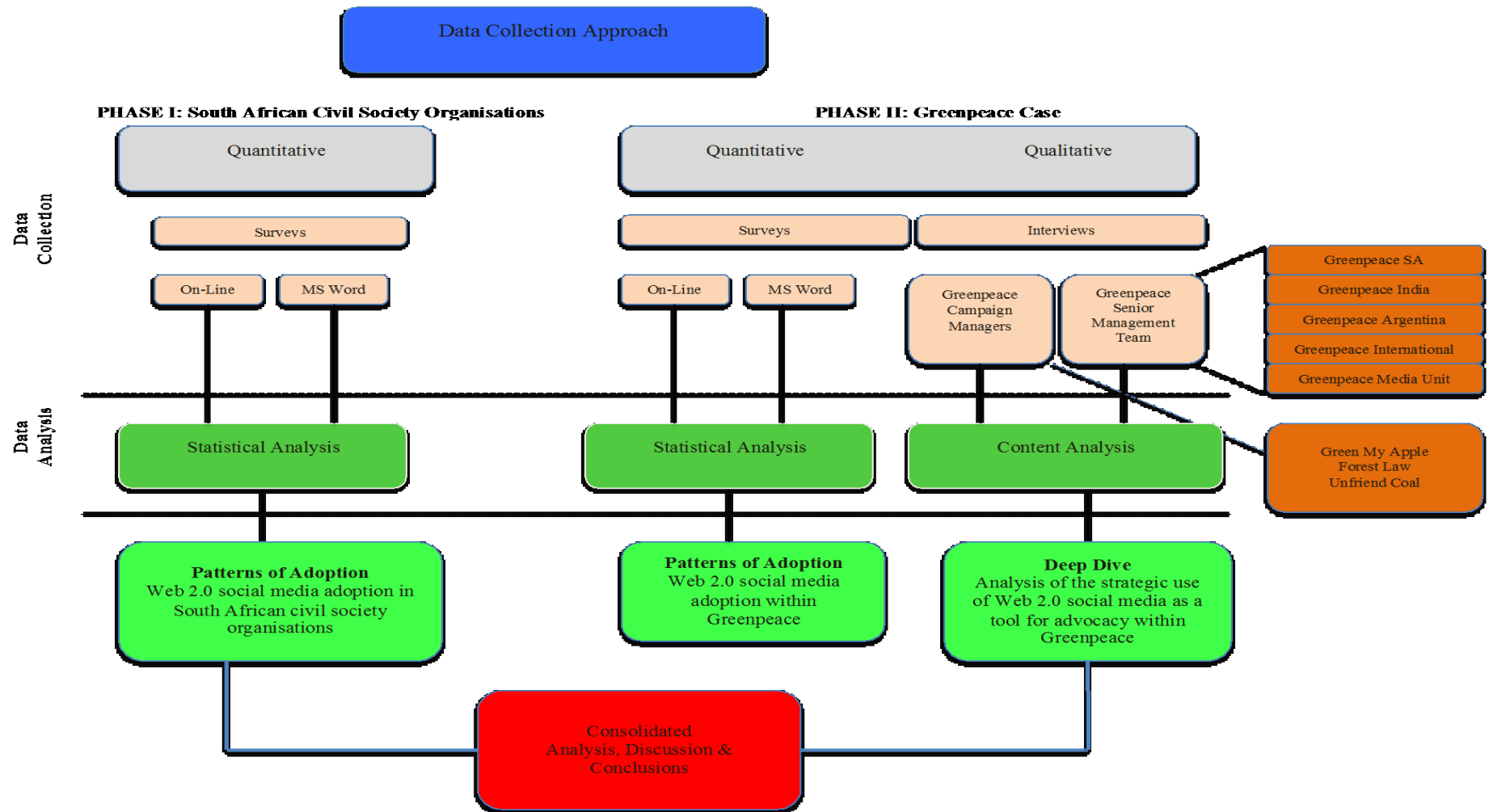


Figure 27: Data Collection Approach (Adapted from Nugroho, 2007)

3.4.1.1 The Choice of Greenpeace as a Case Study

Castells (2004) argues that the environmental justice organisations have been leaders in the adoption of emerging technologies, in particular the Internet and many of the advances made by these organisations comes from their ability to adapt to communicating with these new technologies. Greenpeace is one of the world's largest global environmental justice organisations, and has been at the forefront of environmental issues since its inception in 1971. The organisation has probably done the most to bring environmental issues to the attention of the public through its high-profile media-orientated protest campaigns (Castells, 2004). Diani (1999) suggests that Greenpeace is an excellent example of a professional protest organisation. Referring to the Greenpeace Argentina office Kincade and Verclas (2008) maintain, "Greenpeace Argentina has established itself as one of the premier advocacy organisations in the country and region. Alongside the direct-action flair for which Greenpeace is famous, its grassroots organising, online advocacy, use of social media, and innovative use of mobile technology has enabled it to win remarkable legislative victories in Argentina."

The organisation was formed in 1971 and emerged out of protests against proposed nuclear testing on islands near the coast of Alaska. The Greenpeace head office is in Amsterdam and the organisation has grown into a global networked organisation of over forty national/regional offices. It is supported by individuals and trusts and by the end of 2011 Greenpeace supporters numbered approximately 2.9 million globally and has revenues of over one hundred million euros (Greenpeace, 2009). Section 5.2 has a detailed discussion on the history of Greenpeace, and of the selected advocacy campaigns that has made Greenpeace an appropriate choice for a case study.

3.4.2 Research Design

A research design is a technical plan that attempts to link the beginning and ending of a study and which helps the investigator get "from here to there" (Yin, 1989, p. 2). Leedy (1993) defines a research design as an operational framework within which facts are placed to make their meaning clearer; the aim of such of a research design is to describe and analyse the methods used and thereby clarify any presuppositions and consequences in order to highlight their limitations.

3.4.2.1 Timelines for Data Collection

This section introduces the research methods employed for data collection, with Figure 28 illustrating the timeline for data collection.

The data collection spanned a period of nine months with participants in the research located all across the world. Two surveys were undertaken:

1. The first survey targeted South African civil society (May through to June 2011).
2. The second targeted all Greenpeace national / regional offices (October to November 2011).

Two separate sets of in-depth interviews took place. Physically these occurred in three countries, while virtual interviews (via Skype) took place in a further three countries. The interviews targeted:

1. Greenpeace Senior Management Team (April through to November 2011).
2. Greenpeace campaign managers (September through to November 2011).

The results of the data collection will be discussed in detail under the main headings of Data Collection: Surveys (section 3.5) and Data Collection: Interviews (section 3.6).

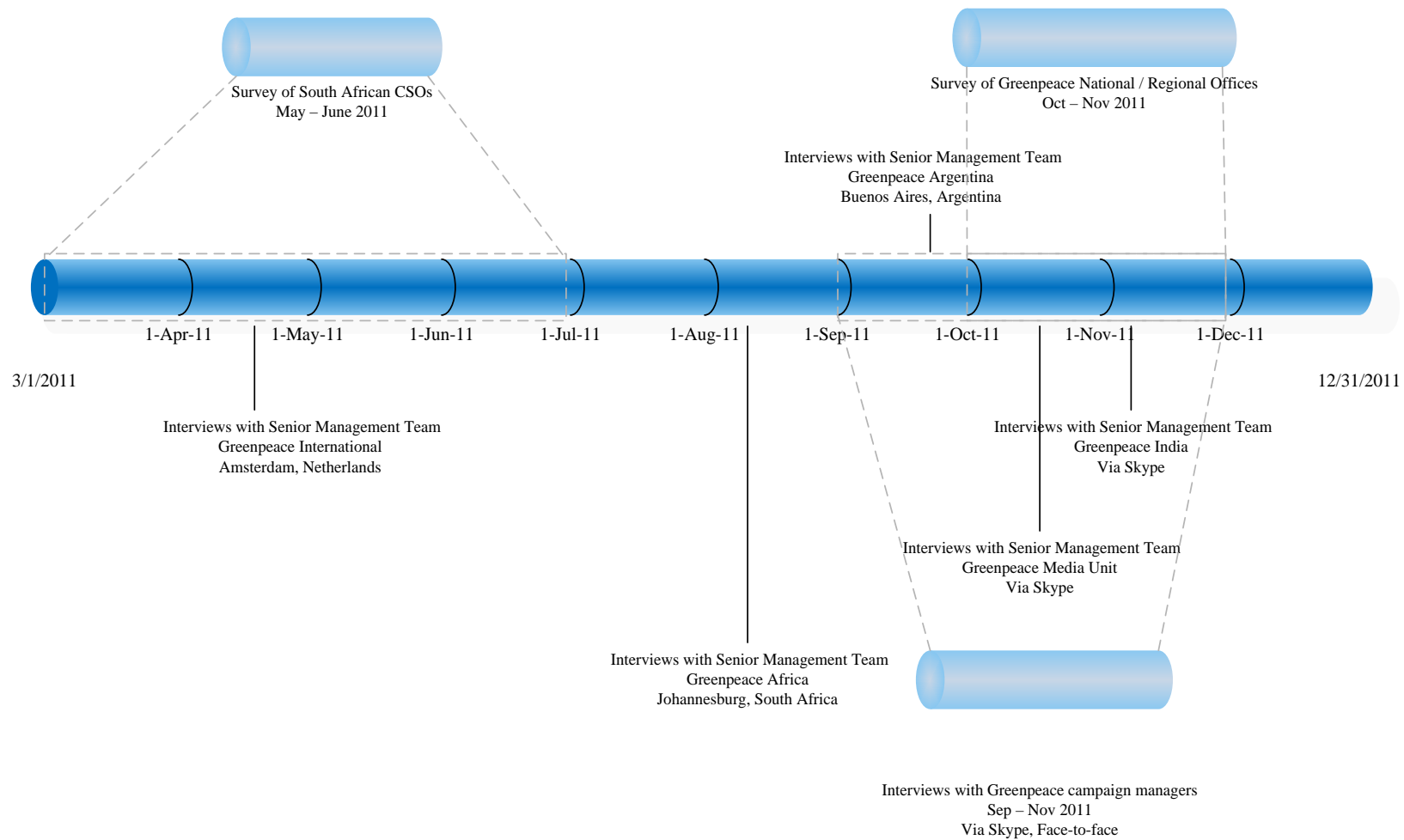


Figure 28: Data Collection Timelines

3.5 DATA COLLECTION: SURVEYS

As noted two sets of surveys were conducted with the first targeting South African civil society and the second aimed at Greenpeace national and regional offices. Save for some minor changes, which are detailed in section 3.5.4, the same survey instrument was used. Both surveys were conducted in English.

3.5.1 Questionnaire Design¹⁶

The survey was designed for three purposes.

- The first was to capture information specific to the organisation i.e. size, age, financial position, the nature of the organisation, core issues engaged in, and relationship with technology, specifically their relationship and reliance on Information and Communication Technologies (ICTs) and the Internet.
- The second part evaluated the level of knowledge and adoption of Web 2.0 services. It probed the reasons for deployment and identified what the perceived benefits were, and any barriers to adoption.
- The last section identified the particular Web 2.0 services deployed, length of time these services were deployed and the reason for adoption. This section also collected data on the use of mobile devices and mobile platforms.

The survey was developed using the Google Docs¹⁷ toolset, which created an online version of the survey. An MS Word[®] version was also developed. Respondents could complete the survey by accessing the online version via a Google[®] generated URL or by completing the soft copy of the survey. Sheehan & Hoy (1996) state that online surveys are an effective means of survey research - they cannot be easily mislaid and remain in place until purposefully deleted. In research conducted, Cook, Heath, & Thompson (2000) note that respondents cite ease of use as one of the things they liked most about answering a Web survey.

3.5.2 Ensuring Reliability of the Survey

The development of the survey instrument followed a comprehensive process. An initial desktop review of existing and similar surveys was conducted, which provided a necessary structure and some of the initial operationalised survey questions (Nugroho, 2007;

¹⁶ See Appendix C for a copy of the Questionnaire

¹⁷ Google Docs is a suite of products that lets the user create, work and store different kinds of documents, in real time (Google, 2012)

MobileActive, 2010; NTEN, 2010; NTEN, 2011a; NTEN, 2011b). A few of the survey questions also emerged from the literature review.

The ethics committee of the University then subjected the survey instrument to further scrutiny. This process was successfully completed on 10th August 2010 (See Appendix K for a copy of the ethics committee letter). On obtaining ethical clearance the survey was then sent to a statistician for further evaluation. Suggestions from the statistician resulted in some minor changes i.e. changes to of the scales and changes to the wording of some of the questions. One important change was the inclusion of a 'not sure' option for certain questions. With Web 2.0 being a recent innovation, this was an important change as it gave an additional response option.

3.5.2.1 Pre-test and Pilot

The next stage in the refinement of the questionnaire involved a pre-test and pilot. It is recommended (Compeau & Higgins, 1995) that both a pre-test and a pilot test be conducted prior to the initial data collection phase in order to gain feedback on:

- The research process
- The wording of particular items
- The data gathering methods to validate them and ensure that they are free from errors

Furthermore, pre-tests and pilot studies serve as a trial run that enables the researcher to re-evaluate the research methods being contemplated, and also to relook at the operational aspects of collecting the data prior to the commencement of the actual fieldwork. The result of this process is that the reliability and validity of the research is improved which can also save time and money, and reduce effort in the long run (Mathison, 1988; Maxwell, 1992; Patton, 2001).

3.5.2.1 (a) Pre-test

A pre-test, which is the small-scale test of a specific aspect of the research, was conducted for the survey component of this study in September 2010. The questionnaire was presented to colleagues at the University with a view to justifying the selection of the questions, and to evaluate the possible responses. The suggestions concerning the wording and structure of the questionnaire were incorporated into a revised version of the questionnaire. The number of questions was deemed to be too many and an attempt was made to consolidate related questions. Overall the respondents in the pre-test indicated that the questionnaire was relatively clear and easy to complete. The revised questionnaire was again subjected to the above peer review process.

3.5.2.1 (b) Pilot Study

A pilot study is an initial test of one component of the research procedure that follows the entire process from beginning to end using a small sample of the data (Mathison, 1988; Maxwell, 1992; Patton, 2001). A comprehensive pilot of the questionnaire was conducted to test both the use of the online version and soft copy in a live environment. It was important that the online version worked efficiently as this was the main method of access to the survey. The pilot was also used to ensure that the responses were statistically analysable.

Twenty-one questionnaires were distributed on 18th October 2010. At the time of the pilot the researcher was enrolled for an ICT-related postgraduate diploma at a South African University, and was also employed as a consultant in the ICT sector. The questionnaire was distributed to thirteen of the researchers' fellow students and eight work colleagues. All candidates for the pilot, fellow students and colleagues, were familiar with emerging technologies.

Reminder emails were sent out on the 4th November 2010. Nine responses were eventually returned. Based on these, changes were made to the questionnaire. Some questions were removed because they did not make sense within the context of the study, one duplicate question was identified and removed, the order of questions were changed to ensure that the questions flowed more logically, and options of 'not familiar with this service' and 'don't know' was added where appropriate.

The granularity of some of the scale options provided was changed. For example the range of staff numbers was changed to cater for smaller organisations and the option in response to the organisations' financial position was changed to increments of three hundred thousand. With specific reference to social media services: a category of microblogging was added; the question pertaining to podcasts was expanded to 'downloading' and 'publishing' of podcasts; the questions relating to blogs was expanded to 'maintaining of blogs' and 'monitoring of the blogosphere'; and a question relating to mobile phones was included.

3.5.3 A Census of South African Civil Society Organisations

As previously mentioned, the Prodder Database was the source of civil society organisations in South Africa. At the time the survey was undertaken, the database had information on three thousand two hundred and forty one (3241) civil society organisations. The target population represented all the CSOs listed in the Prodder database that had an Internet presence and a valid email address.

Unfortunately the information from the database could not be extracted programmatically into a usable format. Each organisation's information had to be displayed individually on the screen, and then extracted manually using the cut and paste functions and then stored into an MS Excel[®] spread sheet. The extracted information included organisation name, website address, type, legal status, contact persons email addresses and telephone numbers. The information was then manually validated and all organisations that did not have an email address were eliminated, which gave a total of two thousand five hundred and seventy one (2571).

The survey was distributed in batches of five hundred on the evening of Tuesday 31st May 2011 to the two thousand five hundred and seventy one organisations. It has been shown that the likelihood of potential respondents responding to a survey increases if they receive the survey in the morning of a working day (PeoplePulse, 2012). An email and an introductory letter stating the nature of the research, information usage policies and an undertaking to maintain anonymity accompanied all questionnaires (see Appendix C for a copy of the survey protocol which includes an assurance of confidentiality). Furthermore the timing was chosen in consultation with the IT administrators of the University to ensure that the University's email server would handle the volume of email traffic.

Of the two thousand five hundred and seventy one organisations (2571), eight hundred and fifty nine (859) did not have a valid email address with the emails being returned as undeliverable. The remaining one thousand seven hundred and twelve organisations (1712) represented all the South African civil society organisations that had a valid email address and was the eventual population of the study.

3.5.3.1 Reminders: South Africa Civil Society Organisations

At first the response to the survey was good but soon tapered off. This is borne out by the research, which shows that in an on-line survey the return of the questionnaire is almost immediate but declines quickly soon after (Weible & Wallace, 1998).

During the course of the survey three reminders were sent. The first reminder was sent a week after the survey was initially distributed and the second reminder a week later. The third reminder was then sent two weeks later. From the graph in Figure 29 we can see that the reminders helped to boost the survey response rate. Estimates for increase in response rates attributed to reminders vary between twenty-five and fifty percent (Cook *et al.*, 2000). As can be seen, after the first reminder the response rate again decreased considerably. The second and third reminders saw only a small increase in the previously flattened response rate. Couper (2000) argues that too many reminders may indeed have the opposite effect and actually slow

down response rates. Crawford, Couper & Lamias (2001) suggest a shorter period of time between initial request to participate and first reminder may work better.

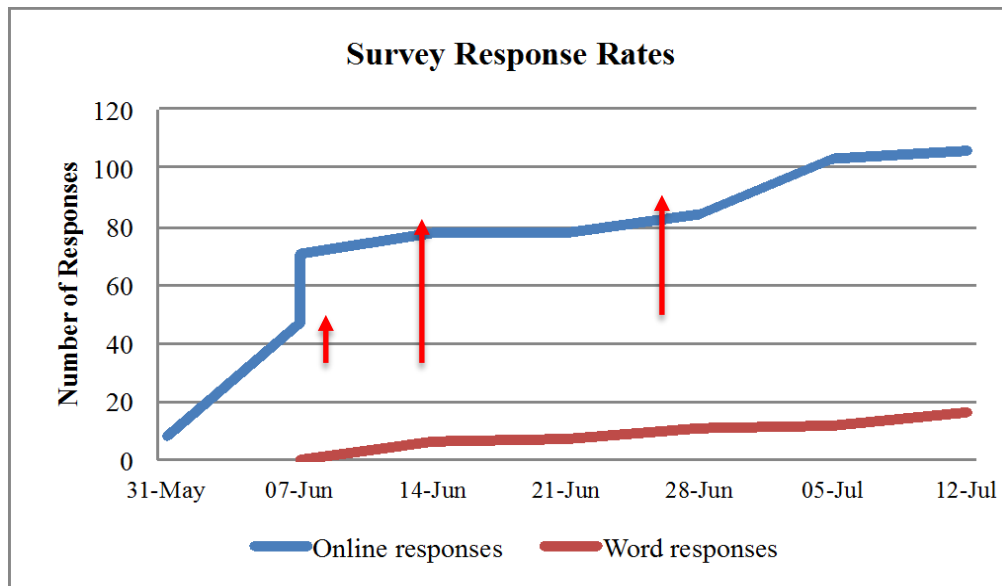


Figure 29: Survey Response Rates

The reminders included the soft copy of the survey and urged organisations that had experienced problems with access to the online version to complete and email this version. It must also be noted that the soft copy of the survey were only received after the first reminder. One explanation is that organisations that had been having problems with Internet access had not realised that the option of completing the soft copy was available. This was clarified in the reminder, which led to the MS Word[®] documents being completed and returned.

As suggested in other studies (e.g. Nugroho, 2007) this study provides further evidence that the sending of reminders positively influences the response rate. Previous studies have also found that a reminder with an attached document has a more positive effect, than does an email reminder that includes a hyperlink to a survey located on the Web (Kaplowitz, Hadlock & Levine, 2004).

The final responses received included one hundred and five online and seventeen MS Word[®] documents giving a total of one hundred and twenty two. Statistically this was adequate for a population of one thousand seven hundred and twelve organisations.

3.5.4 A Survey of Greenpeace National and Regional Offices

As noted previously there were minor changes to the questionnaire that targeted Greenpeace¹⁸:

- A question was added that asked each office to identify the currency in use. This was done to ensure that the financial position of all offices could be standardised across one currency, in this case the United States Dollar (USD), to ensure accurate comparisons.
- The questions that concerned the nature and the core issues of the organisation were removed. All Greenpeace offices are fundamentally advocacy organisations involved in environmental justice issues (della Porta & Diani, 2006).

Greenpeace is both a highly centralised organisation, and at the same time, a globally decentralised network. Greenpeace has an International office in the Netherlands and has a presence in over forty countries through its thirty national and regional offices. These offices operate independently and modify global campaigns to suit the local context. The head office formulates the strategy for global campaigns. In addition it has a European research center, and a Digital Innovation Unit that was launched in August 2011 and is based in Washington. Within Greenpeace, regions sometimes control many satellite offices e.g. Greenpeace Australia, in addition to controlling the office in Australia, controls the office in the Pacific island of Fiji. An evaluation of the regions yielded thirty distinct national and regional offices that were candidates for the survey, and was the population for this survey.

With Greenpeace International sanctioning the study, it was relatively easy to obtain email addresses of the appropriate respondents in each of the thirty offices. A survey of all offices was undertaken in the last week of September 2011. Again this was done electronically with both an online version and a MS Word[®] version available. Seven responses were returned due to invalid email addresses. These email addresses were verified and emails were resent to these seven Greenpeace offices in the week that followed. One office asked for confirmation that the study was an approved study and that permission had been obtained. This was supplied.

3.5.4.1 Reminders: Greenpeace Offices

Only one reminder was sent on 14th October 2011. The Greenpeace research unit then undertook to follow up on responses internally and to motivate people to respond. There was eventually a thirty percent response rate to the survey with nine responses being received. The survey ended at the end of November 2011. Four of the nine responses corresponded to the Greenpeace offices in which interviews took place. The fifth office in which interviews took place was a

¹⁸ See Appendix C for a copy of the survey

research center and think tank and did not undertake advocacy work in the way national / regional offices did.

3.5.5 Response Rates

While the response rate was statistically adequate for the survey of South African CSOs, it may seem low seen in light of the population. This can be attributed to the issue of access, with the civil society coalition SANGONeT (2011) for one noting, that of the approximately one hundred thousand civil society organisations operating in South Africa, only a small percent are equipped with the necessary ICT capacity and expertise required to support their work, and therefore the potential impact of ICTs on the work of CSOs remains limited.

While online surveys show a better response speed and are cheaper to administer than postal surveys (Sheehan, 2001), Crawford *et al.*, (2001) cites various studies which show that traditional postal surveys have a better response rate than Web-based surveys, e.g. Kwak & Radler (2002) obtained a response rate of forty-two percent for mail and twenty-seven percent for Web, while another study obtained response rates of forty-eight percent for mail and thirty-seven percent for Web (Guterbock, Meekins, Weaver & Fries, 2000).

The low response rate for the Greenpeace surveys was surprising considering the fact that the Greenpeace Board, a fact that was highlighted when the surveys were distributed, sanctioned this study. Numerous attempts were made by senior managers to get national offices to complete the survey. In hindsight one of the reasons for the low response rate may have been the timing of the survey, which coincided with the seventeenth United Nations Framework Convention on Climate Change (UNFCCC), also known as the Conference of the Parties (COP17), which was held in Durban, South Africa in December 2011. Conferences of this nature and the UN COP conferences in particular, are a major staging ground for organisations like Greenpeace to lobby and drive their agendas, with Keck & Sikkink (1999) noting that international conferences create arena for forming and strengthening transnational advocacy networks. The conference attracted a large number of Greenpeace activists from around the world with many arriving far in advance of the actual conference. The focus for a large number of senior Greenpeace personnel was the actual planning and logistics for the conference, which started a few of months prior to COP 17, which in turn may have made the survey less of a priority for many of the offices.

3.6 DATA COLLECTION: INTERVIEWS

Two separate sets of in-depth interviews, each of which will be discussed separately, were held namely:

- Interviews with members of Senior Management Team of five Greenpeace offices
- Interviews with Greenpeace campaign managers

The interviews spanned the globe and while interviewee responsiveness was largely similar across the world, it was incumbent on the researcher to do as much homework about each country visited to mitigate differences inherent in each country. Walshman (2006) argues that the researcher should ‘be there’ in both body and spirit, while Ciborra (2004) argues that the concept of ‘situatedness’ should be more than mere cognitive processes and must be redefined so that emotions and feelings can be incorporated.

The interviews were conducted in English, were semi-structured and pre-arranged with the selected subjects. An introductory email initially established contact with respondents (See Appendix D for a copy of the interview protocol which includes the introductory email). Respondents signed consent forms and all interviews were recorded for later transcription. The interviews made use of an interview schedule, which served as a guide to structure the interview process. It also allowed the researcher and the participant to have full discussions and explanations of the questions and answers. It further ensured that the same questions were posed to each participant, which made interviewing of a number of individuals more systematic and comprehensive (Silverman, 2000).

The researcher was aware that individual interviews limit the use of alternative lines of questioning i.e. the process of posing different questions to different people, depending on their particular experiences (Dixon, Bouma & Atkinson, 1991). This was mitigated to some extent by posing questions of a strategic nature to more senior members of the organisations, and ‘operational’ type questions to people involved in social media-led campaigning. Classification questions - which are about the respondents’ experience and about the specifics of the organisations that they represented - were also included. While there is some debate about where the classification questions should be located, this research asked these questions at the beginning, so as to begin the interview in a non-threatening manner (Hussey & Hussey, 1997). Interviewees were free to digress from the theme of a particular question, as long as the information given was useful to the research topic (Cresswell, 1994).

The interviews were held either in person or via a Skype call. The interviews were conducted during the period of April 2011 through to November 2011 and took approximately one hour each. The shortest interview lasted forty-five minutes and the longest one hour and twenty minutes. Follow-up interviews were held via Skype, which was feasible once the main issues were established. The follow-up interviews were for clarification purposes and also afforded the opportunity to make clear any ambiguities that arose during the transcription process. Queries were also clarified via email.

3.6.1 Interviews with Greenpeace Senior Management Team (SMT)

The original intention of the research was to conduct interviews in the Greenpeace International, Greenpeace Africa, Greenpeace Indonesia and Greenpeace India offices. Based on discussions with senior members of the organisation the offices finally chosen were Africa, Greenpeace International (Netherlands), India and Argentina. The offices were suggested based on their work being done with social media. Interviews were conducted with the senior management team (SMT) and campaign managers directly involved in Web 2.0 campaigning.

3.6.1.1 Interview Protocol

The interview probed the following central themes: the fundamental use of Web 2.0 media, the stages of adoption of Web 2.0, the strategic and future use of Web 2.0, and finally the relationship between Web 2.0 adoption and the multi-dimensional aspects of state power, cultures of contention, transnationalism, the market and the mutual constitution of online activism and civil society (See Appendix D for a copy of the interview protocol).

3.6.1.1. (a) Greenpeace International

The first set of interviews was conducted with the senior management team (SMT) of Greenpeace International, which is housed in Amsterdam, Netherlands. These were held in person between the 25th to the 29th April 2011. The interviews lasted between forty and seventy minutes. One additional interview was held via Skype with the head of mobile strategy based in Finland. In addition to the interviews, on-going email contact with the interviewees resulted in a host of strategic organisational documents being provided. It was during these interviews that a number of campaigns were identified for analysis and were described as ‘break points’ in terms of Greenpeace social media advocacy.

3.6.1.1 (b) Greenpeace Africa

The second set of interviews was conducted with Greenpeace Africa, in their Johannesburg offices. Four interviews were held with the Senior Management Team (SMT) and were held in one sitting on 19th August 2011. The interviews lasted between thirty and sixty minutes.

3.6.1.1 (c) Greenpeace Argentina

Interviews with the senior management team of Greenpeace Argentina were held on the 27th and 28th September 2011. Two interviews were held in Buenos Aires, Argentina and lasted between fifty and eighty minutes.

3.6.1.1 (d) Greenpeace India

The interview with the communication director of Greenpeace India was held via Skype on 07th November 2011 and lasted thirty minutes.

3.6.1.1 (e) Greenpeace Digital Innovation Unit

One interview was held with the Director of the newly formed Digital Innovation Unit, based in Washington DC. This interview took place on 15th October 2011 and lasted thirty minutes.

3.6.2 Interviews with Greenpeace Campaign Directors

As stated previously, Greenpeace International identified a number of campaigns that were good candidates for analysis in terms of social media led campaigns. These were considered social media activism break points and had not previously been documented or benefited from any comparative analysis. Ten campaigns were identified. Based on available literature, three were chosen for deeper analysis. An initial desktop-based literature review was conducted on each campaign, and analysis of the Web 2.0 space - which included analysis of Twitter, Facebook and the blogosphere – was also conducted.

One of these campaign interviews was held in person during the visit to the Argentinian office. The remaining two interviews were conducted via Skype.

3.6.2.1 Interview Protocol

The interview protocol was designed to probe for specifics on the campaigns, the objectives of the campaigns, the relationship of social media to traditional campaigning, and the success factors attributed to social media and lessons learned (See Appendix D for a copy of the interview protocol).

What follows is a brief description of the campaigns and details of the interviews. The details of the campaigns are included in Chapter Five. The interviews for these campaigns were held during October and November 2011.

- (a) **Green My Apple:** The campaign aimed to reduce electronic waste, improve recycling policies, and fundamentally change the design, production and ultimate disposal of electronic products. The interview was held on 28th November 2011 via Skype and lasted thirty-five minutes.
- (b) **Argentina Forest Law:** The campaign aimed for the passing of law to protect Argentina’s forests from unfettered deforestation (Kinkade & Verclas, 2008). The interview took place on 28th September 2011 in Buenos Aires, Argentina and lasted eighty minutes.
- (c) **Unfriend Coal:** The campaign targeted Facebook and was an attempt to convince the social networking company to start using clean energy to power their data centers. The interview took place on 14th November 2011 via Skype and lasted sixty minutes.

3.6.3 Final notes on the Interview process

All interviews were recorded using a hand-held recording device. Table 8 summarises all of the interviews that were held:

Greenpeace Offices	Senior Management	Date (2011)	Interview Type
International	7	25-29 April	Face-to-face
Africa	4	19 August	Face-to-face
Argentina	2	28 September	Face-to-face
India	1	07 November	Face-to-face (Skype)
Digital Media Unit	1	15 October	Face-to-face (Skype)
Total	15		
Campaign Interviews	Campaign	Date	Interview Type
Argentina - Forest Law	1	28 September	Face-to-face
International – Green my Apple	1	28 November	Face-to-face (Skype)
International – Unfriend Coal	1	14 November	Face-to-face (Skype)
Total	3		
TOTAL	18		

Table 8: List of Interviews Conducted

A total of fifteen interviews were held with the Greenpeace Senior Management Team and three interviews with campaign managers.

3.6.3.1 Transcription of interviews

All interviews were transcribed using a professional transcription service. The transcripts were then edited to confirm words that could not be clearly heard on the recording. These edited transcript documents formed the basis for the analysis described in chapter five.

3.6.3.2 Some Interview Techniques Employed

The following points were observed during the interview process:

It was important to stay attentive to various aspects of the interview including the writing of field notes, looking for useful non-verbal communication and checking that the recording device was working. One trait that interviewers must inculcate is the ability to be a good listener, which entails being faced with large amounts of new information that must be analysed without bias (Yin, 2003).

It was important to be sensitive to the views of the interviewee, not only as a matter of courtesy but also for getting the most out of an interview. The interviewer had to tolerate the views of 'evangelical' respondents whose passion for the topic ensured that the questions were answered with a level of detail not required.

It was necessary to tolerate silences during the course of the interviews. A key skill is to overcome the fear that the interview was going awry and to keep quiet and not rush the respondent to the next point. Silent probes are effective in drawing out further responses.

Effective prompting techniques are very useful. While silences can be productive, there are times when the researcher may feel it necessary to spur the informant to speak. This was done in a subtle way rather than demanding answers, the idea being to gently nudge the respondent to share their knowledge or thoughts on an issue. Techniques included repeating the question, repeating the last few words spoken by the respondent or providing examples. This helped obtain information from the interviewee that might not have emerged naturally (Mathison, 1988; Maxwell, 1992). Care was taken to avoid influencing responses by agreeing or disagreeing with statements, or even by the use of body language or facial expressions (Cresswell, 1994).

It is sometimes necessary to probe an answer before moving on to the next point. The probing was subtle and not aggressive and followed Walshman's (1995) advice of maintaining a balance between excessive passivity and over-direction. For example, where answers were unclear or ambiguous, clarification was requested by using a mirroring or reflecting probe such as, 'What you seem to be saying....' Explanatory probes such as, 'What did you mean by that?' or 'What

makes you say that?’ and focused probes such as, ‘What sort of written guidelines, process etc.?’ were used when necessary (Cresswell, 1994).

Information was checked by summarising the respondent’s thoughts and getting confirmation that the understanding was accurate, or making the necessary corrections if a misunderstanding had occurred.

It would have been inappropriate for the interviewer to share personally held beliefs and values about the topics that were discussed in the interview. Caution was exercised not to show surprise, disapproval or pleasure through facial expressions or gestures.

To ensure that the interview was complete, the interviewees were asked at the end of the interview if there were any important issues they thought had not been covered by the interview.

3.6.3.3 Ethical Consideration for Data Collection

Bogdan & Biklen (1992) contend that qualitative research imposes a radically different relationship between researcher and interviewee, so much so that the process may actually require the drafting of new code of ethics. On initial contact with interviewees it was established whether permission needed to be obtained from senior management for the interview to take place. All interviewees were senior members of their organisation and did not require additional organisational permission to participate. Researchers must treat all participants in the research process with respect; furthermore it is incumbent on the researcher to ensure that the interviewee’s agreement to participate in the research is both obtained and fully understood (Campbell, 1997). All potential respondents were informed of the purpose of the research. This was done during the initial contact with the respondent via the introductory letter and at the time of the interview.

3.6.4 A Summary of the Multi-Method Approach

A multi-method study, such as this one, is not always easy, but is necessary to portray the complex dialectic relationship that exists between civil society and adoption of technology, two concepts that are in their own right complex. Quantitative methods are useful for painting a broad picture. They can identify trends and patterns, a sequence of adoption, and can point to the benefits of appropriation, both expected and experienced. What this picture misses though, are the details of this complex relationship, which is remedied through qualitative methods. Interviews allow for probing and the exposing of nuances in relationships. They point to additional related areas of interest and provide a richness of data. Table 9 summarises the data collection phases, response rates and numbers of interviewees.

Research Methodology	Dates (2011)	Data Collection Protocol	Responses
Quantitative	May-June	Survey of South African civil society organisations	122
	October – November	Survey of Greenpeace national & regional offices	9
Qualitative	April – November	Interview with Senior Management Team of the following Greenpeace offices: International, Africa, Argentina, India & the Digital Media Unit	15
	September – November	Interview with Greenpeace Campaign Managers: Green My Apple, Forest Law, Unfriend Coal	3

Table 9: Summary of Data Collection Phases

The multi-method gave both a breadth and a depth to the research, and in combination made up for any shortcoming inherent in either of the methodologies. In summary this research benefits from a combination of fieldwork methods, not only for the data generated, but also because it allows for a richer interpretation and understanding of the data.

Analysis Sections	Operational Questions
Organisational Innovativeness	1.3 The nature of your organisation 1.4 Organisational Issues 1.5 Organisational Age, Employee Profile, Financial position, Computers and Internet adoption and influence
Adoption categories	3.1 Levels of knowledge 3.2 Social media services adoption in South African CSOs 2.3 Intensity of usage 3.3 Usage areas
Drivers of Web 2.0 Adoption	3.7 Internal drivers of adoption 3.8 External drivers of adoption 3.3 Functions of Web 2.0 usage
Benefits and Barriers	2.4 Benefits of Web 2.0 adoption 2.5 Barriers to Web 2.0 adoption
Perceived Attributes and Attitudes Towards Web 2.0	2.1 Perceptions of Web 2.0 2.7 Areas of Impact
Strategic Uses of Web 2.0 (Collaboration, Mobilisation, Observation, Publishing)	Various questions and sub questions from the survey were aggregated for the analysis of the strategic constructs

Table 10: Theoretical Constructs versus Operational Questions

A further breakdown of the theoretical constructs matched to the operational questions in the surveys and the various interview protocols are presented in Table 10.

3.7 DATA COLLECTION: DESKTOP RESEARCH

This section describes the desk-based research methods that included an analysis of documents and secondary data sources.

3.7.1 Social Media Campaigning

A systematic search of the Internet was conducted specifically on research centers like the Berkman Center for Internet and Society at Harvard (Harvard University, 2010) and The Pew Research Centre (Pew Research Center, 2010); online newspapers, magazines and journals; reports, civil society documents, podcasts, online interviews, lectures; and the social media space to identify recent social-media led campaigns. These campaigns are discussed in various sections of the literature review. The search strategy involved subscribing to these sites, which then provided notifications when relevant news reports and articles were published. Internet search engines were then employed to search online newspapers and periodical for any additional commentary and analysis. Searching for the same story online referenced initial television reports. A documentary movie on the history of Greenpeace also yielded valuable information. Other sources used include books, major research reports, journal articles, and conference papers

3.7.2 Secondary Data

Secondary data was gathered from reports released from academic, public and private research organisations. Subscriptions to these organisations sites provided a method of monitoring latest research being conducted on social media-led campaigning. The secondary data was used as corroborative evidence to support (or refute) findings from the primary research, the literature review and the document analysis.

3.8 DATA ANALYSIS

The research questions and the data collection methods are based on various theoretical frameworks and constructs. The data analysis and presentation of the results will synthesise these various constructs to create a consolidated picture explaining the adoption of Web 2.0 technologies and the reciprocal effect on organisational transformation. According to Strauss (1987) a data analysis strategy is a process of systematically applying logical techniques to describe, summarise, and compare data. Yin (2003, p. 99) describes data analysis as the process of “examining, categorizing, tabulating, testing or otherwise recombining both qualitative and

quantitative evidence” to address the propositions of a study. The outcome of the analysis was descriptive and interpretive. The descriptive analyses yielded information on processes and relationships while the interpretive analyses helped to create generalisations and provide insights and identify problems (Campbell, 1997).

3.8.1 Analysis of the Quantitative Data

It is important to recognise that this research studies research constructs which are abstractions. For example the construct ‘*innovativeness*’ described in the Diffusion of Innovations framework, does not have a tangible existence and is said to be latent i.e. it has a reality that is latent in, and revealed through the measures that are employed to capture it (Straub *et al.*, 2005).

3.8.1.1 Descriptive Statistics

Descriptive statistics such as minimum, maximum, mean, median, and mode were used on appropriate items to produce bar charts, pie graphs and histograms.

3.8.1.2 Inferential Statistics

Factor analysis, which is typically used in survey research, is a statistical technique that is employed when the aim is data reduction. With reference to questions 2.1, 2.4, 2.7, 3.1, 3.7 and 3.8:

- The principle component analysis with Varimax rotation and Kaiser Normalisation was used as the extraction method that simplifies the interpretation of the factors.
- Inter-correlations between variables were observed.
- Items loading at or above 0.5 were grouped together as components.

3.8.2 Analysis of the Qualitative Data

Recognising the dependence on individuals’ views this work treated the case study approach as interpretive (Walsham, 1995) rather than scientific as categorised by Galliers (1991). The strategy was to develop a case study description to identify appropriate causal links to be analysed (Yin, 2003). The qualitative data was subject to content analysis, also called reflective interpretation or interpretive analysis (Martin, 2003). Strauss (1987) suggests that content analysis be used in the reduction of qualitative data to develop a more consolidated picture; while the purpose of reflective interpretation or interpretive analysis is to develop a coherent interpretation that is consistent with the views expressed by the interviewees.

The qualitative analysis tool, NVivo[®] was used to analyse the output of the interviews. Introduced in section 1.10 word clouds were also used to provide a visual representation of the

themes that emerged from the interviews. Word clouds provide an aggregate of word-usage statistics and have been used extensively by the social media website Flickr. Word clouds are closely related to social media in general, and to the concept of folksonomies (discussed in section 2.5.5) in particular (Kaser & Lemire, 2007). Word clouds are based on graph theory and are specifically related to the important area of research concerned with the two-dimensional generation of graphs. Some of the research into word clouds include: authors Hassan-Montero and Herrero-Solana have described how word cloud could be improved by a process of clustering similar tags and discarding others; Millen *et al.*, (2005) have improved the searching of words and tags in large clouds with the inclusion of an index; researchers Dubinko *et al.*, (2005) have suggested word clouds that represent tags over a time line; and Jaffe *et al.*, (2006) have experimented with integrating words clouds inside maps, which then has an added dimension of geographical information.

3.8.3 Reliability and Validity

The value of scientific research is partially dependent on the ability of individual researchers to demonstrate the credibility of their findings (LeCompte & Goetz, 1982). This section deals with the criteria of validity that apply to this research and also details the strategies employed to promote validity in the research.

3.8.3.1 Measures of Validity Employed

The concept of validity is defined as qualitative research that is “plausible, credible, trustworthy and therefore, defensible,” (Johnson, 1997, p. 73). Neuendorf (2002) refers to validity as the extent to which an empirical measure adequately reflects what humans agree on as the real meaning of a concept. Validity is term used to describe the difference between qualitative studies that considered better than others. The issue of validity has long been debated in light of the legitimacy of qualitative research; qualitative research must consistently produce valid results, else any program or action premised on the output of this type of research must be considered unreliable (Maxwell, 1992). A few proponents of qualitative research consider the established quantitative standards of reliability and validity as having no relevance to qualitative research (Smith, 1984). Stenbacka (2001) says indicators best suited to the concept of quality in the inductive context are validity, reliability, generalisability and carefulness. According to Campbell (1997) a conservative approach to research pursues validity, generalisability, reliability and replicability, while a more realistic approach is look for credibility, transferability, dependability and confirmability.

3.8.3.1 (a) Descriptive Validity

One of the main concerns with qualitative research is the factual accuracy of the research i.e. is the researcher correctly ascribing a comment made by a respondent during an interview (Maxwell, 1992; Johnson, 1997). Descriptive validity can refer to issues that were omitted and those that were included e.g. a verbatim interview transcript might be descriptively invalid in omitting features of respondents' speech such as pitch and tone that may be essential to the understanding of the interview. Low Inference descriptors refer to descriptions that are close approximations of what the respondent has said, and of the interviewers notes (Johnson, 1997). For example direct quotations are a low inference descriptor that is used extensively. In this study the interviews were recorded and transcribed. The transcriptions were clarified with interviewees where necessary.

3.8.3.1 (b) Generalisability and External Validity

Generalisability is the extent to which finding that emerged from a study may be applicable to other study's that uses a larger sample set of the original population (Neuendorf, 2002). The concept of generalisability is consistent with the term eternal validity.

In qualitative research generalisation is the ability to develop a theory that is applicable across a variety of research contexts, all of which are capable of producing different results (Maxwell, 1992). Generalisability asks the question whether the conclusions drawn from a study are applicable across a population, which in turn makes it necessary for a sample to be representative of a population. Stenbacka (2001) states that that "the basic quantitative demand for generalisability makes qualitative research look suspicious since the concept of sample is used generally in research with no thought of its irrelevance in the qualitative context." Yin (1989) argues that the conclusions that result from a qualitative study are only generalisable for theoretical frameworks, but are not intended to be generalisable for the population.

External validity refers to the use of research findings to make generalisations around the operational aspects of a research study like the people involved, and the setting of the research (Cook & Campbell, 1979); this is also called naturalistic generalisation (Stake, 1990). Normally the need to make research general is not a major concern of qualitative research, because the research context (people and settings) in qualitative research is seldom chosen randomly, and random selection is statistically the most appropriate way to generalise from a sample to a population. Johnson (1992) states a research report should help readers understand the situations in which they can generalise and qualitative research must furnish the following information:

- The number and kinds of people in the study.
- How they were selected to be in the study.
- Contextual information.
- The nature of the researchers' relationship with the participants.
- Information about any respondents.
- The data collection methods.
- The data analysis methods.

All of the above information is provided in detail in this research study with the caveat that anonymity of respondents is maintained. While the respondents from the Greenpeace offices were not identified, they are to some extent identifiable as they are part of the senior management team of specific offices. While there was no intention to generalise, the study did provide an opportunity for naturalistic generalisation.

3.8.3.1 (c) Reflexivity

The term 'researcher bias' is the outcome of the selective observation and recording of information during the data collection process that results from the researchers own viewpoints, which in turn affects data interpretation and the conclusions that emerge (Johnson, 1997). The key strategy to counter researcher bias is 'reflexivity' i.e. the researcher actively engages in critical self-reflection and attempts to monitor and control any biases. Doolin & McLeod (2005) advocate the dispelling of the illusion of neutrality that many academics seek and instead argues for a more reflexive approach, suggesting that the contribution of interpretive research lies not only in adding depth, but also in that the in-depth analysis facilitates the disruption of existing assumptions and uncertainties.

3.8.3.1(d) Data Triangulation

Data triangulation is the process of gathering data from many varied sources. A consequence of data triangulation is that data must be aggregated in order for themes or constructs to emerge (Creswell & Miller, 2000). The multi-method approach adopted in this study was articulated in section 3.4.

3.8.3.1 (e) Referential Adequacy

Referential adequacy is the use of mechanically recorded data such as tape recorders, videotapes and photographs (Lincoln & Gobi, 1985). This study recorded all the interviews using a recording device.

3.8.3.2 Measures of Reliability Employed

While there may be nuances in the definitions of reliability, particularly with respect to replication, the aim of reliability is to reduce the number of errors and any inherent biases that may cloud a study (Yin, 2003). The question that can be framed with respect to reliability is “will the evidence and the conclusions stand up to close scrutiny?” Hussey & Hussey (1997) contend that it is important for the reliability of the research that similar observations and interpretations can be made on different occasions and/or by different researchers. Stenbacka (2001) argues that reliability is not a relevant construct in qualitative research where there is no differentiation between researcher and method.

3.8.3.2 (a) Visibility of the Process

One method of reliability, proposed by Sykes (1991) is for the researcher to make the whole research process visible i.e. preparation, data gathering and analysis. Yin (2003) adds that the one prerequisite for allowing a repeat of the original research is to document the procedures followed. In this research study full disclosure has been made of all the processes from inception all the way through to the writing of the final report.

3.8.3.2 (b) Chain of Evidence

Another method to increase reliability is maintaining a chain of evidence, the states that a reader or another researcher must be able to follow the entire research process, from the initial research proposal all the way to the conclusions (Yin, 2003). This process must assure the reader that all evidence was indeed collected during the data collection processes and that no information has been lost through carelessness or bias.

3.8.3.2 (c) Inter-judge Reliability

Inter-judge reliability is achieved by determining the degree of agreement between participants (DeVellis, 1991). This research compared the interviews from participants across organisations.

3.8.3.2 (d) Instrumental validity

Straub *et al.*, (2005) identifies three types of scientific validity for instrumentation: content validity, construct validity and reliability. Content validity includes all the ways employed to show that the instrument is not an unreasonable conclusion for all methods available to capture a construct (Cronbach, 1971). One example of construct validity is when items or phrases in the instrument are being related in a way they should not be. Reliability is the assurance that operationalised research questions, posed to measure a construct, are sufficiently related to be

reliable. The survey instrument was subject to an intense series of steps to ensure validity and reliability. These steps are detailed in section 3.5.2.1 of this chapter and included both a pre-test and pilot study, both of which improve the validity of a survey instrument (Mathison, 1988; Maxwell, 1992; Patton, 2001; Compeau & Higgins, 1995). Additional measurements on the reliability of the survey instrument are detailed in chapter four.

3.8.3.2 (e) *Replicability*

Reliability is proof that all the steps of the study such as the data collection is repeatable and will produce the same results. It must be noted that the emphasis is on doing the same case study and not ‘replicating’ the study by doing another case study. In contrast Carmines & Zeller (1979) use ‘replication’ in their definition and state that reliability is the degree to which the measurement of data will produce the same result if repeated or the extent to which studies can be replicated (LeCompte & Goetz, 1982).

3.8.4 Ethical Considerations for Data Analysis

Campbell (1996) argues that researchers are obliged to present the results of a study truthfully. Some commentators believe that firm ethical principles should be established for research while others believe that ethical codes can be simplistic and rigid and sometimes it may be necessary to be vague and covert about the actual nature of the research in order to achieve useful findings (Hussey & Hussey, 1997). This was not the case in this study and full disclosure about the nature of the study was made to all participants.

It is normal to offer confidentiality and anonymity to respondents in a research study as this encourages more useful, open and honest answers (Hussey & Hussey, 1997; Campbell, 1996). This research has not divulged the identity of the respondents. The only personal classification information with respect to individual respondents was the fact that respondents were members of the case study organisation’s senior management team, which is insufficient to identify the respondents. All data gathered was treated confidentiality and no information was presented in any way that permitted linking certain individuals to specific responses. Information was also presented in an aggregate form.

3.9 CONCLUSION

Evidence for the impact of social media on society can be found in the varied research being conducted currently: The Berkman Center for Internet and Society at Harvard describes its mission as being “to explore and understand cyberspace, to study its development, dynamics, norms, and standards, and to assess the need or lack thereof for laws and sanctions” (Harvard University, 2010); and The Pew research centres’ ‘Internet & American Life Project’ has and continues to produce research into the impact of social media in a variety of social situations (Pew Research Center, 2010).

Structuration theory as espoused by Giddens (1984) describes a duality of structure that suggests a dialectic relationship of structures and actors (Fuchs, 2008). This research explores the complex relationship between civil society and the appropriation of social media. It is exploratory in nature. The large amount of empirical data collected was analysed, and is presented in following chapters as depicted in Table 11.

Research Question	Methodology	Methods	Presentation of Findings
Research Question One	Quantitative	Survey	Chapter Four
Research Question Two	Qualitative Quantitative	Case study, involving mostly interviews and a targeted survey	Chapter Five

Table 11: Mapping of Research Results

This chapter started with a summary of the research questions and then highlighted the methodological pluralism employed and the reasons for this approach. The next chapter presents the analysis of the empirical data collected through the survey.

CHAPTER FOUR: WEB 2.0 ADOPTION IN SOUTH AFRICAN CIVIL SOCIETY ORGANISATIONS

Analysing Social Media Adoption in South African Civil Society

Not everything that can be counted counts, and not everything that counts can be counted.

Albert Einstein (attributed)

4.1 INTRODUCTION

The previous chapter discussed the research methods, the data collection strategy, and introduced the theoretical frameworks employed in this study. In this chapter, traditional Diffusion Theory (Rogers, 2003) and Surman & Reilly's (2003) constructs for interpreting the strategic use of technology in civil society are employed to describe the adoption of social media in South African civil society organisations (CSOs). The data for the analysis was gathered from a survey. Figure 30 illustrates where this chapter is situated within the overall research strategy.

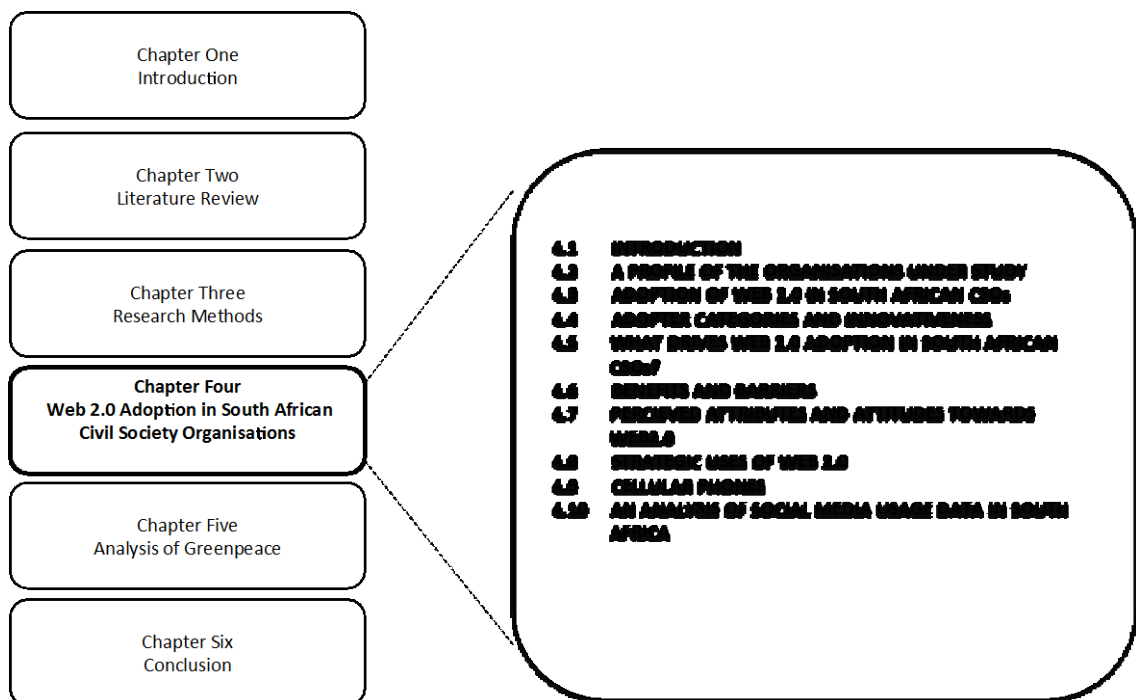


Figure 30: Chapter Four within the Overall Research Study

This chapter both describes and provides an analysis of the empirical data. The surveyed organisations are profiled in section 4.1 first with regards to their demographic characteristics and also in relation to their adoption of computers and the Internet. Section 4.2 examines the levels of knowledge and timescales of adoption of Web 2.0 services. The adoption categories

(e.g. leaders, laggards etc.) and the internal and external drivers for social media adoption are analysed in sections 4.4 and 4.5 respectively. The benefits of, and barriers to adoption are described in section 4.6 while section 4.7 looks at how social media is perceived by civil society. The constructs that constitute the strategic use of technology are presented in section 4.8, which also proposes a model for the strategic use of social media. The analysis concludes with section 4.9, which relates to the use of cellular phones as a platform for the deployment of social media services. The factors that support and mitigate social media adoption are presented in section 4.10. The sections in this chapter discuss specific constructs of social media adoption in South African CSOs, which are related to specific operational questions as laid out in the survey protocol (Appendix C); this relationship is illustrated in Table 12.

Analysis Sections	Operational Questions
4.2 A Profile of the Organisations Under Study	1.3 The nature of your organisation 1.4 Organisational Issues 1.5 Organisational Age, Employee Profile, Financial position, Computers and Internet adoption and influence
4.3 Adoption of Web 2.0 in South African CSOs	3.1 Levels of knowledge 3.2 Social media services adoption in South African CSOs 2.3 Intensity of usage 3.3 Usage areas
4.4 Adoption Categories	3.2 Social media services adoption in South African CSOs
4.5 What Drives Web 2.0 Adoption	3.7 Internal drivers of adoption 3.8 External drivers of adoption 3.3 Functions of Web 2.0 usage
4.6 Benefits and Barriers	2.4 Benefits of Web 2.0 adoption 2.5 Barriers to Web 2.0 adoption
4.7 Perceived Attributes and Attitudes Towards Web 2.0	2.1 Perceptions of Web 2.0 2.7 Areas of Impact
4.8 Strategic Uses of Web 2.0	Various questions from the survey are aggregated for the analysis of the concepts of observation, publishing, mobilisation and collaboration
4.9 Cellular Phones	3.9 Development of a mobile platform 3.10 Cellular phone usage

Table 12: Analysis of the Operational Questions

Recalling from chapter two, section 2.2 the purpose of civil society is to create, maintain and defend free democratic public spaces thereby creating an environment where citizens can add to the conversation and thus influence local and state policy (Edwards, 2004; Naidoo, 2010a). There is a dialectic relationship between civil society and the public with CSOs highlighting current issues that resonate with the public, and in turn people being exposed to alternative discourses as suggested by CSOs. At certain points in this chapter reference is made to secondary research relating to social media adoption by the South African online population. The dualistic relationship between CSOs and the broader populace, and the fact that social media adoption in certain sectors of society (including civil society) mirrors adoption within society at large, makes this secondary research relevant. Rogers's (2003) Diffusion of Innovations framework supports this viewpoint and suggests that innovation spreads amongst organisations in an industry (or sector) in a diffusion process that mimics innovation diffusion amongst individuals in society.

4.1.1 Writing conventions

Just as the designs of qualitative research vary the write-up takes on different formats depending on the purpose of the study and the intended audience (Campbell, 1996). The following conventions are used in the presentation and interpretation of the results:

- Bar charts, pie charts, tables and scatter graphs are used to illustrate the findings and inform the discussion.
- All financial values are quoted using the South African currency of Rands (international abbreviation ZAR). At the time of writing the exchange rate was ZAR 7.58 to the US Dollar and ZAR 10.03 to the EURO.

4.1.2 Revisiting the Theoretical Frameworks

The theoretical frameworks employed in the analysis of the data are described by recalling the Diffusion of Innovations theory, which is described in detail in chapter three. This framework describes the processes that disseminate information about an innovation amongst the members of a community (Rogers, 2003). The actual process of diffusion is made up of knowledge acquisition, persuasion, decision, implementation and confirmation. Innovativeness is the extent to which an innovation is adopted in relation to other potential adopters and includes the categories of innovators, early adopters, early majority, late majority and laggards.

The framework for the strategic use of technology in civil society organisations as proposed by Surman & Reilly (2003) is described in detail in chapter three. The strategic appropriation of

technology by civil society occurs when organisations becomes proficient enough to ensure that the technology furthers the aims of the organisation. The main areas where networked-technology, like social media, is used strategically are collaboration, publishing, mobilisation and observation.

4.1.3 Statistical Analysis

In total one hundred and twenty-two civil society organisations participated in the study. A detailed description of the administration of the survey is presented in section 3.5.3. The data collected from the responses was analysed using the PASW Statistics version 18.0.

The analysis of the data included descriptive statistics based on demographic and biographical information and also employed factor analysis for data reduction, which in turn facilitates the management and understanding of a large number of variables. The principle component analysis with Varimax rotation and Kaiser Normalisation was used as the extraction method, which simplified the interpretation of the factors. Inter-correlations between variables were observed. Items loading at or above 0.5 were grouped together as components. Data resulting from observations made on two different related categorical variables (bivariate) were summarised using a contingency table. Additionally, where necessary, Pearson's correlation was used to identify the strength of relationships between variables. Further, linear and multi-linear regression was used to test the emergent model describing the strategic use of technology.

The spatial median was another technique employed in the analysis of the data. The spatial median of a random sample of points in R^d is defined as the point in R^d with the minimal sum of Euclidean distances¹⁹ to the sample points. It is used as an estimator of location. It is popular because of its robustness and ease of computation (Rublik & Somorcik, 2011). The mathematical modelling tool, Mathematica²⁰ was used to determine the spatial median with respect to the constructs of leaders and laggards of adoption (See section 4.4.4).

Scatter graphs are used in section 4.10.1. Scatter graphs are very useful in investigating the existence of a relationship between two variables and can tell the reader one of three things: whether there is a positive correlation between two variables, or a negative correlation between two variables, or no correlation at all. The regression line (or the line of best fit) can be found for a scatter diagram. However, such a line will only be of value if the x and y values show some degree of linear relationship (r). This means that the points in the scatter diagram must

¹⁹ In mathematics, the Euclidean distance or Euclidean metric is the 'ordinary' distance between two points that can be measured with a ruler

²⁰ Version 8.0.0.0 for an Apple Mac[©]

cluster around a straight line. The closer the points are to the line, the stronger the degree of the linear relationship (also called linear correlation). The measurement for r is on a scale between -1 and +1. When $r = 0$, there is no relationship. For $r = +1$, there is a strong positive relationship between the variables, i.e., as x increases, y also increases. For $r = -1$, there is a strong negative relationship between the variables, i.e., as x increases, y decreases.

4.1.3.1 Reliability of the Survey Instrument

Recalling from chapter three section 3.5 the questionnaire was composed of three sections:

- The first section captured information specific to the organisations i.e. size, age, financial position, the nature of the organisation, core issues engaged in, and finally the organisations relationship with technology, specifically their relationship and reliance on computers and the Internet.
- The second gathered information concerning the reasons for the adoption of Web 2.0 services. It probed the reasons for deployment and perceived benefits.
- The last section identified the particular Web 2.0 services deployed, the length of time these services were deployed and the reason for adoption. This section also collected data on the use of mobile devices and mobile platforms.

The development and testing of the survey instrument was a comprehensive process that spanned a period of six months. The details and results of the various stages of this process are detailed in section 3.5.

Before drawing conclusions, the data obtained from the survey needed to be tested for reliability, which refers to the characteristics of the data-gathering instrument that produces comparable results for related inputs. According to Sekaran & Bougie (2010) reliability is the degree of association between the individual ‘things’ in a set. Straub *et al.*, (2005) states that reliability is the assurance that the items posited to measure constructs are sufficiently related to be reliable (i.e. low on measurement error) considered as a set of items (Cronbach, 1971). Cronbach’s alpha (α) was used to test instrument reliability in this research.

Reliability was computed by taking numerous measurements on related topics. While a reliability coefficient of 0.70 or generally considered as adequate, this study obtained a reliability coefficient of 0.968. The results are presented in the Table 13.

Section / Question	Cronbach's Alpha
2.1	0.952
2.4	0.945
2.7	0.926
3.1	0.918
3.7	0.931
3.8	0.945
Overall	0.968

Table 13: Measure of Reliability

The overall scoring pattern indicates that the alpha values are greater than the recommended value for all sections of this research. The high Cronbach's alpha values indicate a degree of consistent scoring for the various aspects of the questionnaire.

4.2 A PROFILE OF THE ORGANISATIONS UNDER STUDY

The profile of the organisations that participated in the survey, which creates a better understanding of the context of the study by revealing a deeper understanding of the structure of South African civil society and their relationship with technology, is presented.

4.2.1 Nature of South African Civil Society Organisations

In describing the nature of their organisation, respondents were given nine distinct categories to choose from. In the event that none of the options accurately matched the organisation, the option of 'Other' was available, which was an open field that allowed for free form text input.

The responses produced twenty-nine distinct categories, including the original nine from the survey (Table 14). The twenty-nine categories were too unwieldy for any kind of meaningful data analysis and were aggregated in order to make sense of the data. Some of the categories also naturally lent themselves to being aggregated e.g. 'Education development focused NPO', 'Educational Trust' and 'educationism' are similar enough to grouped together.

Survey Categories Identified from the Survey Data	Number of Responses
Access Consultancy	1
Accommodation for and care of older persons	1
Advocacy orientated	11
Advocacy, Mobilisation, Not for Profit, Development orientated	1
Biblical Reconciliation	1
Campaigning Organisation (covers more than any of the options above)	1
Development orientated	22
Direct service delivery aimed at therapeutic services with an advocacy function	1
Education development focused NPO	1
Educational Trust	1
Educationism	1
Not for profit social enterprise	1
Higher Education	1
Market Entry Support Structure	1
Mobilisation based activities	2
Network of many groups	2
Non Profit Spiritual	1
Not for profit, community-based organisation	52
Organised Agriculture	1
Other	1
Other, Animal Protection	1
Philanthropy	1
Public conservation and employment programme	1
Religious affiliation	2
Research and Training	1
Social enterprise	1
Strategic Communications	1
Think-tank (research based activities)	8
Training based	2

Table 14: Nature of South African CSOs – Original Categories

The categories were narrowed down to five as shown in Table 15. The five distinct categories also represented the most popular choices in the original survey: Advocacy Orientated (11), Think-tank (8), Development Orientated (22) and Not for Profit (52). These categories were chosen by the majority of respondents in the survey prior to the final post-analysis aggregation of categories. The category ‘Other’ is made up of twelve organisations and includes religious

groups and training-based organisations as the two main sub-categories. The final numbers in each category are presented in Table 15.

Categories	Number of Responses
Advocacy	17
Think-tank	11
Development	26
Not-for Profit	56
Other	12

Table 15: Nature of South African CSOs – Aggregated Categories

4.2.2 Demographic Information

This section relates to the demographic information of the organisations under study and includes a description of the organisational age, staff numbers and financial position.

4.2.2.1 Age Profile of Civil Society Organisations

The ages and longevity of South African civil society organisations are presented in Figure 31.

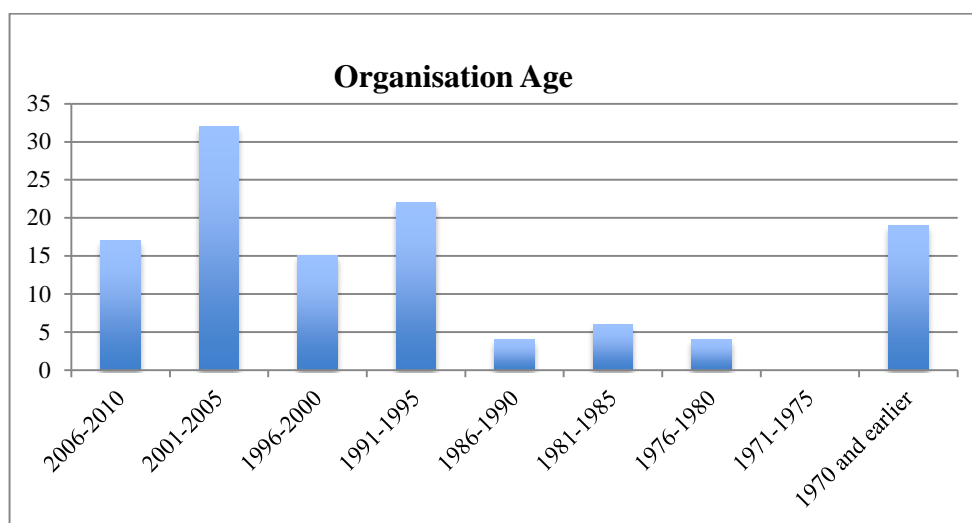


Figure 31: Age Profile of South African Civil Society Organisations

Of the one hundred and twenty-two organisations that participated in the study seventeen were less than five years old, having being formed in 2006 or after, and fifty-three were less than ten years old, having not existed prior to 2000. There were eighty-eight organisations, or seventy-two percent, that were less than twenty years old indicating that they were formed in 2000 or later. There were nineteen organisations that were formed prior to 1970 making them older than forty years.

Using 1994 as a benchmark - as the year democracy was achieved in South Africa - reveals that seventy-seven (or sixty three percent) CSOs were formed post-democracy. While the advent of democracy created an environment that encouraged the development of civil society, as embodied in the Non-Profit Act that officially recognised civil society (Ranchod, 2007; Habib, 2003), the simple relationship between the State and civil society in apartheid South Africa has been replaced by issues in a post-apartheid society that demand a balance between support for, and independence from government. One of the major roles of civil society is to challenge the status quo and act as a watchdog against government excess and any unethical behaviour.

4.2.2.2 Employee Profile of Civil Society Organisations

The number of salaried and full-time staff in the employ of South African CSOs is illustrated in Figure 32.

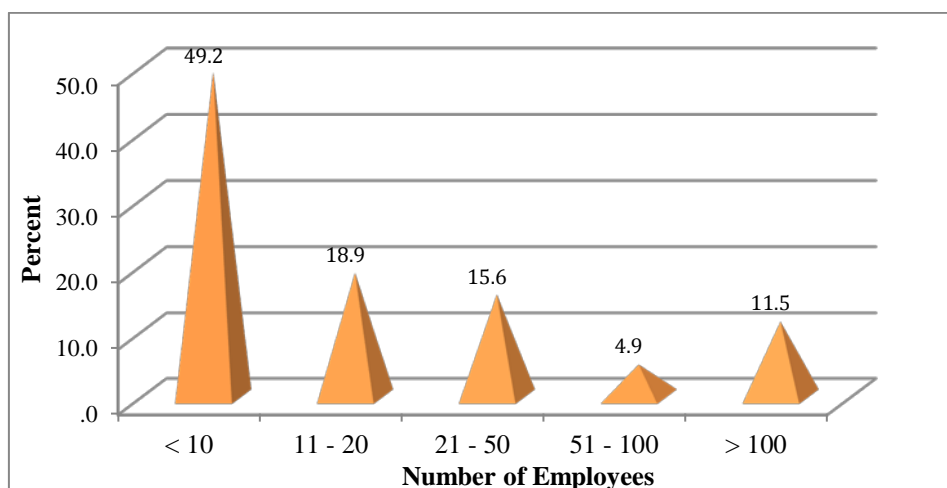


Figure 32: Employee Profile of South African Civil Society Organisations

Small to medium sized CSOs (which for the purpose of this study is defined as less than ten, and between eleven and twenty respectively) predominate with just under half employing less than ten people, and a fraction over sixty one percent employing twenty or less staff. Combining two of the categories reveals that just over thirty four percent of CSOs employ between eleven and fifty people. Over eighty percent of all organisations employ fifty people or less, with only sixteen percent of CSOs employing more than fifty staff members.

4.2.2.3 Financial Profile of Civil Society Organisations

Using organisation's Annual Operating Budget, the financial position of South African CSOs under study is illustrated in Figure 33. Annual operating budget tracks an organisations income and expenditures for a fiscal year and is deemed an adequate financial measure for CSOs, which

are not first and foremost commercial enterprises motivated by profit; neither do CSOs have a requirement to report to customary directors and managers which is a requirement found in purely commercial organisations (Salamon *et al.*, 2003).

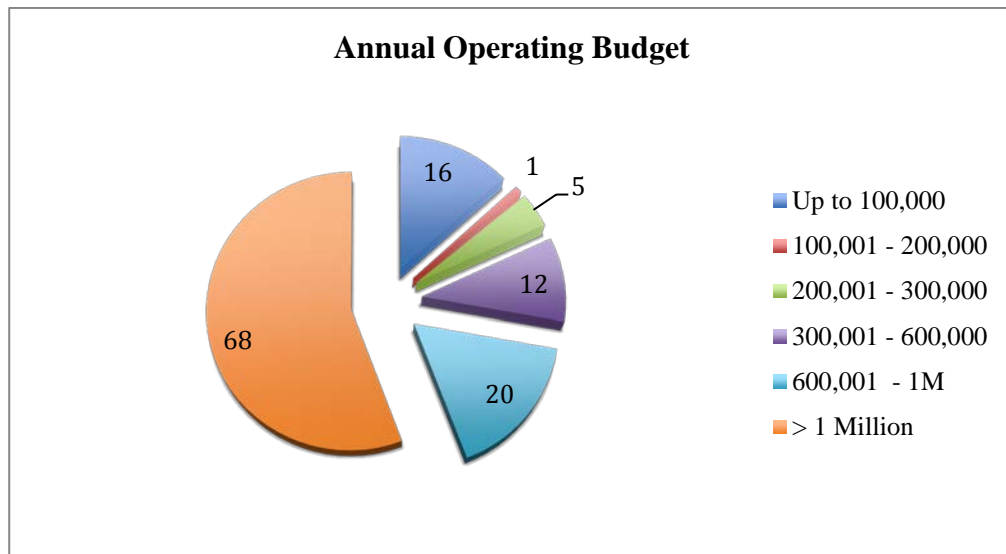


Figure 33: Financial Profile of South African Civil Society Organisations

The majority of South African CSOs surveyed, fifty six percent or sixty-eight, have an annual turnover of more than one million ZAR²¹. Just over sixteen percent of CSOs (or twenty) had a turnover of over ZAR 600,000. Eighteen organisations, or thirty percent, have a turnover of between ZAR 100,000 and ZAR 600,000. A significant proportion of organisations (13.1%) have a turnover equal to or less than ZAR 100,000.

4.2.3 Adoption of Computers and the Internet

This section will describe the use of computers and the Internet by CSOs. This section, together with the demographic information presented in the previous section will provide the basis for a discussion of the concept of organisational innovativeness as described by Rogers (2003).

4.2.3.1 Adoption of the Internet and Computers by South African Civil Society

The timelines for the adoption of computers and the Internet in South African CSOs is presented in Table 16.

²¹ At the time of writing the exchange rate was 7.58 to the US Dollar and 10.03 to the EURO

			When did your organisation begin using computers?				Total
			< 3 years	3-5 years	6-10 years	>10 years	
When did your organisation begin using the Internet	< 3 years	Count	8	1	0	1	10
		% Of Total	6.6%	0.8%	0.0%	8%	8.2%
	> 10 years	Count	0	0	0	52	52
		% Of Total	0.0%	0.0%	0.0%	42.6%	42.6%
	3-5 years	Count	0	9	8	3	20
		% Of Total	0.0%	7.4%	6.6%	2.5%	16.4%
	6-10 years	Count	0	0	27	13	40
		% Of Total	0.0%	0.0%	22.1%	10.7%	32.8%
Total		Count	8	10	35	69	122
		% Of Total	6.6%	8.2%	28.7%	56.6%	100.0%

Table 16: Adoption of Computers and Internet

A large proportion of CSOs - just over forty two percent - have been using both computers and the Internet for over ten years. Just over twenty two percent have used both computers and the Internet for between six and ten years. The majority of CSOs - approaching sixty five percent - have adopted both computers and the Internet for more than six years. Only a minority of organisations, 6.6% and 8.2% respectively, have deployed computers and the Internet less than three years ago.

Civil society has always been at the forefront in adopting new technologies with many civil society organisations recognising the value of the Internet in particular (Hara & Shacaf, 2008). Even with the Internet's wider adoption in South Africa being estimated circa mid 1990s (Freedom House, 2011) or approximately sixteen years ago (at the time of this study), a significant majority of CSOs have access to the Internet for over ten years, indicating that they adopted the Internet during the late 1990s.

The relationship between computer and Internet adoption is illustrated in Figure 34. As expected, adoption of the Internet initially lagged that of computers. While the first Internet connection in South Africa was established in 1988, the wide-scale adoption of the Internet only occurred from around 1993, many years after the release of computers in South Africa (Freedom House, 2011). However Internet adoption has increased and is now on par with computer adoption. It is expected that computer adoption will flatten as more and more device and access options become available, and also as a consequence of saturation in the market.

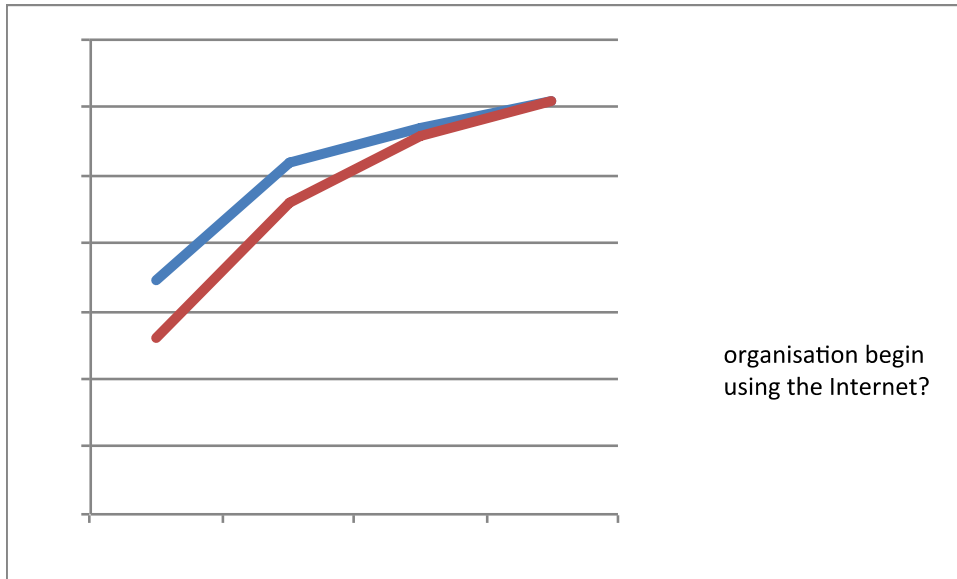


Figure 34: The Relationship between Computer and Internet Usage

It is also to be expected that Internet adoption will overtake computer adoption as more organisations revert to other devices for Internet access e.g. mobile phone, smart phones, network computers and tablets.

4.2.3.2 Influence of Information and Communication Technologies (ICTs) on Organisational Goals

Table 17 depicts the relationship between the two statements (1) ‘the use of ICT has had a significant positive influence on my organisation’s relationships with other organisations’ and (2) ‘the organisation’s mission and goals have benefited from the use of ICT.’ Information and Communication Technologies in this context refers to traditional computer systems and excludes Web and related technologies.

Of the one hundred and twenty-two CSOs surveyed, seventeen (or 13.9%) ‘agree’ and a majority of sixty-two (or 50.8%) ‘strongly agree’ that Information and Communication Technologies (ICTs) has had both a significant positive influence on relationships with other CSOs, and also positively influenced CSOs’ missions and goals. A small minority (2.5%) strongly disagree with these views. Nine percent of CSOs were unsure about the influence of ICTs. The aggregated level of agreement (‘strongly agree’ and ‘agree’) is over sixty four percent.

			The organisation's mission and goals have benefited from the use of ICT					Total
			Strongly Disagree	Disagree	Unsure	Agree	Strongly Agree	
The use of ICT has had a significant positive influence on my organisation's relationships with other organisations	Strongly Disagree	Count	3	1	0	0	0	4
		% Of Total	2.5%	0.8%	0.0%	0.0%	0.0%	3.3%
	Disagree	Count	1	2	0	1	0	4
		% Of Total	0.8%	1.6%	0.0%	0.8%	0.0%	3.3%
	Unsure	Count	1	0	11	2	0	14
		% Of Total	0.8%	0.0%	9.0%	1.6%	0.0%	11.5%
	Agree	Count	0	1	7	17	4	29
		% Of Total	0.0%	0.8%	5.7%	13.9%	3.3%	23.8%
	Strongly Agree	Count	1	0	3	5	62	71
		% Of Total	0.8%	0.0%	2.5%	4.1%	50.8%	58.2%
Total		Count	6	4	21	25	66	122
		% Of	4.9%	3.3%	17.2%	20.5%	54.1%	100.0%

Table 17: The influence of ICTs on CSOs Missions and Goals

When testing the relationship between the statements 'the use of ICT has had a significant positive influence on my organisation's relationships with other organisations' and 'the organisation's mission and goals have benefited from the use of ICT,' the cross tabulation correlation results in a significant value ($p = 0.000$) implying a strong positive relationship (+0.80). This means that there is a directly proportional relationship between the variables.

4.2.3.3 Integration of Information and Communication Technologies

Table 18 illustrates the extent to which Information and Communication Technologies (ICTs) have been integrated into the daily operations of South African civil society organisations. In this survey 'Fully Integrated' implies an organisational dependence on ICT.

Level of Integration	Frequency	Percent	Cumulative Percent
Integrated just a little	5	4.1	4.1
Somewhat integrated	18	14.8	18.9
Fairly integrated	32	26.2	45.1
Fully integrated	67	54.9	100.0

Table 18: Integration of ICTs into Daily Operations of CSOs

A fraction under fifty-five percent of all organisations indicated that ICTs are fully integrated into their organisations, while just over twenty-six percent indicated computers were fairly integrated. More than eighty percent of respondent organisations (aggregating scores for ‘fairly integrated’ and ‘very integrated’) were satisfied that ICTs had been fairly well integrated or very integrated within their organisations. A small minority (4.1%) indicated a low level of ICT integration in their organisations.

4.2.3.4 Factors in Organisational Adoption

Research into the diffusion of innovation into organisations reveals several factors that influence both organisational innovativeness and the adoption of innovation. With respect to socio-economic characteristics, larger organisations are generally early adopters of innovation: early adopters have more access to more people, and they possess more channels for interpersonal communication; early adopters also actively seek information about innovation. There is inconsistent evidence of the effects of age on adoption with approximately half of the studies indicating no relationship and the other half showing that early adopters are longer established (Rogers, 2003). Innovative organisations are generally larger, less centralised in structure and have lower level of formalisation.

South Africa civil society can be neatly divided into two distinct periods: the first was around the 1980s when civil society was defined by the struggle against apartheid and the second phase from 1994 and the post-apartheid years when civil society changed fundamentally (Habib, 2003). This study used 1994 as a pivotal moment in the history of South African civil society and describes innovativeness as a function of ‘pre 1994’ and ‘post 1994’ civil society. Table 19 illustrates these two eras in relation to organisation age, number of employees and the financial position of the organisations.

Organisational Demographics	Era of Organisation	
	Pre 1994	Post 1994
Number of organisations	38%	62%
Average Number of staff	44	24
Average Annual turnover (in ZAR)	0.86 million	0.68 million

Table 19: Organisational Adoption Factors

Of the technology-enabled CSOs sampled (i.e. they had an Internet presence and a valid email address) a pre-1994 South Africa saw the formation of thirty-eight percent of CSOs as opposed to sixty-two percent that were formed post-democracy. While almost counter-intuitive the

number of staff members decreased post-1994 as did the annual turnover; the average spend per staff member (turnover divided by staff numbers) increased from ZAR 196,000 to ZAR 285,000. One possible explanation is the increased efficiency brought about by the adoption of technology, which has made CSOs more efficient in both their daily operations and in their fund-raising initiatives.

4.3 ADOPTION OF WEB 2.0 IN SOUTH AFRICAN CIVIL SOCIETY

The adoption of Web 2.0 services in South African CSOs is discussed firstly in relation to the level of knowledge regarding social media services amongst CSOs, and secondly with respect to the actual adoption patterns.

4.3.1 Knowledge of Social Media Services in South African CSOs

Figure 35 denotes the level of knowledge amongst South African CSOs and is in response to the question from the survey protocol: 'Indicate the level of knowledge of your organisation regarding the use of the following Web 2.0 services.' Rogers (2003) states that knowledge is information about the workings and functionality of an innovation by individuals, organisations or decision-making units within an entity. Knowledge is merely the first step in the innovation-decision process; the actual process navigates from this acquisition of knowledge and follows a process of attitude formation towards the innovation, decision-making on whether to adopt or reject, the actual implementation and use of the innovation, which finally confirms the decision (Rogers, 2003).

The responses to this question were on a scale of one to five, with one equal to 'Not at all knowledgeable' and five equal to 'very knowledgeable.' The raw data was coded and aggregated and reported on as follows: responses with a one or a two were grouped together as 'A little knowledgeable'; three was coded as 'somewhat knowledgeable' and four and five were aggregated as 'Fairly knowledgeable'

There were more negative than positive responses, with the majority of CSOs having little knowledge of social media services. Organisations were fairly knowledgeable with regards to social networks (just over fifty five percent), photos / multi-media sharing (just forty three percent) and messenger applications (a fraction over fifty one percent). Other services with which CSOs were familiar (or fairly knowledgeable) with were microblogging (twenty seven percent), wiki's (thirty six percent) and RSS feeds (thirty one percent).

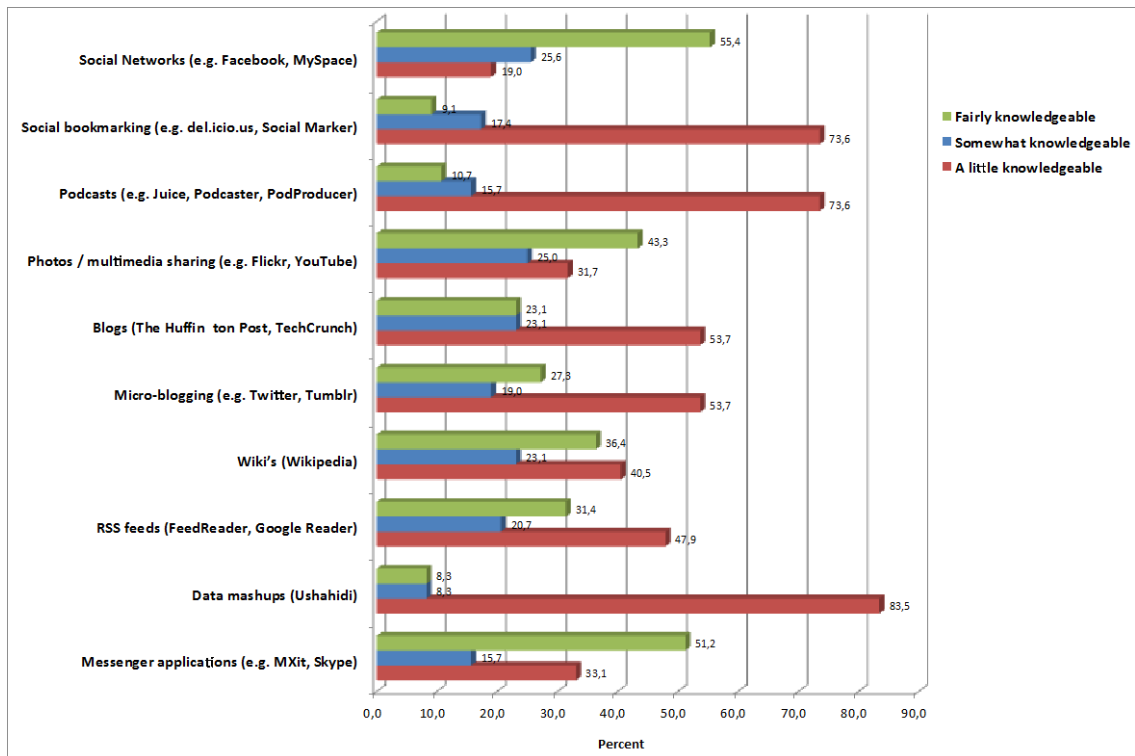


Figure 35: Knowledge of Social Media Services in South African CSOs

Social bookmarking and podcasts were relatively unknown with 73.6% of organisations indicating little knowledge of either. There was also little knowledge of blogs or microblogs with 53.7% of CSOs indicating unfamiliarity with these services. By far the service with which organisations were most unfamiliar was data mashups (83.5%).

4.3.1.1 Factor Analysis

Factor analysis reveals a grouping of social media services along two components (Table 20) with social bookmarking, podcasts, blogs, RSS feeds and data mashups falling into a category labelled component one and the remainder into component two.

Table 21 illustrates component one and component two factors, cross-tabulated against organisational responses indicating 'Fairly Knowledgeable' with respect to the identified social media services. The majority of component two factors with a value over 0.5 correspond to services with which organisations are fairly knowledgeable, that is social networks (0.747 and 55%), photos and multimedia sharing (0.868 and 43%), messenger applications (0.719 and 36%), microblogging (0.561 and 27%) and wiki's (0.719 and 36%).

In a similar vein the majority of component one factors with a value over 0.5 correspond to services where organisations are not knowledgeable: social bookmarking (0.864 and 9.1%),

podcasts (0.726 and 10.7%), blogs (0.616 and 23.1%), RSS feeds (0.722 and 31.4%) and data mashups (0.843 and 8.3%).

Social Media Services	Component 1	Component 2
Social bookmarking (e.g. del.icio.us, Social Marker)	0.846	0.233
Podcasts (e.g. Juice, Podcaster, PodProducer)	0.726	0.361
Blogs (The Huffington Post, TechCrunch)	0.616	0.437
RSS feeds (FeedReader, Google Reader)	0.722	0.302
Data mashups (Ushahidi)	0.843	0.218
Social Networks (e.g. Facebook, MySpace)	0.302	0.747
Photos / multimedia sharing (e.g. Flickr, YouTube)	0.240	0.868
Microblogging (e.g. Twitter, Tumblr)	0.543	0.561
Wiki's (Wikipedia)	0.393	0.719
Messenger applications (e.g. MXit, Skype)	0.251	0.842

Table 20: Factor Analysis

Social Media Services	Fairly Knowledgeable (%)	Component 1	Component 2
Social bookmarking (e.g. del.icio.us, Social Marker)	9.1	0.846	0.233
Podcasts (e.g. Juice, Podcaster, PodProducer)	10.7	0.726	0.361
Blogs (The Huffington Post, TechCrunch)	23.1	0.616	0.437
RSS feeds (FeedReader, Google Reader)	31.4	0.722	0.302
Data mashups (Ushahidi)	8.3	0.843	0.218
Social Networks (e.g. Facebook, MySpace)	55.4	0.302	0.747
Photos / multimedia sharing (e.g. Flickr, YouTube)	43.3	0.240	0.868
Microblogging (e.g. Twitter, Tumblr)	27.3	0.543	0.561
Wiki's (Wikipedia)	36.4	0.393	0.719
Messenger applications (e.g. MXit, Skype)	51.2	0.251	0.842

Table 21: Factor Analysis Cross-tabulated with Levels of Knowledge

In studies conducted into social media usage by South Africans, the key findings include:

- The messenger application MXit leads the way in user numbers, with approximately ten million active users. More than a quarter-million South Africans log on to MXit every day and more than four hundred thousand South Africans register on MXit every day (World Wide Worx, 2011). MXit has more than thirty million users in Africa (Cashmore, 2012). In

a study conducted by the United Nations Children's Fund (UNICEF, 2011) into the use of MXit by South African youth – i.e. between the ages of seventeen and twenty-four - thirty percent indicated that chatting on MXit was the most common activity at home, which is nearly twice as common as the next most popular activity, which is watching television.

- Facebook lead the way in user numbers with approximately 4.2 million Facebook users in South Africa of which 3.2 million visited the site during 2011. While Facebook is used by only 8.7% of the total South African population, 80.7% of Internet users in South Africa have a Facebook account. LinkedIn, aimed at professional users, saw an eighty three percent increase in users in South African between 2010 and 2011, signing up 1,1-million users. Of these, one hundred and twelve thousand, or ten percent, are business owners, and one hundred and thirty two thousand are managers (World Wide Worx, 2011).
- The microblogging site, Twitter, had the biggest growth in 2011 with approximately four hundred and five thousand South Africans active on Twitter in the last three months of the period being measured (August through to October 2011). Over the period of the survey (July through to December 2011), a total of 115 000 tweets were made per day by South Africans which amounted to 3.47-million per month and 20,820,080 tweets for the six months (World Wide Worx, 2011). In Africa twenty countries sent over twenty million tweets in the last quarter of 2011 (The Economist, 2012).
- A Freedom House report (2011) reveals that blogging in South Africa revolves around the promotion of HIV/AIDS awareness, environmental issues and general socio-political debates.

As can be seen, social media adoption by the South African online population closely parallels social media adoption by South African CSOs with usage of social networks (Facebook, LinkedIn etc.), microblogging (Twitter) and messenger applications (MXit) mirroring each other. It worth reiterating that the constituency of civil society in any country is all of society, and it is expected that there will be a close correlation in adoption rates of society at large and civil society, precisely because of this relationship.

4.3.2 Web 2.0 Adoption in South African Civil Society Organisations

This section looks at the adoption of social media services and describes the Web 2.0 services being used by South African CSOs. Figure 36 illustrates which services have (and have not) been adopted and the accompanying adoption timescales.

The following Web 2.0 services have been adopted more than year ago by a significant proportion of organisations: social networks (63.9%), photos and multimedia sharing (40.3%) and messenger applications (45.4%). The other group of services that have been adopted more than a year ago and which have similar adoption percentages include: creating and maintaining blogs (27.1%), microblogging services like Twitter (23.5%) and Wiki's (30.8%). More recent adoption (approximately three months or more ago) has also occurred with: social networks (18.5%), photos and multi-media sharing (18.5%), creating and maintaining a blog (17.8%), microblogging (20.2%), and messenger applications (17.6%). A large proportion of CSOs have not adopted a number of services: social bookmarking (76.5%); downloading of podcasts (60.8%); publishing of podcasts (72%); and data mashups (71.2%).

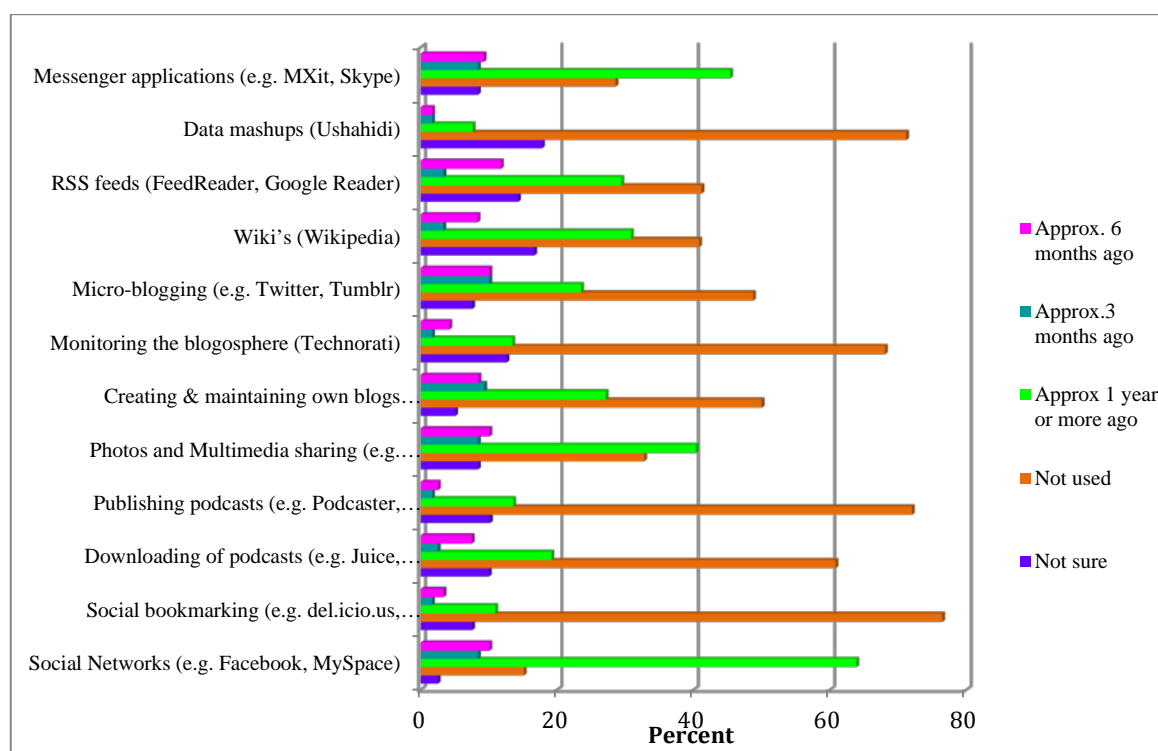


Figure 36: Adoption of Web 2.0 Services

The cumulative adoption timescales - cumulative timescales do not consider when a service was adopted, just that it has been adopted - is illustrated in Table 22.

Only three services (irrespective of when adopted) were adopted by more than fifty percent of all organisations surveyed: social networks (82.4%), photos and multi-media sharing (58.8%) and messenger applications (63%). Other services that have a relatively high cumulative adoption percentage are: creating and maintaining of blogs (44.9%), microblogging (43.7%), wiki's (42.4%) and RSS feeds (44.6%). In contrast many CSOs have not adopted many of the

services: social book marking (76.5%), downloading and publishing of podcasts (60.8% and 72% respectively), and data mashups (71.2%). There was an almost even split between CSOs who did not maintain their own blogs (50%) and those who did (44.9%).

Social Media Services	Approx.3 months ago, but less than 6 months ago	Approx. 6 months ago, but less than 1 year ago	Approx. 1 year or more ago	Cumulative
Social Networks (e.g. Facebook, MySpace)	8.4	10.1	63.9	82.4
Social bookmarking (e.g. del.icio.us, Social	1.7	3.4	10.9	16
Downloading of podcasts (e.g. Juice, iTunes)	2.5	7.5	19.2	29.2
Publishing podcasts (e.g. Podcaster,	1.7	2.5	13.6	17.8
Photos and Multimedia sharing (e.g. Flickr,	8.4	10.1	40.3	58.8
Creating & maintaining own blogs (Blogger,	9.3	8.5	27.1	44.9
Monitoring the blogosphere (Technorati)	1.7	4.2	13.4	19.3
Microblogging (e.g. Twitter, Tumblr)	10.1	10.1	23.5	43.7
Wiki's (Wikipedia)	3.3	8.3	30.8	42.4
RSS feeds (FeedReader, Google Reader)	3.4	11.8	29.4	44.6
Data mashups (Ushahidi)	1.7	1.7	7.6	11
Messenger applications (e.g. MXit, Skype)	8.4	9.2	45.4	63

Table 22: Cumulative Adoption of Social Media Services

Table 23 illustrates the relationship between the cumulative adoption timescales and the level of knowledge about these services (section 4.3.1). Rogers (2003) contends that adopters of innovation actively seek information about innovations. The adoption question broke down podcasts into downloading and publishing of podcasts while the question about level of knowledge did not. The values for podcasts from the level of knowledge question are used for both podcast sub-categories. The same applies to blogs, which were broken up into creating and monitoring of blogs.

Social Media Services	Cumulative Adoption (%)	Fairly & Somewhat Knowledgeable (%)
Social Networks (e.g. Facebook, MySpace)	82.4	81
Social bookmarking (e.g. del.icio.us, Social Marker)	16	26.5
Downloading of podcasts (e.g. Juice, iTunes)	29.2	26.4
Publishing podcasts (e.g. Podcaster, PodProducer)	17.8	26.4
Photos and Multimedia sharing (e.g. Flickr, YouTube)	58.8	68.3
Creating & maintaining own blogs (Blogger, WordPress)	44.9	46.2
Monitoring the blogosphere (Technorati)	19.3	46.2
Microblogging (e.g. Twitter, Tumblr)	43.7	46.3
Wiki's (Wikipedia)	42.4	59.5
RSS feeds (FeedReader, Google Reader)	44.6	52.1
Data mashups (Ushahidi)	11	16.6
Messenger applications (e.g. MXit, Skype)	63	66.9

Table 23: Adoption of service versus Knowledge of service

Not unexpectedly there is a strong correlation between knowledge and adoption rates of a service, illustrated by the following examples which details levels of knowledge and adoption rates respectively: social networks (81% and 82.4%), photos and multimedia sharing (68.3% and 58.8%); creating and maintaining blogs (46.2% and 44.9%) and messenger applications (66.9% and 63%). The inverse is also true with a low level of knowledge equating to low levels of adoption: data mashups (16.6% and 11%) and downloading of podcasts (16.4% and 19.2%). One service, monitoring the blogosphere, did not display a very strong correlation, (46.2% and 19.3%).

In his work, Rogers categorises the five perceived attributes that are believed to determine the rate of adoption: (1) relative advantage, (2) compatibility, (3) complexity, (4) trialability and (5) observability. These attributes, or combinations thereof, can be used to identify the adoption characteristics in South African CSOs. For example compatibility, which is based on a need for an innovation, may explain the uptake of social networking in South Africa CSOs. With just over eighty percent of online users in South Africa having a Facebook account, it makes it incumbent for CSOs to adopt social networking in order to exploit this channel of communication and to potentially reach a large target audience. A report by the Pew Internet and American Life Project (Raine & Smith, 2012) found that, amongst other things, intensive

Facebook users are more likely to report that they attended a political meeting or rally. Furthermore participation in Facebook groups, either by being added to a group or adding someone else, is associated with trying to influence someone to vote in a specific way. This is an important finding for civil society in their quest to influence society and propose alternative discourses that may influence people's socio-political views.

Complexity - or the degree of difficulty in understanding and ultimately using an innovation - can explain low adoption rates of data mashups. Mashups are complex in that they have to aggregate various different type of data sources (e.g. databases and legacy systems). Furthermore mashups are generally programmed by developers or have to be developed using a mashup development tool. All of which requires a certain set of skills which may be lacking in civil society. Lack of skills has been cited by thirty percent of CSOs as a barrier to the deployment of social media (see section 4.6).

Trialability, or the ability to experiment with an innovation prior to any decision to adopt or reject, may explain the adoption of social networking and photos and multi media sharing, both of which can be discontinued fairly easily. While it may be notoriously difficult to leave an online site once registered Facebook has evolved some fairly mature and well defined steps to discontinue their service.

One possible reason why messenger applications and social networks have been adopted to such a high percentage is that these services predominate on mobile platforms. Recalling from section 2.5.9 the penetration rate for cellular phones in South Africa is fast approaching one hundred percent of the adult population. It is this ubiquitous nature of cellular phones that is possibly contributing to the high level of knowledge and high rates of adoption of messenger applications and social networks. In a survey conducted by the European Network and Information Security Agency it was found that users who access Facebook via their mobile devices were approximately fifty percent more active than non-mobile users (ENISA, 2010) illustrating an increasing level of online activity on cellular phones. A study conducted by the University of Cape Town into digital media usage on cellular phones amongst urban youth found that ninety three percent of youth surveyed access the Internet on their mobile compared to eight three percent who access the Internet via non-mobile platforms (Kreutzer, 2009). A report by the United Nations Children Fund (UNICEF, 2011) states that Internet access via the mobile network has already significantly influenced South African society through the wide-scale adoption of mobile-based applications like MXit.

The use of photographs and imagery has always been an important tool in the arsenal of CSOs. Doyle (2007, p. 129) argues that photographs are important tools in discourse on ‘visual truth’ and is a powerful tool to communicate the reality on the ground. This may explain the relatively high adoption rates for photos and multimedia sharing service, which was just under sixty percent.

One interesting point related to the organisations’ time of adoption is that innovative organisations generally have a propinquity or closeness to other organisations that adopted previously (Rogers, 2003). Again while outside the scope of this study, but a possible area for future research would be to ascertain whether organisations who adopted social media fairly early on in the adoption cycle influenced other organisations to do the same?

4.3.2.1 Social Media Adoption in Civil Society: An International Perspective

In two international surveys of social media adoption in civil society organisations (NTEN, 2011a; NTEN, 2011b) the following picture emerged:

- Facebook is the most popular social network for civil society and continues to grow. Nine out of ten CSOs surveyed reported having a presence on Facebook in 2011. In the last three years Facebook usage has grown from seventy four percent to eighty nine percent with the largest proportion of this adoption occurring between 2009 and 2010.
- Twitter usage levels were reported at fifty seven percent in 2011, down slightly from 2010 (sixty percent) with the average Twitter follower base up two percent in 2011 and up five hundred and thirty five percent from 2009 levels. In contrast 43.7% of South Africa CSOs have adopted Twitter (Twitter is considered to be a typical example of a microblogging service). The role of Twitter in a number of social uprisings throughout the world in the past few years, and in particular the Middle East (the Arab Spring), has been well documented (van Niekerk *et al.*, 2011; Coyle & Meier, 2009).
- YouTube has been adopted by approximately forty seven percent of international CSOs compared to 58.8% of South African CSOs.
- LinkedIn, the online professional social networking community, was used by one in three CSOs in 2011, representing a steady-state with no real change from the thirty three percent usage levels reported in both 2009 and 2010.
- As a sector, civil society sentiment toward social networks remains very positive with four out of five (eighty percent) of organisations indicating that they find their social networking efforts valuable.

4.3.2.2 Social Media in South Africa

The Internet research organisation Socialbakers (2011) estimates that there were approximately 4 511 220 Facebook users in the South Africa as at January 2012, while a survey conducted by research company World Wide Worx (2011) estimates the number of Facebook account holders at approximately 4.2 million as at August 2011. Using an average of the two figures gives a penetration rate of just over nine percent of the entire population and an 85.12% penetration rate of the online population. This places South Africa at number thirty in the ranking of all Facebook statistics by country (Socialbakers, 2011). The impact of social networking sites (which is not exclusive to just Facebook) in South African CSOs is depicted in Figure 37.

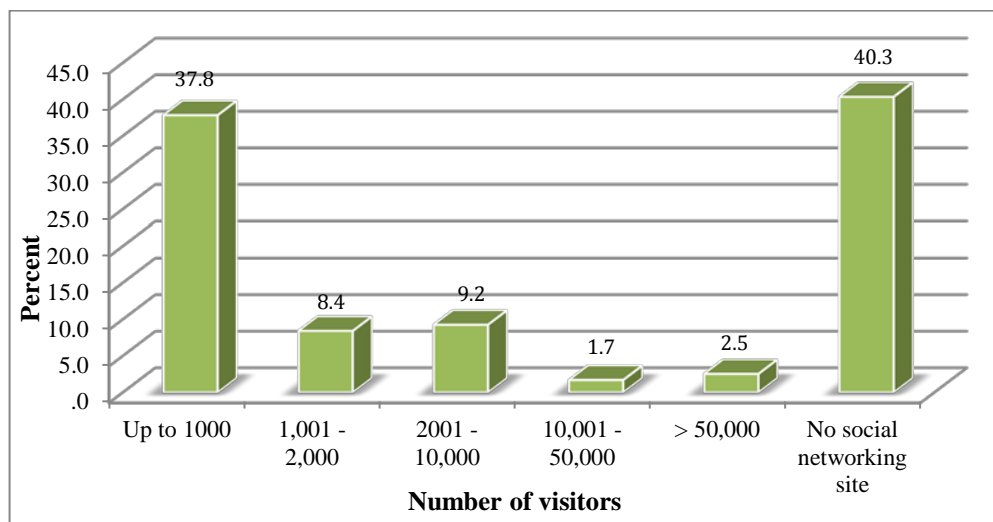


Figure 37: Social Networking in South African CSOs

The largest majority of organisations have managed to attract just up to one thousand visitors to their social networking sites. Using Facebook as the *de facto* social networking service, then South African CSOs only attract approximately 0,02 percent of South African Facebook users. Only 2.5% of organisations have managed to attract more than fifty thousand users to their social network sites, which represent 1.1% of all Facebook users in South Africa.

In response to question 3.2 of the survey, ‘When did your organisation begin using social networking (e.g. Facebook, MySpace),’ eighteen percent of CSOs indicated that they did not have a social networking site (see section 4.3.2); while in response to question 3.5 of the survey, ‘How many members has your organisation attracted to its various social networking sites,’ just over forty percent of organisations indicated that they did not have a social networking site (this section). This discrepancy in responses to two similar questions is a definitional issue. For example Twitter has been described variously as a social networking site (World Wide Worx,

2011) or as a microblogging tool (Rigby, 2010). A Google search in response to the question ‘What is Twitter’ revealed various sites describing Twitter as both a social networking site and as a microblogging service (Wikipedia, 2012; Tweeternet, 2012). Even MXit suffers from a problem of definition with a UNICEF report into MXit usage in South African youth describing MXit as an ‘instant messaging and social networking application’ (UNICEF, 2011, p. 5). The questioned that asked ‘When did your organisation begin using social networking’ explicitly gave Facebook as an example of a social networking site, while the question ‘How many members has your organisation attracted to its various social networking sites’ was open-ended and did not inadvertently prompt respondents by giving an example of a service. The forty percent response rate to the question that did not explicitly give an example of a service represents all social networking services and not just Facebook, which explains the higher percentage.

4.3.3 Intensity of Web 2.0 Use

Figure 38 depicts the extent of usage of social media amongst South African CSOs. This section relates to the following question from the survey: ‘Where would you place your organisation with respect to engaging with Web 2.0 social media?’

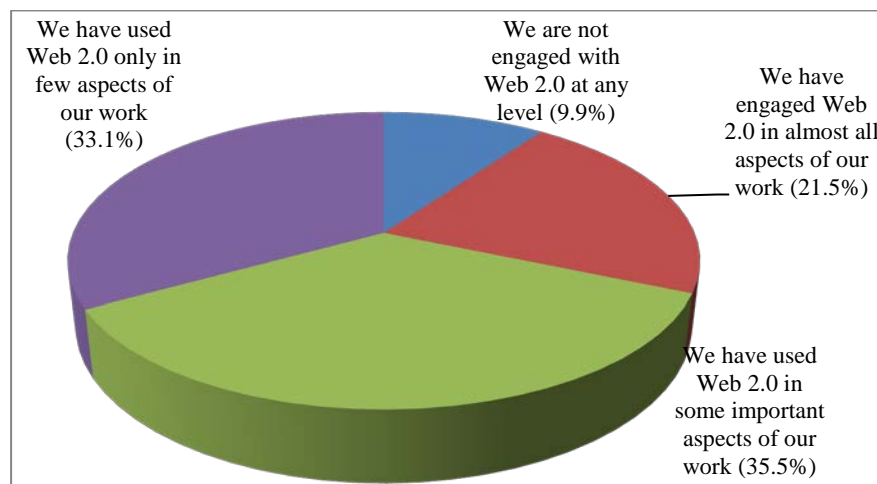


Figure 38: Extent of Usage

A little more than a fifth of all respondents (21.5%) use Web 2.0 in almost all aspects of their work. There is an almost equal split between organisations using Web 2.0 in some aspects of their work (35.5%) and those who use it in only a few aspects of their work (33.1%). Ten percent of all organisations do not engage with social media in any aspects of their work.

4.4 ADOPTER CATEGORIES AND INNOVATIVENESS

This section relates to the concepts of innovativeness and categories of adoption. The time line along which diffusion proceeds allows for the definition of adopter categories, which in turn informs the diffusion curves (see chapter three for a detailed explanation of the diffusion curves). The adoption pattern for an innovation when plotted over time mimics a bell-shaped curve, while the cumulative adoption rate forms an s-curve (Rogers, 2003). As far back as 1939 Schumpeter (1939), who is often considered the economist to first draw attention to the importance of innovation, argued that innovations do not occur in isolation implying that they are not evenly distributed over a period of time, but would rather tend to cluster in groups.

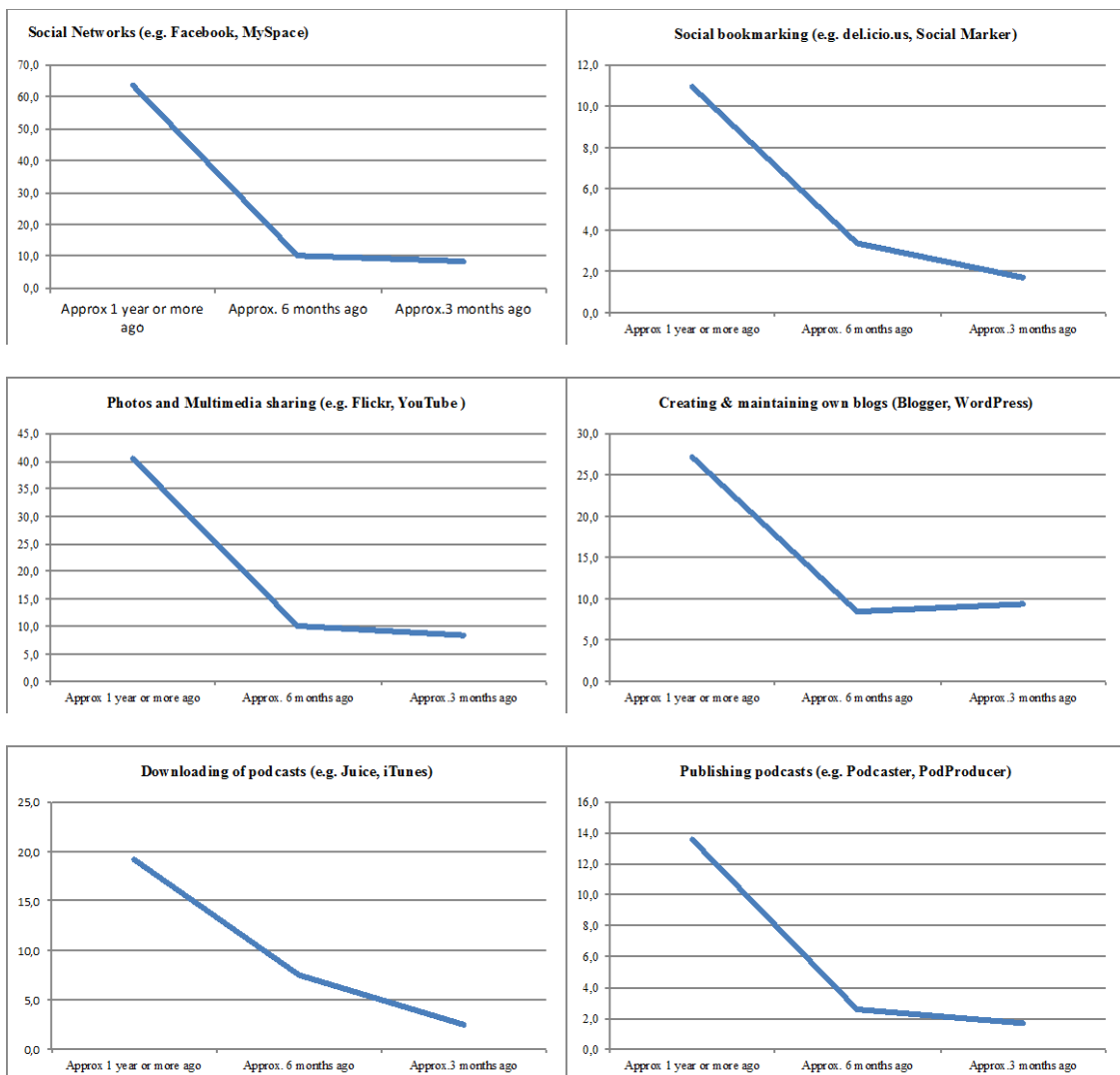
4.4.1 Adoption of Individual Social Media Services

The survey asked questions about the individual services that constitute Web 2.0, which is not one definable service but rather an all-encompassing term that refers to a group of Web-based technologies that promote user-generated content, personified by services such as wikis, blogs, podcasts and social networking sites (Madden & Fox, 2006). All of the twelve distinct services investigated are in essence distinct, with each of these having been developed and released to the public at different times. For example Facebook was released in 2004 while Twitter was released in 2006. In addition different versions of each service – each having distinctive technological and social features – are released to the public at different times. The diffusion framework of adoption is unable to represent adoption across what can essentially be considered separate technologies. Rogers (2003, p. 249) argues that innovations are often not single instances but should be seen as an “interrelated bundle of new ideas” in which the adoption of one service may provide a catalyst for the adoption of others. This ‘technology cluster’ is made up of one or more distinct components of a technology, which are ultimately interrelated. Social media services falls into this definition of technology clusters.

Rogers (2003) further argues that for a variety of reasons, the adoption of newer inter-related information technologies cannot be compared to the adoption patterns reflected in older communication technologies such as television. For example while the adoption of older established technologies followed an s-curve, emerging technologies such as the Internet and social media create a series of dependent s-curves, which is related to the rate at which they rapidly evolve and also to the range of skills that is required to ensure that they are deployed effectively. Two points are important: firstly the increasing speed of technology innovation may increase already existing gaps in information; and secondly a society that has been exposed to the Internet for longer will develop increasingly sophisticated methods of gathering

and processing information and the information gaps between early and late adopters will probably increase (Rogers, 2003).

Figure 39 depicts a series of graphs that represent each individual social media service, which supports Rogers' (2003) argument that certain technologies (of which social media is an example) can be viewed as an interconnected group of new ideas. While percentages may differ markedly (e.g. over sixty percent for social networks, and just over ten percent for social bookmarking) all the graphs display a similar pattern. Only the creating and maintaining of blogs has shown an increase in adoption for the most recent period of three months ago.



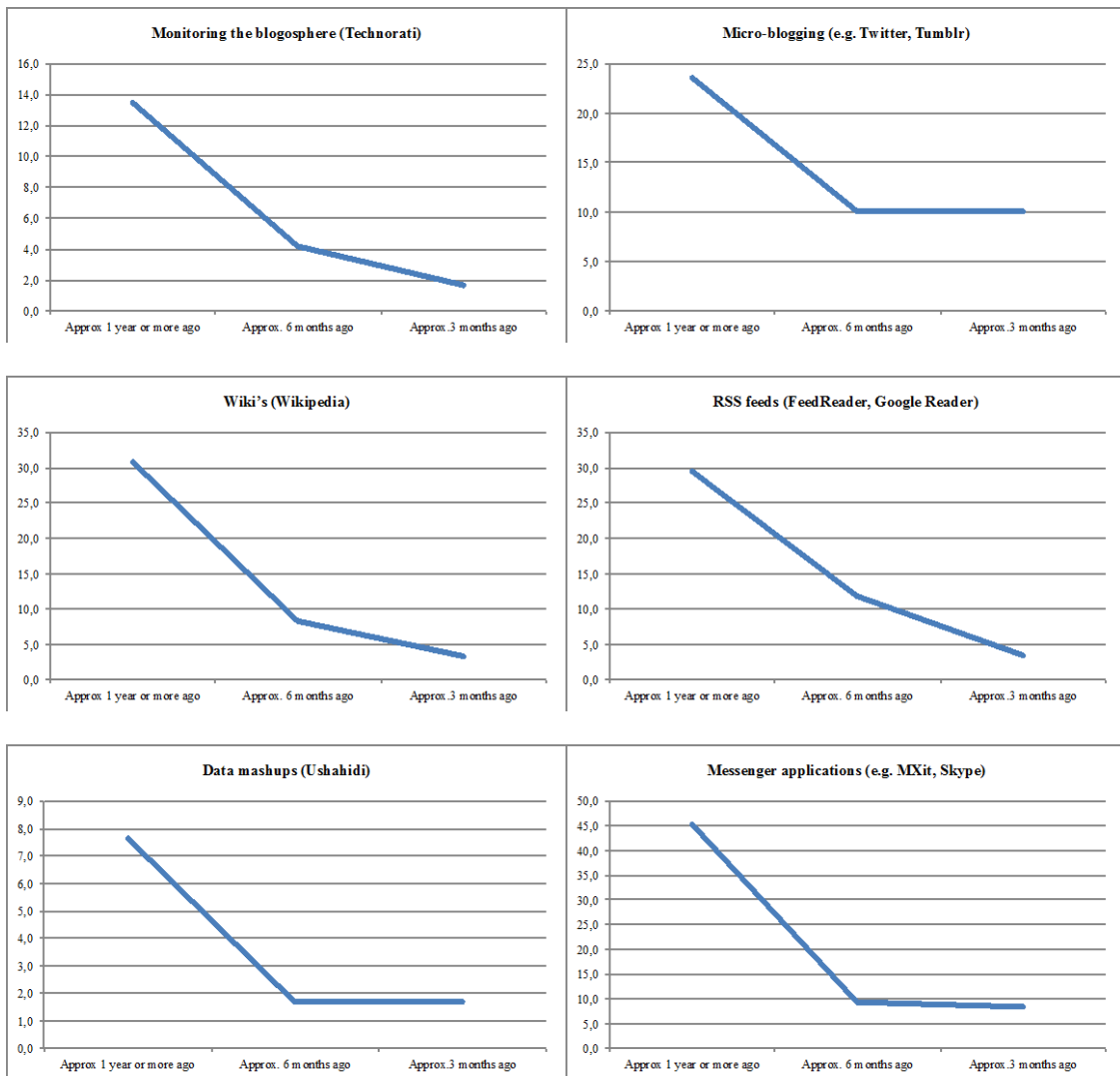


Figure 39: Cumulative Adoption of Individual Services

4.4.2 Adoption Categories: Leaders and Laggards

Organisations seldom adopt an innovation at the same time. Rather innovations are adopted over a period of time which - based on when organisations first begin using an innovation - allows them to be classified into 'ideal type' adopter categories. This is what makes comparisons possible. Adoption categories have been defined by Rogers (2003) as: (1) innovators, (2) early adopters, (3) early majority, (4) late majority and (5) laggards. However it is important to understand that the data can be manipulated to show alternate adoption curves with Rogers (2003, p. 279) arguing for flexibility in adopter categories and advises that when standardising on adopter categories the decision must include (1) the number of adopter categories, (2) the portion of the members under study to be included in each category, and (3)

the method, statistical or otherwise, of defining adopter categories. Innovativeness, which is the construct used to describe adopter categories, is defined as the extent to which organisations (or individuals) adopts an innovation earlier than other members of the social system. Innovativeness occurs continuously, and dividing it into separate and distinct categories is merely a simplification that aids the understanding of behaviour (Rogers, 2003, p. 280). Figure 40 illustrates adoption of each social media service across time.

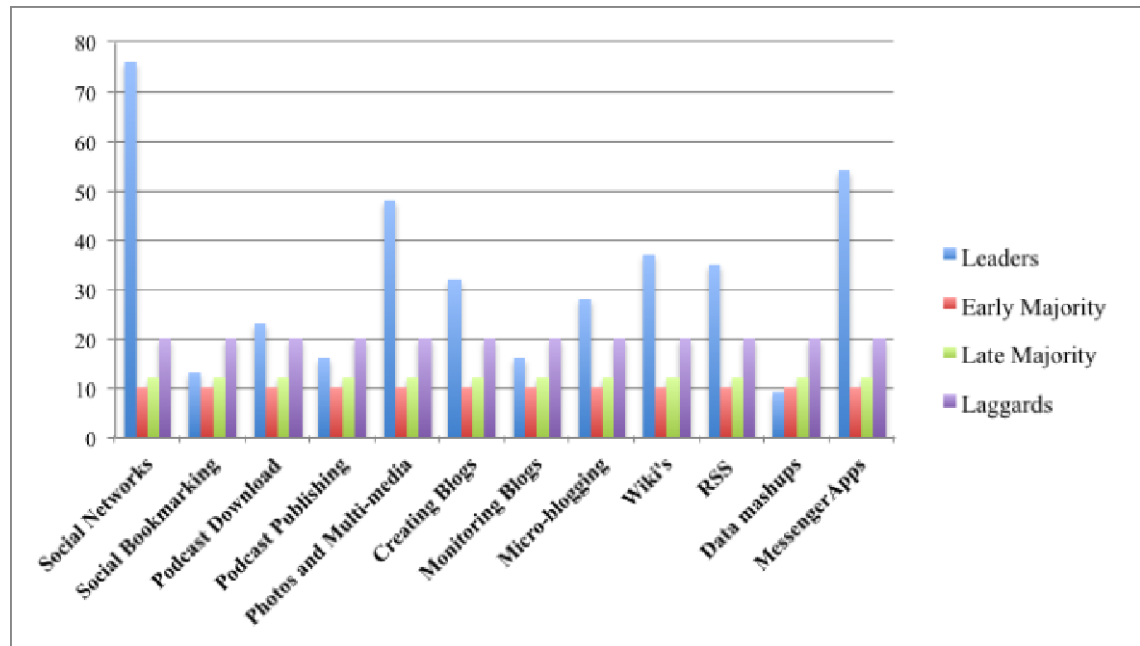


Figure 40: Adoption as per the Diffusion Framework

The adopter categories of leaders, early majority, late majority and laggards are still used. In this depiction of adoption, leaders are those services that adopted approximately one year or more ago; early majority approximately six months ago; late majority approximately three months ago; with laggards services have not been adopted at the time of the survey. Social networks fell in the leader category along with photos and multi-media sharing, messenger applications, wiki's and RSS feeds.

4.4.3 Reproducing the Bell-curve

Reiterating Rogers (2003) argument for flexibility in the definition of adopter categories, this section reproduces the classic diffusion bell-curve by first eliminating all responses that were unsure and then coding the data with numbers one through to four which correspond to the adoption categories of leaders, early majority, late majority and laggards respectively. Because of the short timescales - which may have skewed the data - the analysis allowed for some overlap. For example data up to and including 1.2 (in the coding scheme) was allocated to a

leader category. Using this logic for all of the adopter categories leads to the graph as illustrated in Figure 41.

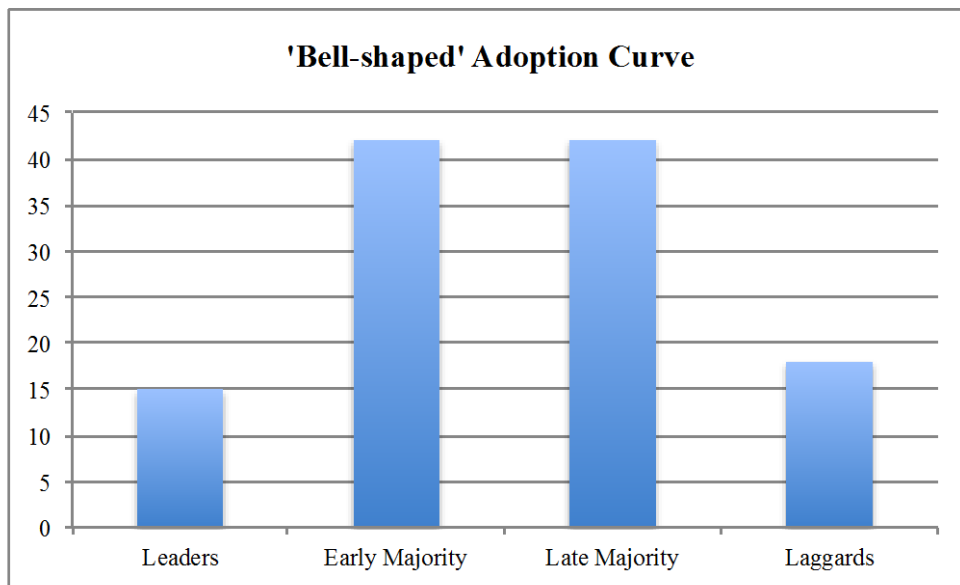


Figure 41: Diffusion Theory Adoption Categories

As can be seen the graph mimics the classic bell-curve of adoption, which illustrates Rogers point that the separation of adoption into categories is merely a conceptual device (Rogers, 2003, p. 280). Alternate descriptions of adopter categories are provided in the next section.

4.4.4 Visualising Adoption Categories using Spatial Median

While an attempt has been made to present adoption categories in accordance with the classical diffusion of innovations framework, alternate representations of leaders and laggards are presented in this section to accommodate the multiple characteristics of social media services.

The spatial median is used to illustrate the position of the organisations with respect to adoption categories across three dimensions. The spatial median is illustrated in Figure 42, extracted from the Mathematica toolset, which describes the type of aggregated data that is used to develop spatial median diagrams.

SpatialMedian

`SpatialMedian[matrix]`
gives the spatial median of the elements in *matrix*.

▼ **MORE INFORMATION**

- To use `SpatialMedian`, you first need to load the `Multivariate Statistics Package` using `Needs["MultivariateStatistics`"]`.
- `SpatialMedian[matrix]` gives the vector \bar{x} minimizing the sum of Euclidean distances from \bar{x} to the elements of *matrix*.

▼ **EXAMPLES**

▼ **Basic Examples (1)**

```
In[1]:= Needs["MultivariateStatistics`"]

      Spatial median for trivariate data:

In[2]:= SpatialMedian[{{1, 1, 2}, {3, 3, 1}, {2, 4, 4}}]

Out[2]= {2.1104, 2.64174, 2.10897}
```

Figure 42: Spatial Median Example – Extract from Mathematica

The adoption categories have been modified to consist of Leaders, Early and Late Majority and Laggards (each of which corresponds to x , y and z axis respectively). The organisational categories have been modified into the following: advocacy, think-tank, development, non-profit and ‘Other’. These categorisations ensure that the diagrams presented are visually useful.

Some notes on interpreting the diagram:

- 1) The size of the circle corresponds to a specific organisation type in the following ascending order: smallest = advocacy, followed by development, think-tank, non-profit and other).
- 2) The colour of the circle represents a specific social media service as defined by the legend
- 3) Leaders, Early and Late Majority (also referred to Intermediate) and Laggards are shown along the x , y and z -axes respectively. If a service is close to zero on the y and z axes, and higher (close to maximum) on the x this is an indication of an organisation falling into the ‘leader’ category
- 4) The size of the tail hanging off the circles is an illustration of the distance away from xy -plane and hence represents the distance along the z -axis, and aids in the visualisation of the diagrams.
- 5) The legend in Figure 43 represents the individual social media services.



Figure 43: Spatial Median Legend

4.4.3.1 Social Media Adoption Across all Organisational Types

Figure 44 illustrates the adoption of all social media services (social networking, bookmarking etc.) across all organisation types (advocacy, development etc.). As expected there are sixty points on the diagram i.e. twelve services across five organisational types. There is a clustering around the laggard and intermediate categories. This corroborates previous descriptions of adopter categories in this study, which indicate a low adoption of social media services across the organisations surveyed.

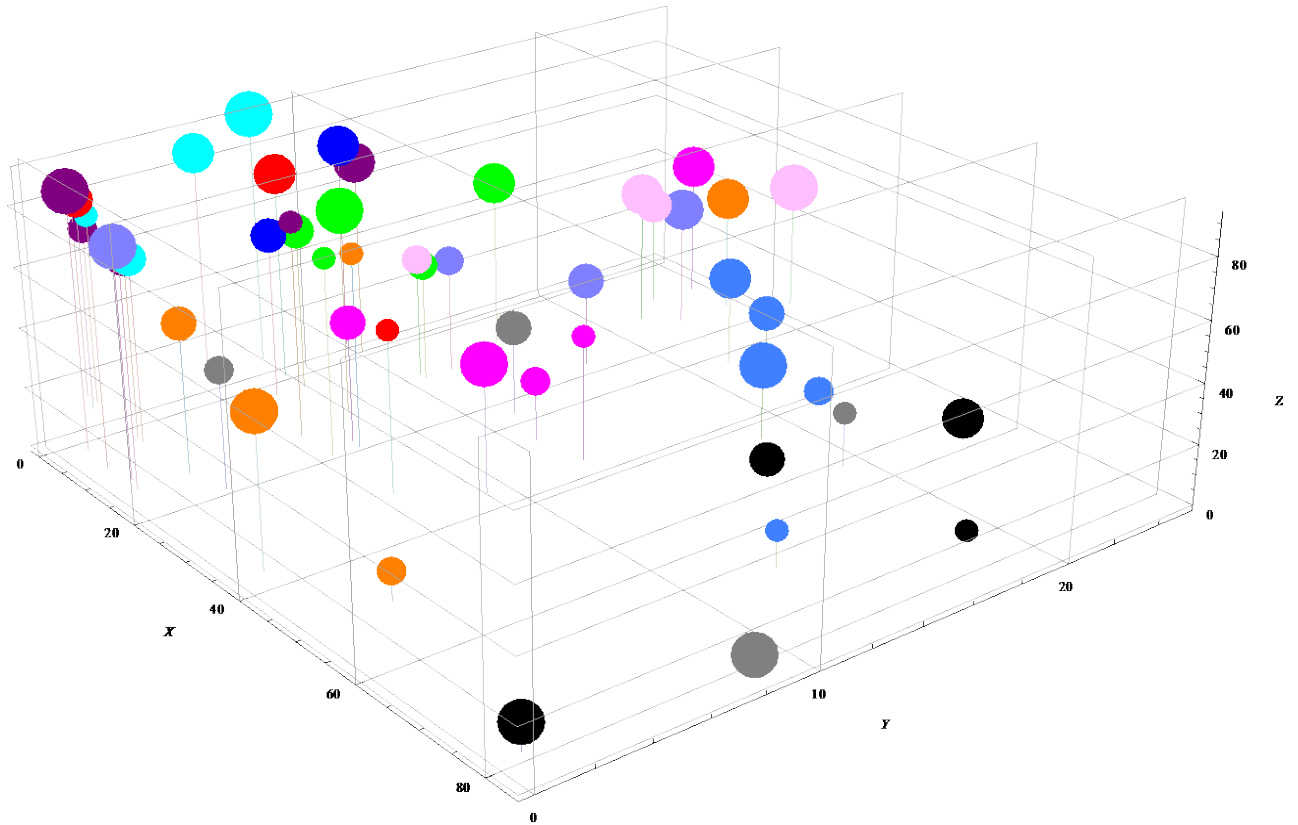


Figure 44: Spatial Median for all social media services across all organisation types

It must be borne in mind that civil society organisations span a wide range of structures, goals and agendas; they also have differing levels of engagement with communities, the public, and other organisations and institutions. Influencing national and regional policy is the priority at the macro- and meso-levels, while at the micro-level they work with communities and organisations. The use of technology is particularly significant for engagement with the public, and varies depending on the type of organisations. For example, influencing regional policy would be less dependent on a service like Twitter, while an engagement at a community level where interaction with citizens is paramount may be the perfect vehicle for a service like Twitter.

4.4.3.2 Aggregated Social Media Adoption Across all Organisational Types

The following series of diagrams in sections 4.4.3.2(a) through to 4.4.3.2(e) illustrate the adoption categories for each organisational type i.e. advocacy, think-tank, development, non-profit and other.

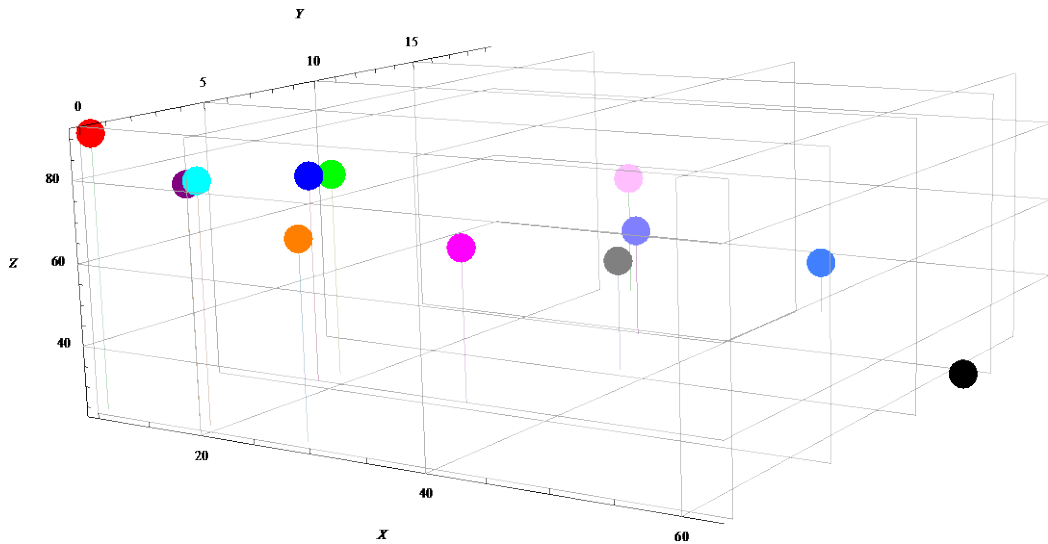


Figure 46: Development Organisations and Adoption Categories

Development organisations appear to have only adopted social networking, this being the only service that lies in the leader space. The remainder of the services are clustered either in the intermediate space (e.g. photos and multimedia sharing) or in the laggard space (social bookmarking and wikis). Just like advocacy organisations, development organisations also engage with communities extensively which makes social networking is a very necessary medium of communication.

4.4.3.2(c) Think Tanks

Figure 47 illustrates adoption categories for think tanks. There were twenty-six organisations in this category.

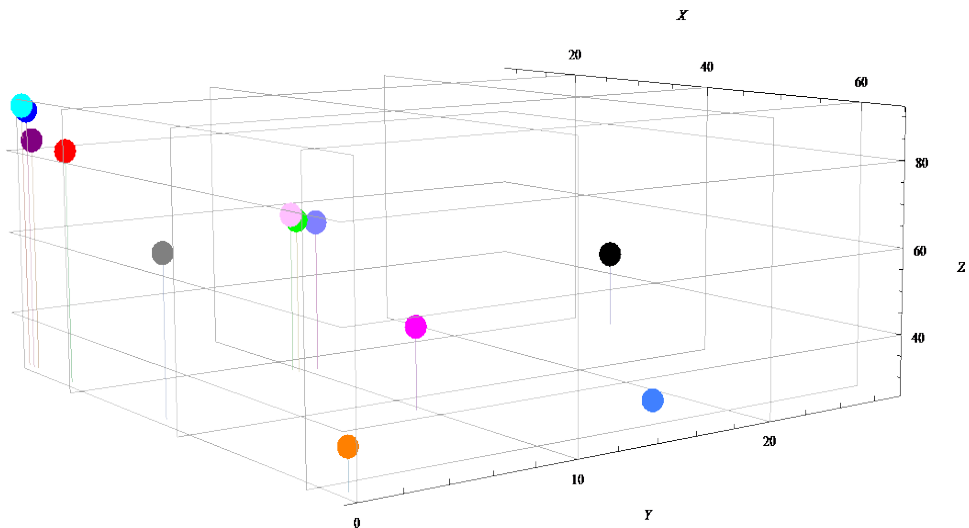


Figure 47: Think-Tank and Adoption Categories

Think tanks have for the most part adopted wikis, which sits in the leader space. Messenger apps lie between leader and intermediate space. The remainder of the services are either in the laggard space, or in the intermediate space leaning towards the laggard space. Think tanks are organisations that engage extensively in research activities and it is safe to speculate that wiki's, and in particular services like Wikipedia, are important tools for research activities.

4.4.3.2(d) *Non-profit Organisations*

Figure 48 illustrates adoption categories for non-profit organisations. There were fifty-six organisations in this category.

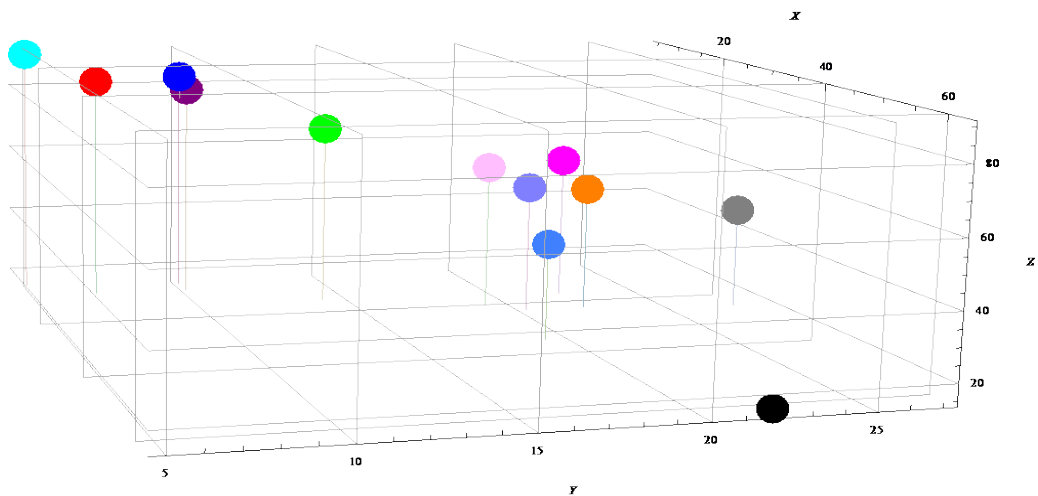


Figure 48: Non-profit Organisations and Adoption Categories

Only social networking has been adopted to any degree by non-profit organisations and lies firmly in the leader space. Photos and multimedia sharing lean towards the leader space. All the other services are clearly either in the intermediate space or in the laggard space.

4.4.3.2(e) *Organisational type Other*

Figure 49 illustrates adoption categories for the category ‘Other,’ which includes training and religious organisations. There were twelve organisations in this category.

Social media services are spread evenly across the adopter categories with social networking and photos and multimedia sharing in the leader space. Microblogging and messenger apps are in the intermediate space and leaning towards the leader space. The others are firmly in the laggard space.

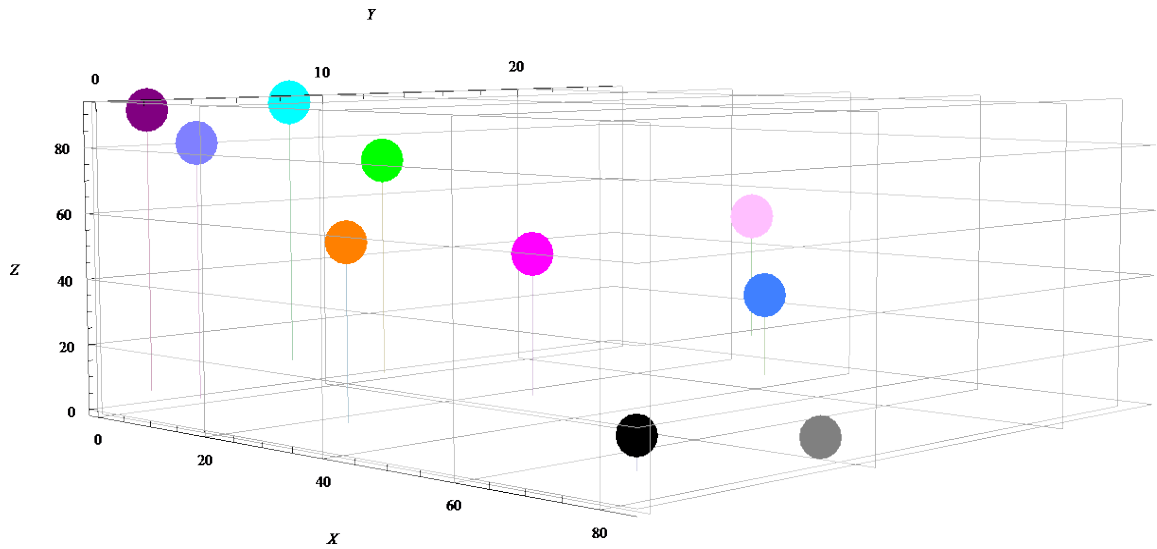


Figure 49: Other Organisations and Adoption Categories

4.4.3.3 The Geometric Center

Figure 50 illustrates the adoption of the twelve services across the five organisational types. As expected there are sixty data points.

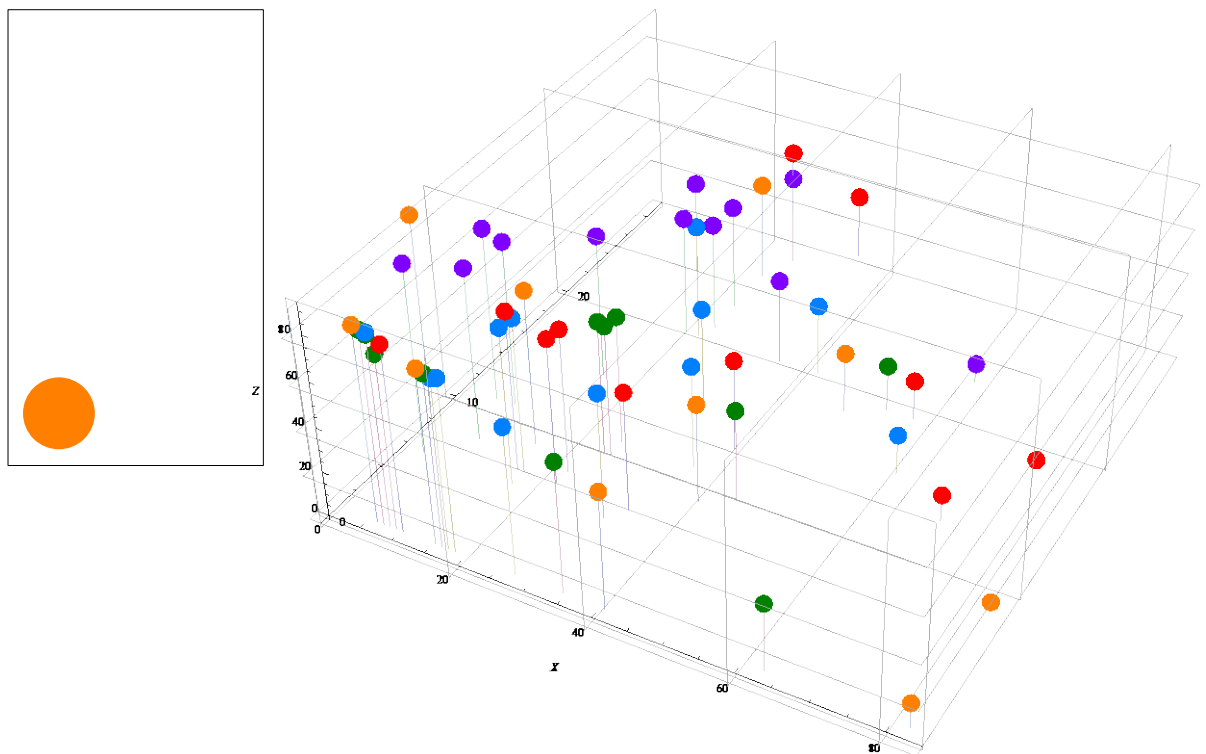


Figure 50: The Geometric Center

There is a clustering of services around the laggard space (high on the z axis) and around the intermediate space (high on the y axis). While this diagram conveys a broad sense of the

adoption patterns it is a visually ‘busy’ diagram. Another visualisation presented in the following sections is the geometric center, which aggregates the spatial medians and creates one point per organisational category and one point per social service.

4.4.3.3 (a) Geometric Center per Organisation Type

A geometric center can be found for each organisation type. This illustrates where an organisation type sits in terms of the adoption categories across all social media services i.e. the services have been reduced down to one point (the geometric center) per organisation type. Figure 51 illustrates where all organisation types lie with respect to the adopter categories.

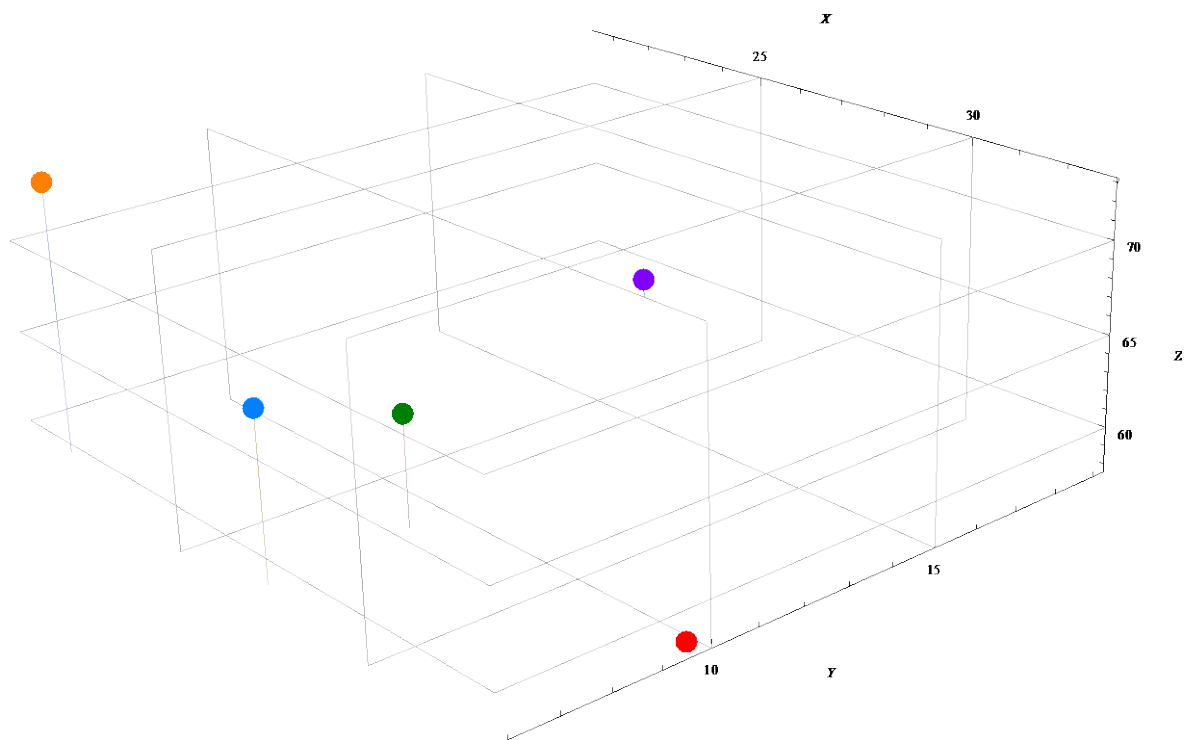


Figure 51: Geometric Center per Organisational Category

Advocacy organisations (red) are the only organisational type that sits in the leader category. Development organisations (blue) and think tanks (brown) lie somewhat in the intermediate category, while the organisations termed ‘Other’ (orange) is in the laggard space. Non-profits (purple) are firmly in the intermediate space.

4.4.3.3 (b) Geometric Center per Service Type

Figure 52 illustrates the dispersion of individual social media services across the adopter categories.

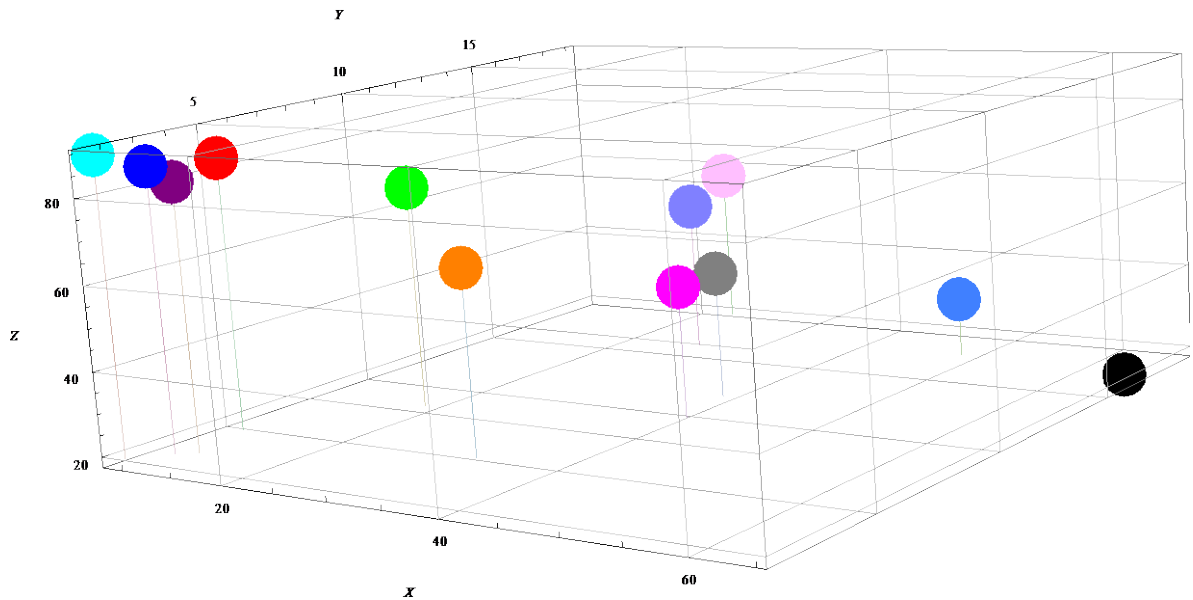


Figure 52: Geometric Center for Social Media Services

Only social networking services and messenger applications have a high x value indicating that they are in the leader space. There is a clustering of four services firmly in the laggard space (high on the z axis). The other services predominate in the intermediate space with four leaning closer to the leaders and two closer to the laggards.

4.4.4 Adoption Categories: A Summary

Two alternate representations of adoption categories have been presented, one from the classic diffusion of innovations framework and the other using the concept of a spatial median. Figure 54, adapted from Segars & Grover (1999), profiles the twelve social media services under investigation with respect to the leader and laggard adoption categories. Even though the Segars & Grover model was originally used to illustrate different concepts (specifically strategic planning constructs) the model is still a convenient way of summarise adopter categories.

Using the matrix values obtained from the spatial median calculations (recalling that leaders, intermediate and laggards correspond to the x , y and z axis respectively) leaders and laggards data points were obtained by the difference in the leader and laggard matrix values (see Table 24).

Social Media Service	Matrix Data Points	Data Midpoints (Rounded)
Socialnetworkcenter	64.5558, 16.5748, 19.0004	44
Socialbookmarkingcenter	11.7977, 2.20179, 86.0005	-75
Downloadingpodcastscenter	20.038, 7.8894, 72.4291	-52
Producingpodcastscenter	11.5505, 4.45702, 84.1767	-73
Photosandmultimediacenter	39.9628, 11.3416, 48.7322	-9
Creatingblogscenter	28.2842, 15.5656, 55.4119	-27
Monitoringblogscenter	13.2845, 2.50878, 82.1623	-69
Microbloggingcenter	24.0, 19.0, 57.0	-33
Wikiscenter	33.5646, 4.72326, 61.9465	-28
RSScenter	41.0537, 9.38449, 49.7065	-8
Datamashupscenter	9.14251, 1.44464, 89.548	-80
Messengerapplicationscenter	50.0, 17.0, 33.0	27

Table 24: Matrix Values for Leaders and Laggards Categories

The data midpoints for each service are plotted onto the vertical axis of Figure 53. The horizontal line indicates a mid-point between leaders and laggards. The greyed out area in the diagram represents the intermediate category (early and late majority).

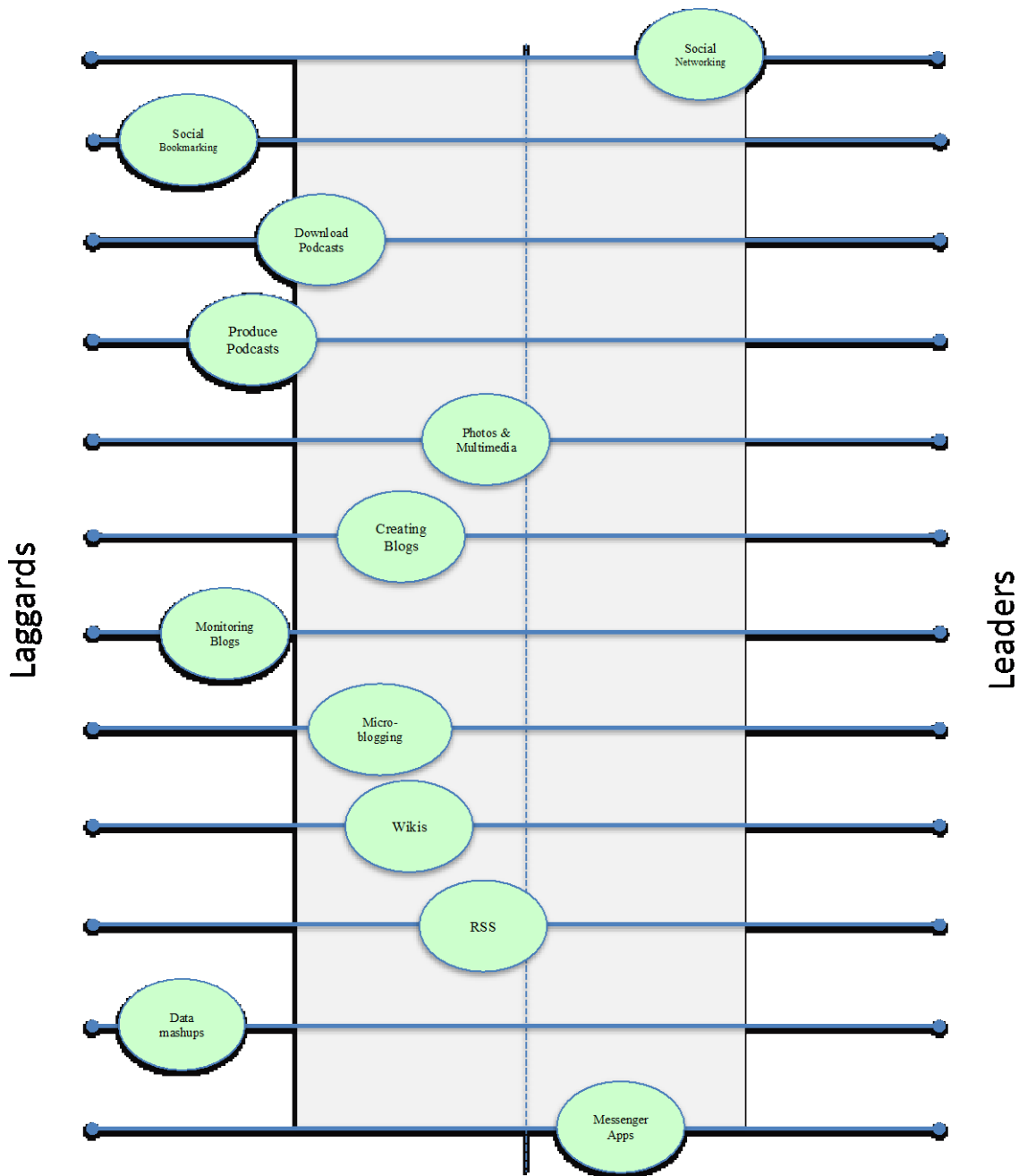


Figure 53: Summary of Social Media Adoption across Adopter Categories

Figure 54 provides an alternate visual summary of social media adoption and corroborates the evidence of the low adoption rate of social media services in South African civil society organisations. This is in respect of the twelve services investigated. The adoption patterns are not uniform across organisation types and neither are they uniform across the different services.

4.5 WHAT DRIVES WEB 2.0 ADOPTION IN SOUTH AFRICAN CIVIL SOCIETY ORGANISATIONS?

Diffusion theory states that it is the individual's perception of the attributes of an innovation that affects adoption, not those attributes defined by experts or change agents (Rogers, 2003). This study follows that path as it tries to explore and explain why South African CSOs adopt social media and what perceptions have characterised the reason for adoption, be it from internal or external perspectives.

4.5.1 Internal Reasons for Web 2.0 Adoption amongst South African CSOs

The internal reasons for the adoption of social media services in South African CSOs are illustrated in Figure 54. This analysis is in response to the question 'How important are Web 2.0 services to your organisation from an internal management perspective?' The responses were on a scale of one to five, with one equal to very unimportant and five equal to very important. The raw data was coded and aggregated and reported on as follows: one and two were grouped together as 'Unimportant', three was coded as 'Somewhat Important' and four and five were aggregated as 'Important.'

Seventy six percent of CSOs believe that Web 2.0 is important firstly to ensure that the organisations becomes well known (visibility) and secondly as an avenue to access information (information intensity). The need to adapt to new technology was rated as important with just over sixty one percent of CSOs choosing this as the reason for Web 2.0 adoption. The ability to reduce communication and back-office costs was cited by fifty seven percent of organisations with just over fifty six percent citing the capacity of Web 2.0 to achieve organisational missions and goals. A fraction over fifty four percent believe in Web 2.0's adeptness to build expertise in ICTs.

The power to gather information (or information intensity) is a strategic imperative for CSOs. The Internet has made countless information sources available which has given CSOs a whole new world of intelligence and data gathering capabilities (Surman & Reilly, 2003). Additionally the new collaborative technologies that define Web 2.0 give CSOs the ability to tap into the *zeitgeist* of their supporters (Rigby, 2010). Competition amongst CSOs makes it imperative for CSOs to remain relevant, which means being in 'sync' with their main constituency of supporters and donors.

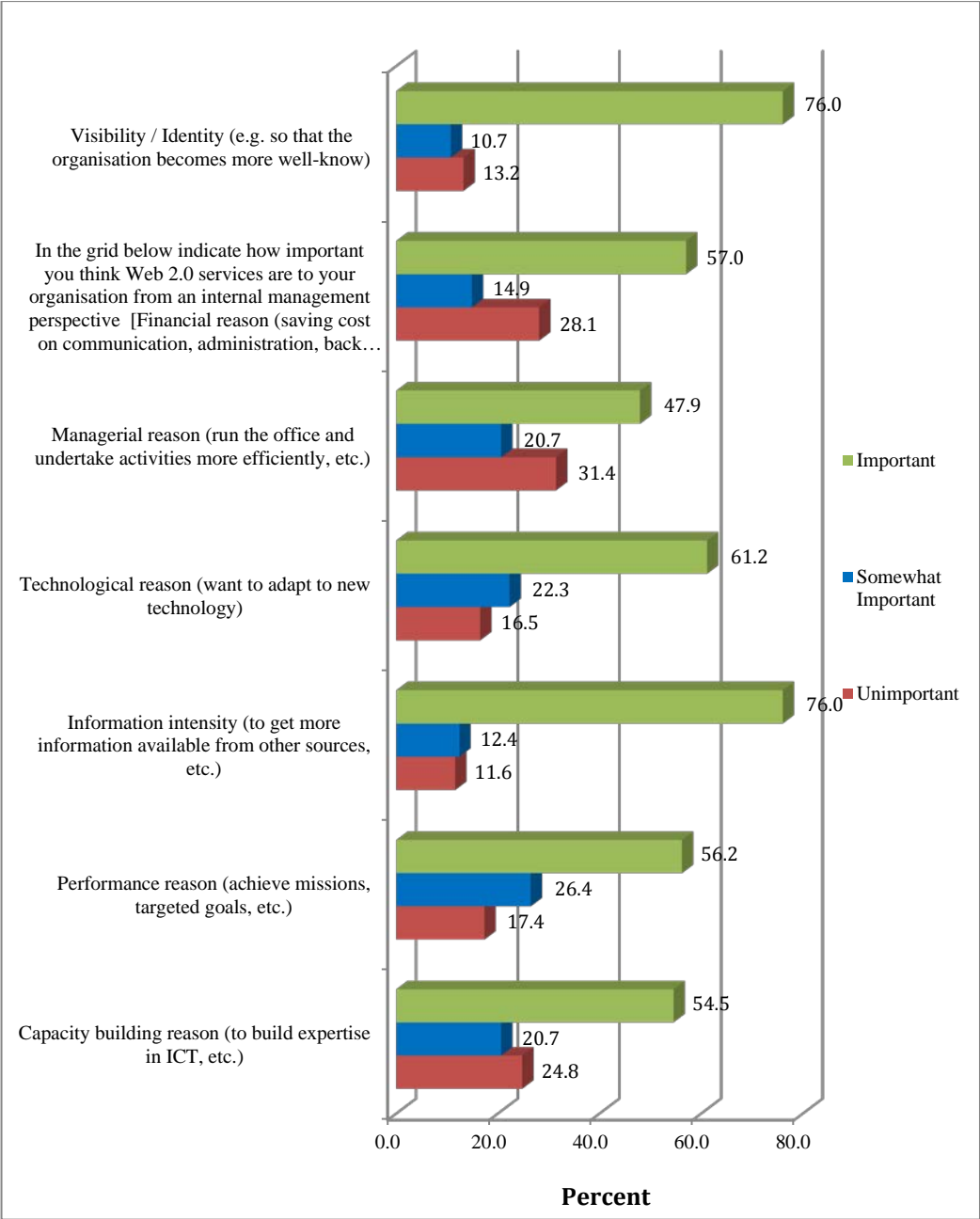


Figure 54: Internal Reasons for Web 2.0 Adoption Amongst South African CSOs

In support of the need for organisations to become more visible (chosen by seventy-six percent of CSOs) Yang (2009) argues that online activists have begun to adopt marketing strategies to promote both their organisations and theirs causes. Activism no longer has the image of the scruffy children of the 1960s but rather activists are more likely to be full-time employees of advocacy organisations, with possibly a scientific background, and a very with likelihood of having obtained post-graduate degrees in the field of politics and/or business.

There was overwhelming positivity about Web 2.0's importance with only a small number of CSOs who consider social media as unimportant from an internal management perspective. The largest of this minority, 24.8%, consider social media as unimportant for capacity building. The factor analysis shows that there was no overlapping of variables, which indicates no mixing of factors for this question.

4.5.2 External Reasons for Web 2.0 Adoption

The importance attached to social media from an external perspective is depicted in Figure 55. This analysis is in response to the question 'Indicate how important you think Web 2.0 services are to your organisation from an internal management perspective.' The responses were on a scale of one to five, with one equal to very unimportant and five equal to very important. The raw data was coded and aggregated and reported on as follows: one and two were grouped together as 'Unimportant'; three was coded as 'Somewhat Important' and four and five were aggregated as 'Important.'

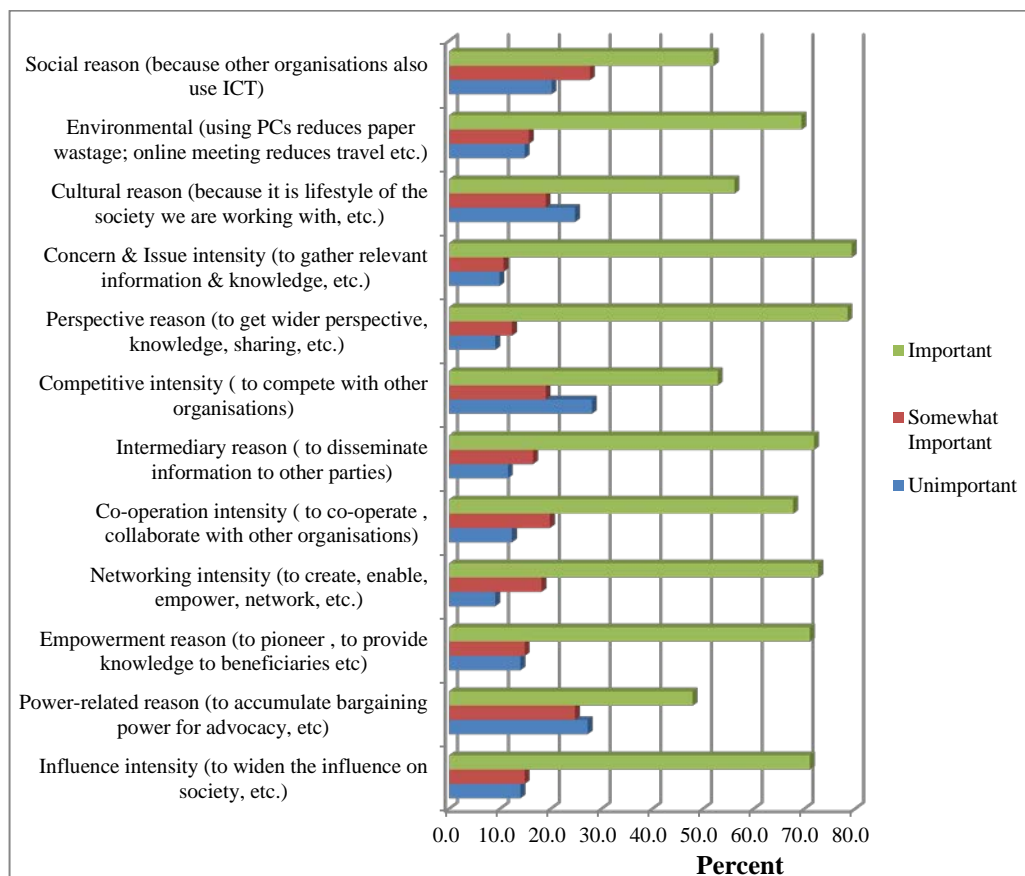


Figure 55: External Reasons for Web 2.0 Adoption in South African CSOs

Table 25 shows a cumulative percentage for the categories of ‘somewhat important’ and ‘important.’

External reasons for Web 2.0 Adoption	Unimportant	Important
Influence intensity (to widen the influence on society, etc.)	14.0	86
Power-related reason (to accumulate bargaining power for advocacy, etc.)	27.3	72.7
Empowerment reason (to pioneer, to provide knowledge to beneficiaries etc.)	14.0	86
Networking intensity (to create, enable, empower, network, etc.)	9.1	90.9
Co-operation intensity (to co-operate, collaborate with other organisations)	12.4	87.6
Intermediary reason (to disseminate information to other parties)	11.6	88.4
Competitive intensity (to compete with other organisations)	28.1	71.9
Perspective reason (to get wider perspective, knowledge, sharing, etc.)	9.1	90.9
Concern & Issue intensity (to gather relevant information & knowledge, etc.)	9.9	90
Cultural reason (because it is lifestyle of the society we are working with)	24.8	75.2
Environmental (using PCs reduces paper wastage; online meeting reduces travel etc.)	14.9	85.1
Social reason (because other organisations also use ICT)	20.2	79.8

Table 25: External Reasons for Web 2.0 Adoption in South African CSOs

A large number of the external reasons for Web 2.0 adoption were deemed important by a majority of CSOs including:

- To widen the influence on society (71.1%)
- To provide knowledge to beneficiaries (71.1%)
- To enable, empower and network (72.7%)
- To co-operate and collaborate with other organisations (67.8%)
- To disseminate information (71.9%)
- To get a wider perspective and share knowledge (78.5%)
- To gather information and knowledge (79.3)
- To reduce environmental waste and travel (69.4%)

The majority of CSOs were in the large positive towards Web 2.0 as external enabler. The largest negative factor relates to using Web 2.0 services to compete with other organisations with 28.1% of CSOs rating this as unimportant. Only 47.9% of CSOs saw Web 2.0’s ability to accumulate bargaining power for advocacy as an important factor. When combined with the category ‘somewhat important’ this percentage rises to 72.7%, with the remaining organisations (27.3%) rating this as unimportant.

4.5.2.1 Factor Analysis

Factor analysis reveals a grouping of social media services along two components with Table 26 illustrating component one and component two factors, cross-tabulated against the external reasons for social media adoption.

External Reasons for Social Media Adoption	Component 1	Component 2
Social reason (because other organisations also use ICT)	0.186	0.788
Environmental (using PCs reduces paper wastage; online meeting reduces travel etc.)	0.378	0.758
Cultural reason (because it is lifestyle of the society we are working with)	0.285	0.791
Concern & Issue intensity (to gather relevant information & knowledge)	0.540	0.690
Perspective reason (to get wider perspective, knowledge, sharing, etc.)	0.579	0.655
Competitive intensity (to compete with other organisations)	0.325	0.681
Intermediary reason (to disseminate information to other parties)	0.817	0.398
Co-operation intensity (to co-operate, collaborate with other organisations)	0.798	0.387
Networking intensity (to create, enable, empower, network, etc.)	0.796	0.347
Empowerment reason (to pioneer, to provide knowledge to beneficiaries)	0.798	0.363
Power-related reason (to accumulate bargaining power for advocacy, etc.)	0.780	0.192
Influence intensity (to widen the influence on society, etc.)	0.828	0.351

Table 26: Factor Analysis

The component two factors with a value over 0.5 are social, environmental, cultural, concern and issue intensity, perspective and competitive intensity. The remaining reasons fall into category one.

The majority of the component one factors over 0.5 appear to relate to ‘outward facing’ reasons, for example dissemination of information; collaboration with other organisations; to empower and network; to provide knowledge; to widen influence on society; and to accumulate advocacy power. Tandon (2000) argues that emerging interactive technologies provide a communications platform between different types of local and international organisations that span a variety of interests, including religious, the labour movement, NGOs and diasporic groups, which provides some support for the ‘outward facing’ hypothesis that this section proposes.

In contrast some of the component two factors over 0.5 are more organisationally ‘inward facing,’ for example reducing wastage, increasing online meeting, reducing travel; to gather

information; to follow trends set by other organisations; and because it reflects the society within which the organisation operates.

4.5.3 Functions of Web 2.0 Usage in South African Civil Society

This section analyses the functions for which Web 2.0 is used in South African CSOs as illustrated in Figure 56. The question asked which areas from marketing, market research, fundraising or campaigning each of the listed Web 2.0 services were used.

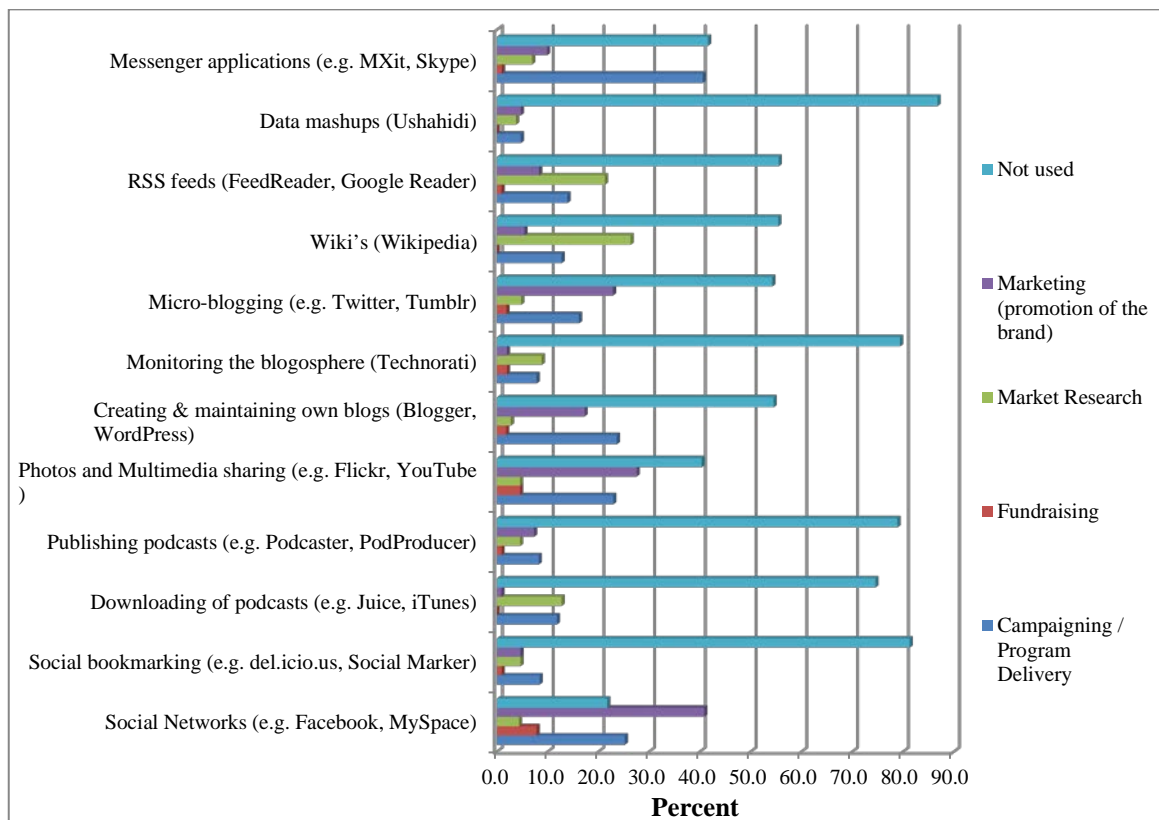


Figure 56: Functions of Web 2.0 usage in South African CSOs

Social networking is the most used service with just over seventy eight percent of CSOs adopting it for the following purposes: campaigning (25.2%); fundraising (7.8%); promotion of the brand (40.9%); and market research (4.3%). Perhaps surprising, fundraising via social networks garnered support from just 7.8% of CSOs. Photos / multi-media sharing and messenger applications followed in terms of usage with 59.6% and 58.4% of organisations using them for the one or more of the listed activities. The maintaining of organisational blogs (45.4%), microblogging (45.8%) and wiki's (44.6%) were the next most utilised services.

Table 27 summarises data on levels of knowledge about social media services (discussed in section 4.3.1), adoption rates (discussed in section 4.3.5) and data with respect to the functions of social media usage (this section).

Social Media Services	Level of knowledge (fairly & somewhat knowledgeable)	Cumulative adoption - 3months or more ago	Cumulative usage across all areas e.g. marketing, research etc.
Social Networks (e.g. Facebook, MySpace)	81	82.4	78.2
Social bookmarking (e.g. del.icio.us, Social	26.5	16	18.7
Downloading of podcasts (e.g. Juice, iTunes)	26.4	29.2	25.4
Publishing podcasts (e.g. Podcaster, PodProducer)		17.8	21.1
Photos and Multimedia sharing (e.g. Flickr,	68.3	58.8	59.6
Creating & maintaining own blogs (Blogger,	46.2	44.9	45.4
Monitoring the blogosphere (Technorati)		19.3	12.8
Microblogging (e.g. Twitter, Tumblr)	46.3	43.7	45.8
Wiki's (Wikipedia)	59.5	42.4	44.6
RSS feeds (FeedReader, Google Reader)	52.1	44.6	30.5
Data mashups (Ushahidi)	16.6	11	13.2
Messenger applications (e.g. MXit, Skype)	66.9	63	58.4

Table 27: Cumulative Adoption versus Cumulative Areas of Usage

As can be expected there is a high degree of correlation between levels of knowledge, adoption and usage. For example eight-one percent of CSOs are knowledgeable about social networks, and 82.4% of them having adopted social networks at least more than three months ago, with 78.2% using them for either campaigning / program delivery, fundraising, market research or promotion of the brand. Similar patterns emerge for all of the other services. Internationally, CSOs are using social networks as a tool for program delivery, marketing, customer support, fundrising and market research and looking forward the goal of these CSOs is to use social networking sites to engage members and grow membership (NTEN, 2010).

4.6 BENEFITS AND BARRIERS

This section analyses the benfits and barriers Web 2.0 deployment in South African civil society. The questions from the survey that informed this analysis are: 'In what way has your organisation benefited from its use of Web 2.0 social media? Rate only those aspects that are

relevant (one = no benefit, five = great benefit)' and 'What difficulties has your organisation experienced in deploying Web 2.0 services? (Tick all that apply).'

4.6.1 Benefits of Social Media Adoption

Figure 57 illustrates the benefits experienced by CSOs with regards to social media services.

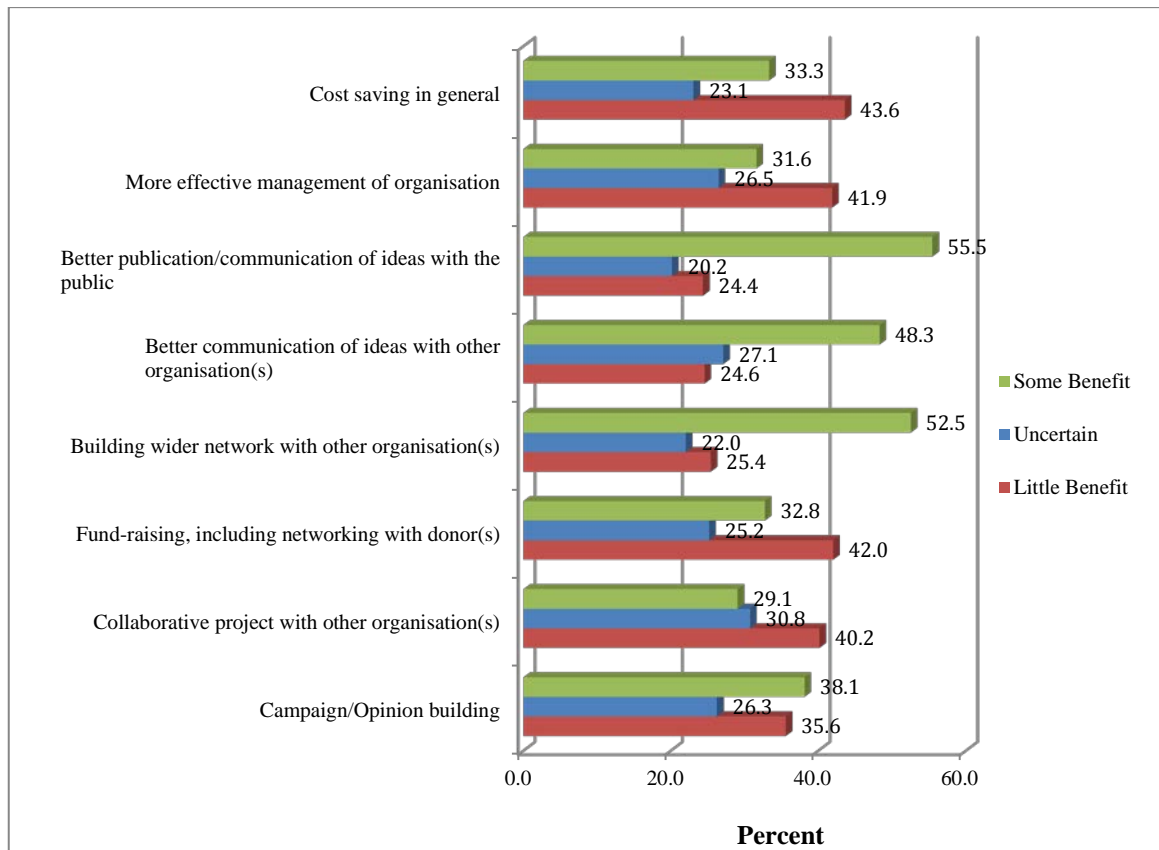


Figure 57: Benefits of Social Media Adoption

The biggest benefits of social media to South African CSOs are better communication of ideas with public (55.5%), better communication of ideas with other organisations (48.3%) and the ability to build wider networks with other organisations (52.5%). The common theme that emerges from these responses is one of communication and networking; which taken together has an average of 52%. Fundraising (32.8%) and opinion building (38.1%) were the other areas where some benefit was realised. Social media does not assist organisations save costs or assist in the management of the organisations with 43.6% and 41.9% of organisations indicating little benefit in these areas.

Paradoxically while CSOs see the benefit of social media in building wider networks with other organisations (52.5%) this does not extend to actually undertaking collaborative projects with

other CSOs (40.2% of CSOs see little benefit of this). There were an almost equal proportion of organisations that saw either some benefit or little benefit is using social media for campaigning/opinion building (38.1% versus 35.6%). The factor analysis shows that there was no overlapping of variables, which indicates no mixing of factors for this question.

In the responses to the usage of social media in section 4.5 just under eight percent of CSOs indicated that they used social media for fundraising, while in response to the benefits of social media (this section) just over thirty two percent of CSOs think social media has ‘some benefit’ in respect of fundraising. This is a case of expected benefits not equating to actual usage. One possible reason for this is that while social media may be a viable channel for fundraising, there is still a lot of hesitancy amongst South Africans in general for online financial transacting. In a study conducted by MasterCard (Polity.org.za, 2012) fifty-one percent of South Africa’s online population conduct online financial transactions. Of the people who have access to the Internet but who do not conduct online transactions, just over fifty percent cite online security as the reason for not transacting online. Fundraising online requires transmitting personal financial information and would be subject to the same security concerns cited above.

4.6.2 Barriers to the Deployment of Social Media

This section analyses the barriers to the deployment of social media in South African CSOs and the responses are illustrated in Table 28.

Barriers to the deployment of social media	Frequency	Percentage
Lack of infrastructure	6	5.0
Lack of skilled human resources, Lack of infrastructure	6	5.0
Lack of money, Lack of skilled human resources	7	5.9
Lack of money, Lack of skilled human resources, Lack of infrastructure	7	5.9
Internal policy, management	8	6.7
Lack of money	19	16.0
Lack of skilled human resources	36	30.3

Table 28: Barriers to Deploying Social Media

Thirty six organisations (or thirty percent) cite the ‘lack of skilled human resources’ as the biggest barriers to deploying social media. The only other significant barrier identified was a ‘lack of money’ chosen by nineteen (or sixteen percent) organisations. The remaining barriers that listed in the survey protocol were insignificantly represented in the sample.

4.7 PERCIEVED ATTRIBUTES AND ATTITUDES TOWARDS WEB2.0

This section look at the results of the attitudes and perceptions of CSO respondents towards Web 2.0 social media.

4.7.1 Perceptions on the Use of Web 2.0 in South African Civil Society

Figure 58 interrogates the responses to the question relating to the impact of social media on civil society organisations.

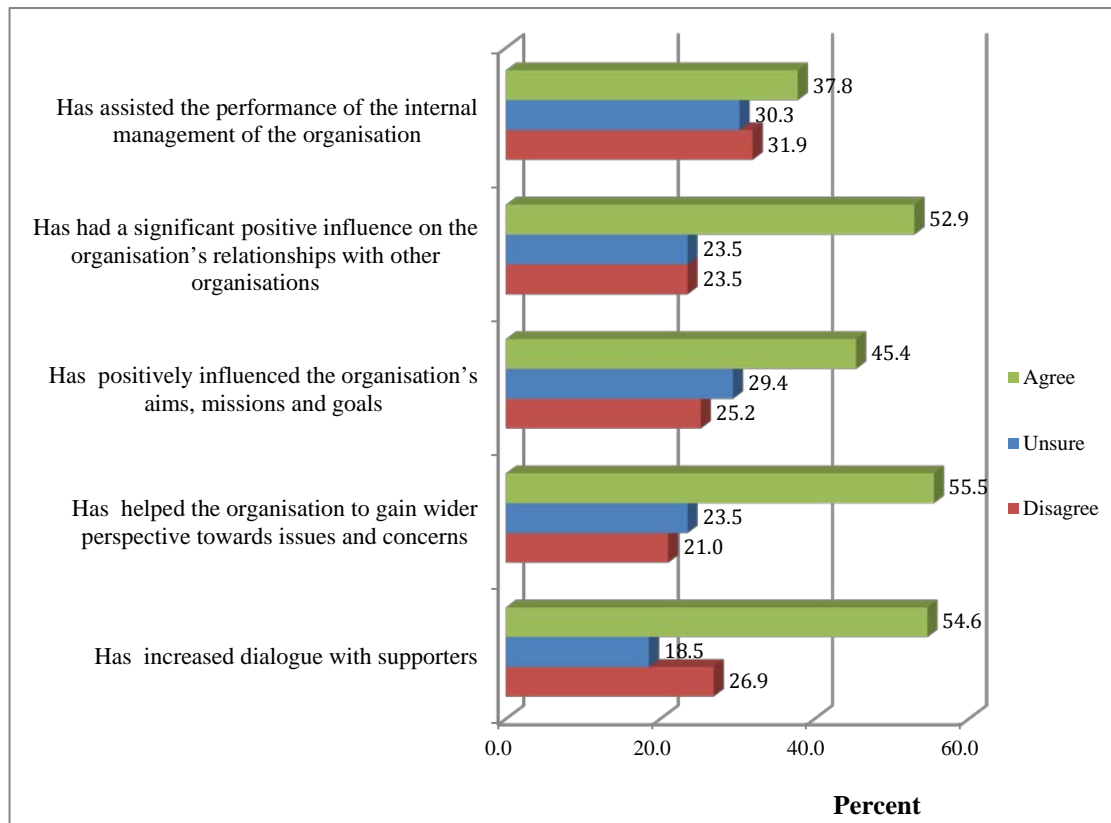


Figure 58: Perceptions on the Use of Web 2.0

Just over half of all CSOs surveyed believed that social media has:

- Had a positive influence on the organisations relationships with other CSOs (52.9%)
- Helped the organisations gain a wider perspective towards issues and concerns (55.5%)
- Increased dialogue with supporters (54.6%)

The ratio of agreement to disagreement for the above statements is approximately two to one. The statements which relate to gaining 'a wider perspective towards issues and concerns' and 'increasing dialogue with supporters' are related to the benefits experienced by CSOs i.e. better communication of ideas with the public, better communication of ideas with other organisations

and the ability to build wider networks with other organisations (See section 4.5.1 for analysis of the benefits).

The first statement ‘has assisted in the performance of the internal management of the organisation’ reflects overall neutrality i.e. there are as many respondents who agreed with the statement as there are those who disagreed. The factor analysis shows that there was no overlapping of variables, which indicates no mixing of factors for this question.

Increased dialogue with supporters is an important consideration for CSOs. The Internet and in particular the World Wide Web has given civil society more power to craft their public image thereby “altering the landscape of protest” (Owens & Palmer, 2003). Social movements also run the risk of alienating its supporter base by defining campaigns based on what will resonate with the media and other global publics (Mann, 2008).

4.7.2 Impact of Web 2.0

This section establishes the areas within which civil society operates and where social media has had a positive impact (Figure 59).

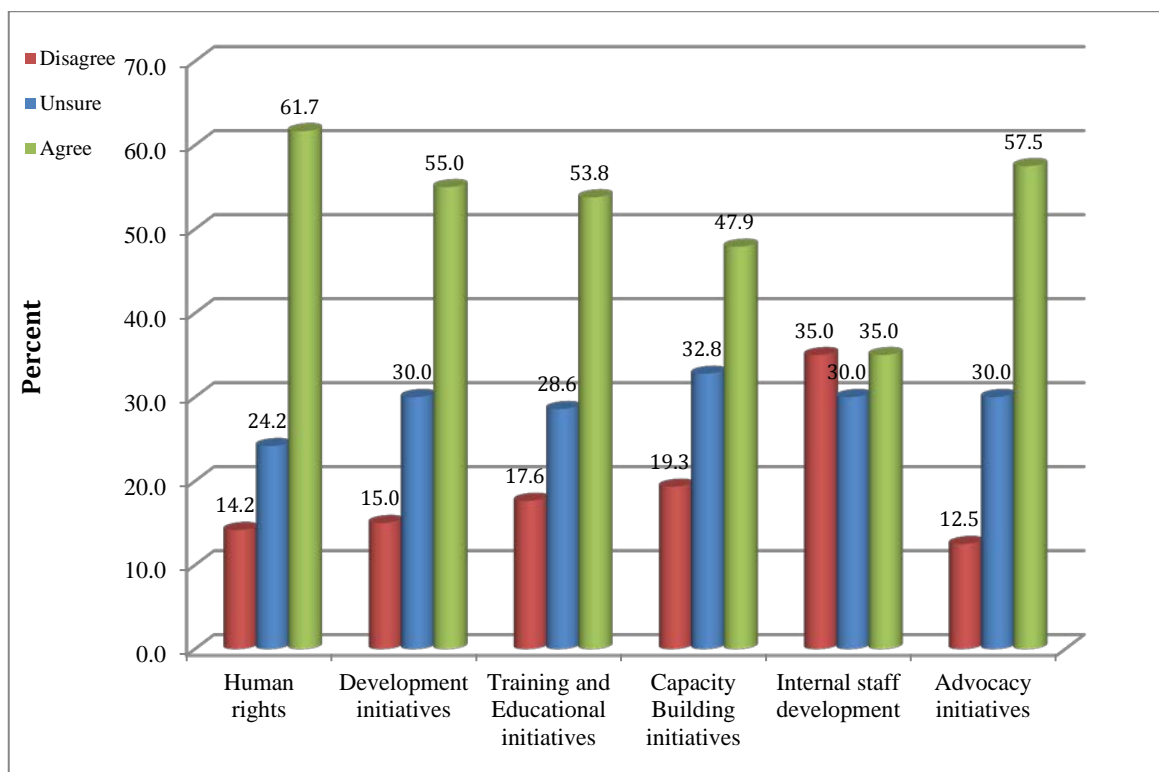


Figure 59: Areas of Impact of Web 2.0

All of statements have positive responses except for Internal Staff Development. However the strength of the agreement is moderate when compared to (high) levels of uncertainty for each

statement. For example comparing levels of agreement to levels of being unsure reveals the following respectively: fifty five percent versus thirty percent for development initiatives; 53.8% versus 28.6% for training; and 57.5% versus 30% for advocacy. Internal staff development had an equal split between those who agree and those who were unsure. The factor analysis shows that there was no overlapping of variables, which indicates no mixing of factors for this question.

If social networking sites are a typical example of Web 2.0 services, as argued by Memmi (2010), then internationally, civil society sentiment toward social media is very positive with four out of five (eighty percent) of organisations indicating that they find their social networking efforts valuable (NTEN, 2010).

4.8 STRATEGIC USES OF WEB 2.0

Recalling from chapter three, the strategic adoption of technology by civil society occurs when organisations becomes proficient enough to ensure that the technology furthers the aims of the organisation. The main areas where these networked-technologies are used strategically are collaboration, publishing, mobilisation and observation (Surman & Reilly, 2003). This section relates to the strategic use of Web 2.0 by South African CSOs. Responses from different questions and sub-questions within the survey are consolidated to give an overall picture of the strategic areas of collaboration, publishing, mobilisation and observation.

4.8.1 Observation

Online observation spans a range of activities that include research and intelligence gathering and within CSOs specifically it involves the collection and pooling of information (Surman & Reilly, 2003).

Just under half (49.6%) of all organisations indicate that they use social media equally when providing and accessing information. A fraction over thirty percent of respondents access information more than they provide information, while small a minority (14.3%) provide and contribute information more than they access it (Figure 60).

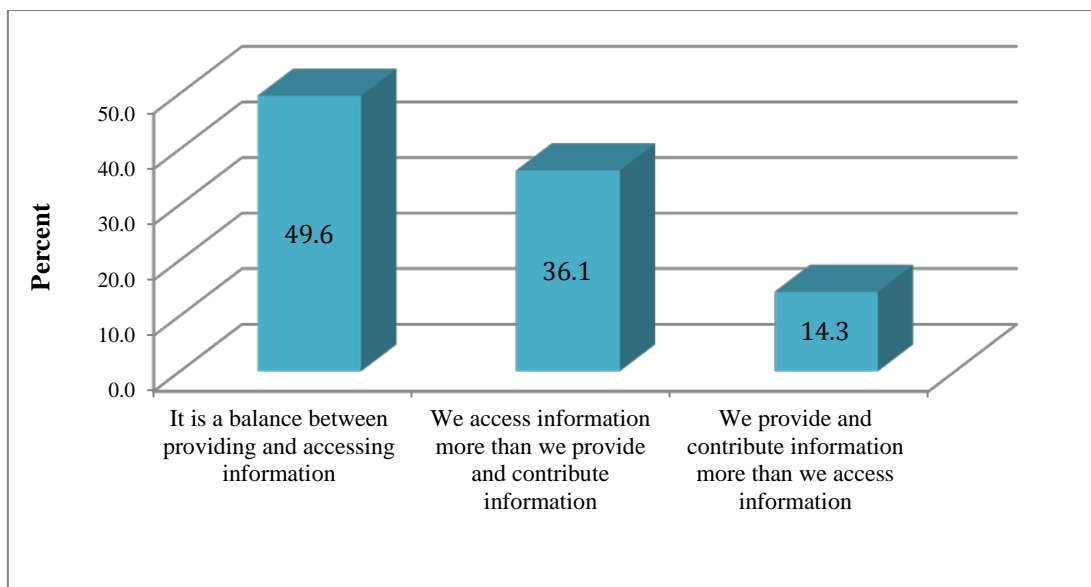


Figure 60: Observation

Various statements relating to the use Web 2.0 for information gathering are presented in Table 29.

Survey Question	Observation using Web 2.0 Social Media	Percentage
2.1.4	Web 2.0 has helped organisations gain a wider perspective	55
3.2.7	Monitoring of the blogosphere	17.3
3.3.3	Downloading of podcasts for market research	12.7
3.3.9	Use of wikis for market research	26.4
3.3.10	Use of RSS feeds for market research	21.3
3.7.5	Importance of getting information available from other sources	76
3.8.4	Importance of gathering relevant information and knowledge	79.3

Table 29: Observation Using Web 2.0 Social Media

While many organisations recognise the importance of Web 2.0 for gathering information (76% and 79.3%) it does not necessarily translate to actual practice with only a small percentage of organisations using any kind of social media services for data gathering: monitoring of the blogosphere (17.3%); downloading of podcasts (12.7%); and using wiki's and RSS feeds for research (26.4% and 21.3% respectively). One of the main uses of social media for civil society has been the ability to access and disseminate vast amounts of information from disparate sources in real-time, something that aids advocacy efforts.

4.8.2 Publishing

This section relates to the publishing of information by CSOs which is one of the most fundamental tasks of CSOs i.e. books, papers, reports, news releases, action alerts, policy statements, pamphlets, posters, radio programs and videos. Not only does publishing content online augmented traditional print media, but in many instances it has actually replaced it. Online publishing goes beyond the web and e-mail and now includes the use of blogs and the publishing of audio and video materials. Table 30 presents various statements relating to the use Web 2.0 for publishing information.

Survey Question	Publishing using Web 2.0 Social Media	Percentage
2.2.2	It is a balance between providing and accessing information	49.6
2.4.4	Better communication of ideas with the public	55.5
3.8.7	Important to disseminate information to other parties	71.9

Table 30: Publishing Information via Web 2.0

A large majority of organisations (71.9%) believe that Web 2.0 is an important tool to disseminate information to other parties while 55.5% of organisations believe they are able to use social media to better communicate ideas to the public.

Figure 61 illustrate the responses to the question ‘Indicate for how long your organisation has been using the following Web 2.0 services to publish information on the web.’

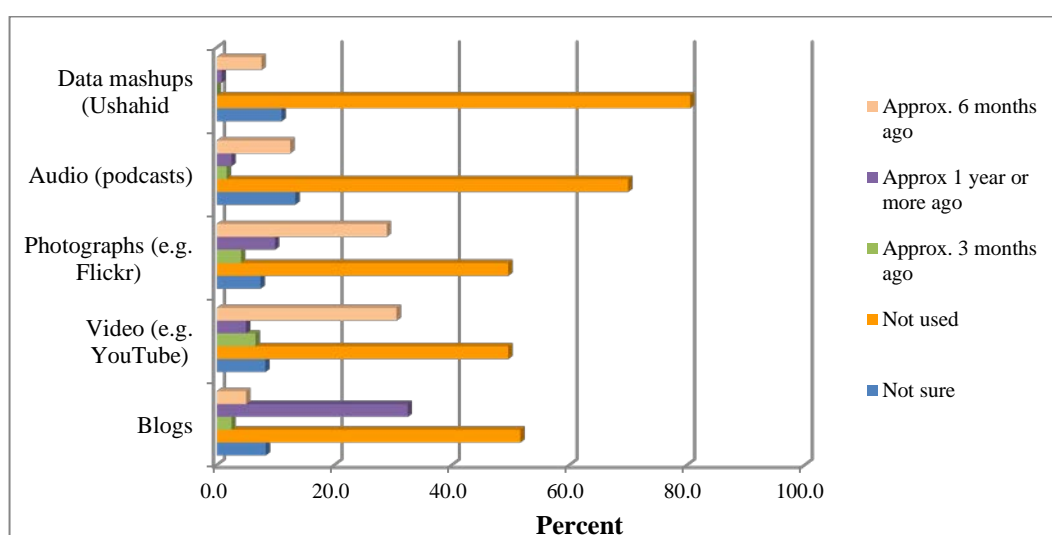


Figure 61: Publishing information via Web 2.0

The cumulative usage percentages are presented in Table 31.

Social Media Service	Not used	Cumulative Usage %	Approx. 3 months ago	Approx. 6 months ago	Approx. 1 year or more ago
Blogs	51.7	40	2.5	5.0	32.5
Video (e.g. YouTube)	49.6	42.2	6.6	30.6	5.0
Photographs (e.g. Flickr)	49.6	42.9	4.1	28.9	9.9
Audio (podcasts)	70.0	16.7	1.7	12.5	2.5
Data mashups (Ushahidi)	80.5	8.4	0.0	7.6	0.8

Table 31: Publishing information via Web 2.0

Many organisations have begun posting videos (42.2%), sharing photographs on photo sharing sites (42.9%) and using blogs (40%) in the last twelve months. Blogs have been the most popular form of publishing information and also one of earliest adopted publishing services with 32.5% of organisations having adopted blogs one year or more ago. Data mashups are the least used service with 80.5% of organisations indicating no usage of this service to publish information.

The 1999 protests against the World Trade Organisation’s Ministerial meeting, which came to be known as the ‘The Battle for Seattle’ owes much of its success to the ability of the organisers of the protest to disseminate information. This protest was also the birthplace of the Independent Media Centre (IMC or IndyMedia), which enabled the rapid distribution information (Pickerill, 2006).

4.8.3 Mobilisation

Surman & Reilly (2003, p. 46) define online mobilisation primarily as the “efforts to move people to action – to protest, intervene, advocate, support.” Networked technologies give the ability to mobilise globally, directly and quickly; it lessens the dependence on mainstream media channels; and it combines advantages that are inherent in broadcast and one-to-many communication channels.

4.8.3.1 Fundraising

An important aspect of mobilisation is the ability to raise funds. Fundraising is analysed in respect of questions 2.8 and 3.6 posed in the survey, and reported in Table 32 and Figure 62 respectively.

Fundraising via Web 2.0	Percent
The value of fundraising via traditional means is more significant than Web 2.0 fundraising	65.3
The value of fundraising via Web 2.0 and via traditional means is similar	19.5
The value of fundraising via Web 2.0 is more significant than traditional forms of fundraising	15.3

Table 32: Fundraising using Web 2.0 Social Media

The majority of organisations (65.3%) believe that the value of fundraising via traditional means is more significant than fundraising via Web 2.0. Only 15.3% believe the opposite.

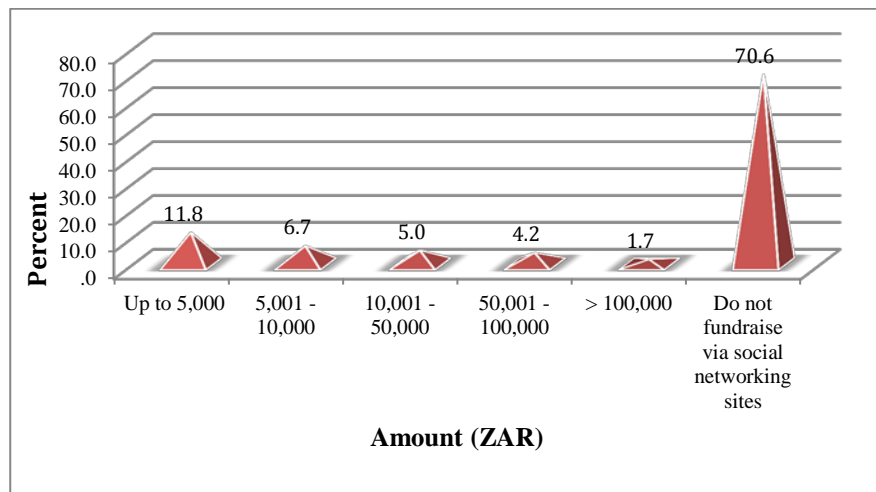


Figure 62: The Value of Fund Raising Using Web 2.0

The majority of organisations do not raise funds via social networking sites. The largest proportion of organisations that do fundraise via Web 2.0 (11.8%) raise only up to ZAR 5,000. Only 1.7% of South African CSOs raise more than ZAR 100,000.

While early attempts at online fundraising were not very successful, more recent efforts that aggregate online fundraising efforts with advocacy activities (termed advocacy fundraising) is starting to bear fruit. The example of Amnesty International in Spain is illustrative with a successful online fundraising initiative, which was preceded by a high profile online petition (Surman & Reilly, 2003).

4.8.3.1(a) Fundraising: An International Perspective

Internationally, fundraising via social networks (and Facebook in particular) is growing but it's still a minority effort with many CSOs generating small fundraising revenue streams of between ZAR 7 to ZAR 70,000 annually (or \$1 to \$10K annually). The number of organisations raising

ZAR 700,000 or more per year on social networks doubled in 2011 year from 0.2% to 0.4% (2011 Nonprofit Social Network report, 2011).

4.8.3.2 Campaigning and Actions

Various questions from the survey were analysed with respect to mobilisation by civil society and are presented in Table 33.

Survey Questions	Mobilisation using Web 2.0 Social Media	Percentage
2.1.5	Has increased dialogue with supporters (Q2.1)	54.6
2.4.3	Better communication of ideas with the public (Q2.4)	55.5
2.4.8	Campaigning / opinion building (Q2.4)	38.1
2.7.6	Has had a positive impact in advancing advocacy initiatives (2.7)	57.5
3.8.11	Important to accumulate bargaining power for advocacy (Q3.8)	47.9%
3.8.12	Important to widen influence on society	71.1

Table 33: Mobilisation via Web 2.0

While many organisations cite the positive contribution of social media in mobilisation initiatives, only thirty eight percent of organisations chose campaigning/opinion building as a benefit (see section 4.6.1 for a discussion on benefits). A majority did believe that it increased dialogue with supporters (54.6%); assisted to better communicate ideas with the public (55.5%); has a positive impact in advancing advocacy initiatives (57.5%) and was important to widen influence on society (71.1%).

Networked technologies are vital when attempting to shift policy through advocacy because of its ability to reach diverse groups of people, which increases representativeness reaching beyond the ‘converted.’ Organisations are no longer reliant on existing mass media organisations to get their message out, instead they have new media in the form of e-mail, protest websites, and text messaging that allows many-to-many broadcasting giving CSOs the ability to quickly and affordably reach a large group of people (Surman & Reilly, 2003).

4.8.4 Collaboration

Various statements relating to the use Web 2.0 for collaboration were extracted from the survey protocol and the responses are summarised and presented in Table 34.

Survey Question	Collaboration using Web 2.0 Social Media	Percentage
2.1.2	Positive influence on relationships with other organisations	52.9
2.4.4	Better communication of ideas with other organisations	48.3
2.4.5	Building a wider network with other organisations	52.5
2.4.7	Collaborative projects with other organisations	29.1
3.8.8	Important to collaborate with other organisations	67.8

Table 34: Collaboration via Web 2.0

Many organisations believe that social media is important in respect of collaborating with other organisations (67.8%) and also with regards to relationships with other organisations (52.9%). This perception is not turned into practice though with just over twenty-nine percent of organisations citing collaborative projects with other organisations as a benefit of adopting social media. The emerging global communications infrastructure has enabled increased levels of cooperation, partnership and opportunities for joint actions and campaigns amongst CSOs (Anheier & Themudo, 2002). It has become easier to communicate decisions and to engage with members on a regular and ongoing basis, irrespective of geographic location.

Social media provides CSOs with a communications platform that simplifies access to large volumes of previously published information. It reduces the costs of publication and allows organisations to circumvent established media houses (who often act as gatekeepers of information), which in turn enables global scale communication. All of which enables the rapid formation and maintenance of virtual communities of shared interests (Naughton, 2001).

4.8.5 A Model for Strategic Use

The strategic goal of civil society is to engage citizens in activities that advocate for the changing of policy and behaviours, which is achieved by proposing alternate debates, highlighting issues to relevant decision-makers, and by proposing alternate solutions to issues (Jones, 2011). In order to conceptualise a model for strategic intent by CSOs the following predictors were chosen: collaboration, publishing, mobilisation and observation as suggested by Surman & Reilly (2003). These variables constitute the strategic use of networked technologies and lend themselves naturally to a model.

Rogers (2003) employs a similar approach for describing the relationship between structural characteristics and organisational innovativeness. In this model the independent variables of individual leader characteristics, internal characteristics of organisational structure and external

characteristics of the organisation are related to the dependent variable of organisational innovativeness.

A simple regression model was chosen to illustrate the impact of these variables on the strategic use of social media services, which is represented visually in Figure 63.

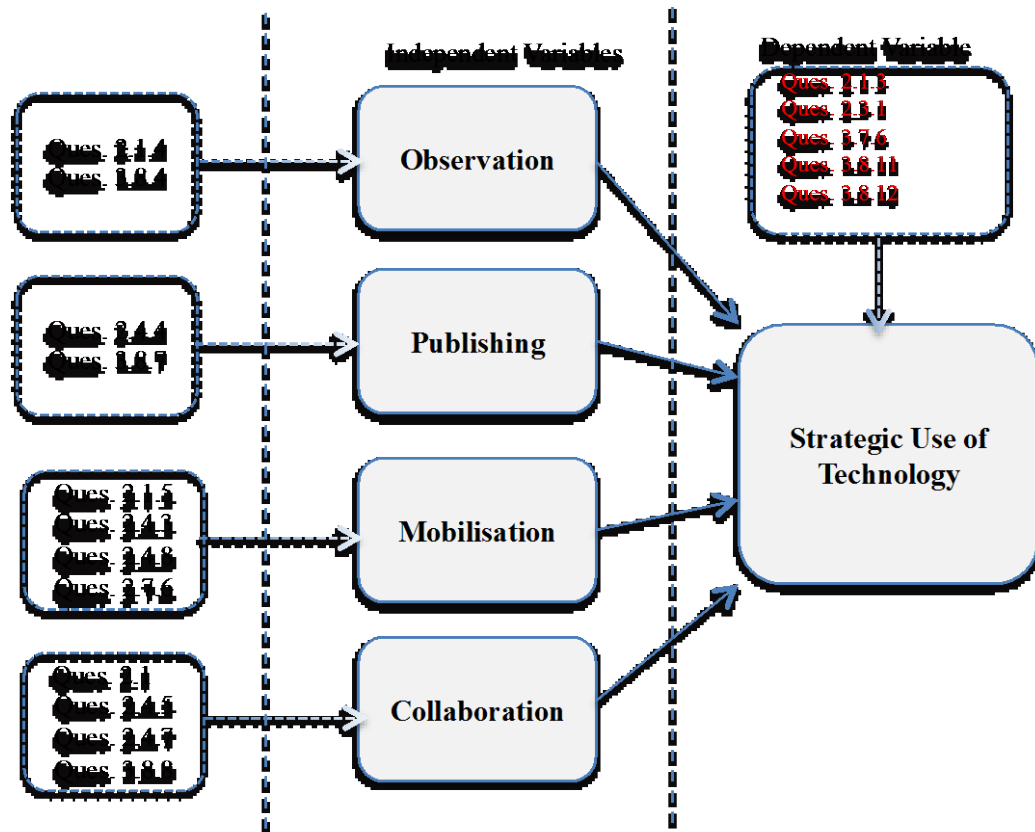


Figure 63: Proposed Model for the Strategic Appropriation of Networked Technologies

Five relevant operational questions were chosen as a measure of strategic intent. The questions were aggregated using simple averaging techniques. Similarly, relevant operational questions were chosen and aggregated using a simple average for the dependent variables: two for observation and publishing and four each for mobilisation and collaboration (detailed in Table 35).

Strategic Adoption Constructs	Operational Questions
Strategic Use of Technology	<p>2.1.3 The use of Web 2.0 social media has positively influenced the organisation's aims, missions and goals</p> <p>2.3.1 We have engaged Web 2.0 in almost all aspects of our work</p> <p>3.7.6 Web 2.0 services are important in order to achieve missions, targeted goals, etc.</p> <p>3.8.11 Web 2.0 services are important in to accumulate bargaining power for advocacy</p> <p>3.8.12 Web 2.0 services are important in to widen the influence on society</p>
Observation	<p>2.1.4 The use of Web 2.0 social media has helped the organisation to gain wider perspective towards issues and concerns</p> <p>3.8.4 Importance of gathering relevant information and knowledge</p>
Publication	<p>2.4.4 Better communication of ideas with the public</p> <p>3.8.7 Important to disseminate information to other parties</p>
Mobilisation	<p>2.1.5 The use of Web 2.0 social media has increased dialogue with supporters</p> <p>2.4.3 Social media has benefitted the organisation by better publication/communication of ideas with the public</p> <p>2.4.8 Social media has benefitted the organisation with campaigning / opinion building</p> <p>2.7.6 Web 2.0 has had a positive impact in advancing Advocacy initiatives</p>
Collaboration	<p>2.1.2 The use of Web 2.0 social media has had a significant positive influence on the organisation's relationships with other organisations</p> <p>2.4.5 Social media has benefitted the organisation by building wider network with other organisation(s)</p> <p>2.4.7 Social media has benefitted the organisation by collaborative project with other organisation(s)</p> <p>3.8.8 Web 2.0 is important for co-operation intensity (to co-operate, collaborate with other organisations)</p>

Table 35: Operational Questions versus Model of Strategic Appropriation

The statistics for the validation of the model are presented next.

4.8.5.1 Correlations

Table 36 indicates correlations. The table was generated using all one hundred and twenty-two data points and all correlations showed a statistical significance of less 0.05.

Correlations						
		Strat_Use_Tech	Observation	Publishing	Mobilisation	Collaboration
Pearson Correlation	Strat_Use_Tech	1.000	0.747	0.733	0.765	0.761
	Observation	0.747	1.000	0.763	0.674	0.748
	Publishing	0.733	0.762	1.000	0.797	0.873
	Mobilisation	0.765	0.674	0.797	1.000	0.868
	Collaboration	0.761	0.748	0.873	0.868	1.000

Table 36: Correlations

4.8.5.2 Model Summary

Table 37 is a summary of the model and describes the correlation and coefficient of determination.

Model Summary				
R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
0.830	0.688	0.677	0.48925	2.115

Table 37: Model Summary

The Durbin-Watson statistic is an indicator of the likelihood that the deviation (error) values for the regression have a first-order autoregression component. Small values of the Durbin-Watson statistic indicate the presence of autocorrelation. A value less than 0.80 usually indicates that autocorrelation is likely. Autocorrelation indicates that errors for the predictors are not related to each other and that errors are independent of each other.

4.8.5.3 Analysis of Variance (ANOVA)

Table 38 presents the analysis of the variances (ANOVA). In general t-tests are used to test two variables and they test for proportions or averages. When more than three variables are being tested the ANOVA statistic is used which is essentially multiple t-tests.

Analysis of Variance (ANOVA)					
Model	Sum of Squares	Df	Mean Square	F	Sig.
Regression	60.739	4	15.185	63.437	0.000
Residual	27.527	115	0.239		
Total	88.266	119			

Table 38: Analysis of Variance

4.8.5.4 Coefficients

Table 39 presents the statistic, coefficients.

Coefficients					
Model	Unstandardised Coefficients		Standardised Coefficients	t	Sig.
	B (Values for the regression equation)	Std. Error	Beta		
(Constant)	0.818	0.182		4.482	0.000
Observation (X ₁)	0.307	0.069	0.369	4.433	0.000
Publishing (X ₂)	0.049	0.099	0.056	0.491	0.624
Mobilisation (X ₃)	0.307	0.087	0.376	3.537	0.001
Collaboration (X ₄)	0.094	0.115	0.110	0.819	0.415

Table 39: Coefficients

The first column shows the predictor variables (Observation, Publishing, Mobilisation and Collaboration). The constant represents the Y-intercept which is the predicted value of strategic use of technology when all other variables are zero.

The second column represents the coefficients for the linear regression. The regression equation is represented as:

$$Y_{\text{predicted}} = b_0 + b_1 * X_1 + b_2 * X_2 + b_3 * X_3 + b_4 * X_4$$

The column of estimates provides the values for b_0 , b_1 , b_2 , b_3 and b_4 for this equation. Hence, the equation is:

$$Y = 0.818 + 0.307*Observation + 0.049*Publishing + 0.307*Mobilisation + 0.094*Collaboration.$$

Here Y is Strategic use of technology and the equation above is interpreted as follows, using the variable ‘observation’ as an illustration:

The coefficient for observation is 0.307, which shows that a unit increase in the independent variable (observation) yields a 0.307 increase in the dependent variable (strategic use of technology). The other variables may be interpreted in a similar fashion.

Using the standardised coefficients, Beta, yields the equation:

$$Y = 0.369*Observation + 0.056*Publishing + 0.376*Mobilisation + 0.110*Collaboration.$$

By using standardised coefficients it allows the reader to compare the effect of the different independent variables upon the dependent variable. For example, it can be noted that ‘mobilisation’ has a greater effect on the strategic use of technology than ‘observation’.

The significance levels in the table indicate that regression coefficients for publishing (X_2 , $p=0.624 > 0.05$) and collaboration (X_4 , $p=0.415 > 0.05$) are not significantly different from zero and hence may be omitted from this model. The revised model is illustrated in Figure 64.

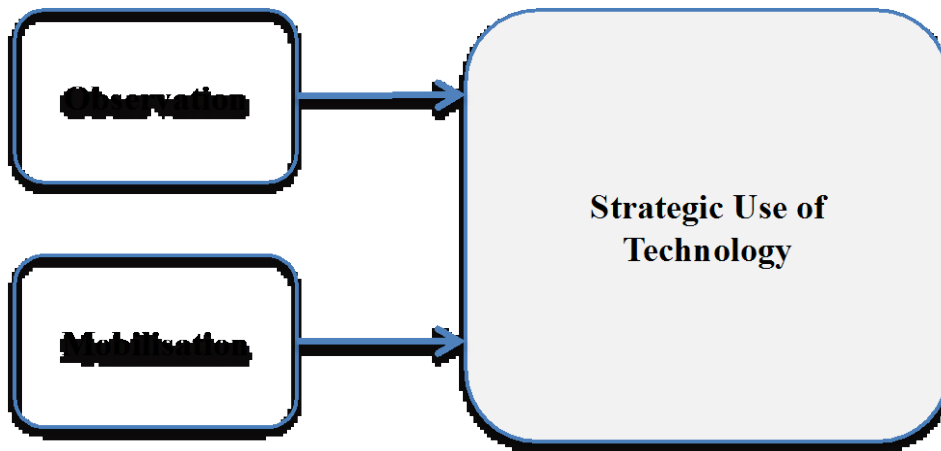


Figure 64: Modified Model for Strategic Use

The new linear equation is:

$$Y = 0.818 + 0.307*Observation + 0.307*Mobilisation$$

Various opportunities for future work arise out of this model and are discussed in chapter six.

4.9 CELLULAR PHONES

This section relates to the use of mobile platforms for deploying Web 2.0 services. It interrogates the responses to the following questions from the survey: ‘Indicate your organisation’s strategic intent with respect to developing a mobile version of your organisations website and accompanying social media services?’ and ‘Using the grid below and on a scale of one to five (one = low usage, five = high usage) indicate your organisations cellular phone usage in respect of standard use (e.g. Voice calls, texting) or advanced use (e.g. Personal diary, emails, connecting to the Web, access to social networks and microblogging sites).

4.9.1 Cellular Phone Usage

Figure 65 illustrates the cellular phone usage amongst South African CSOs. While the responses were on a scale of one to five with one = low usage and five = high usage, these categories were aggregated and reported on as follows: ‘Less than average’ equates to categories one and two, ‘Average’ is equal to category three and ‘Above average’ is equal to categories four and five.

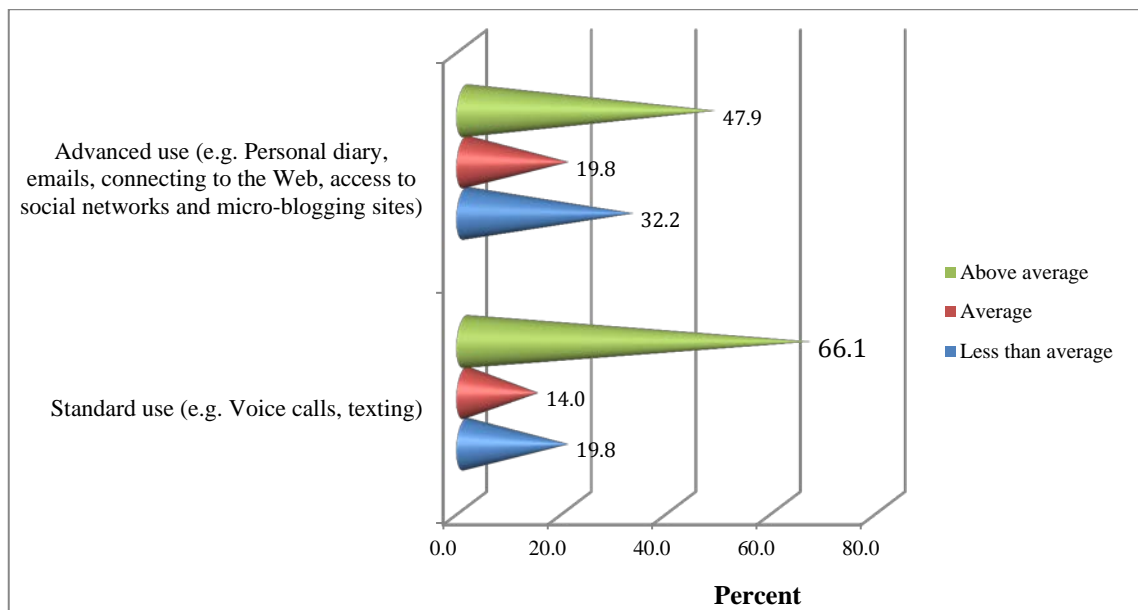


Figure 65: Mobile Phone Usage

Just over sixty-six percent of organisations rate their usage of cellular phones as ‘above average’ for standard usage i.e. making calls and texting, while a fraction under fifty percent have an ‘above average’ usage for advanced use i.e. connecting to the Web, accessing emails etc.

4.9.2 Development of a Mobile Platform

Just under half (43.8%) of all CSOs surveyed reported having no plans to migrate the organisations website and / or social media services to a mobile platform. Just over thirty percent of organisations were currently in the process of developing a mobile platform, and eighteen percent had plans to do so within the next twelve months. Cumulatively just under half (48.6%) of all CSOs were either in the process of migrating to a mobile platform, or had plans to do so in the next twelve months. This is an encouraging finding and also not surprising in the light of previous discussions on the penetration rates of cellular phones and their possible impact on advocacy initiatives. The development of mobile platforms amongst CSOs is illustrated in Figure 66.

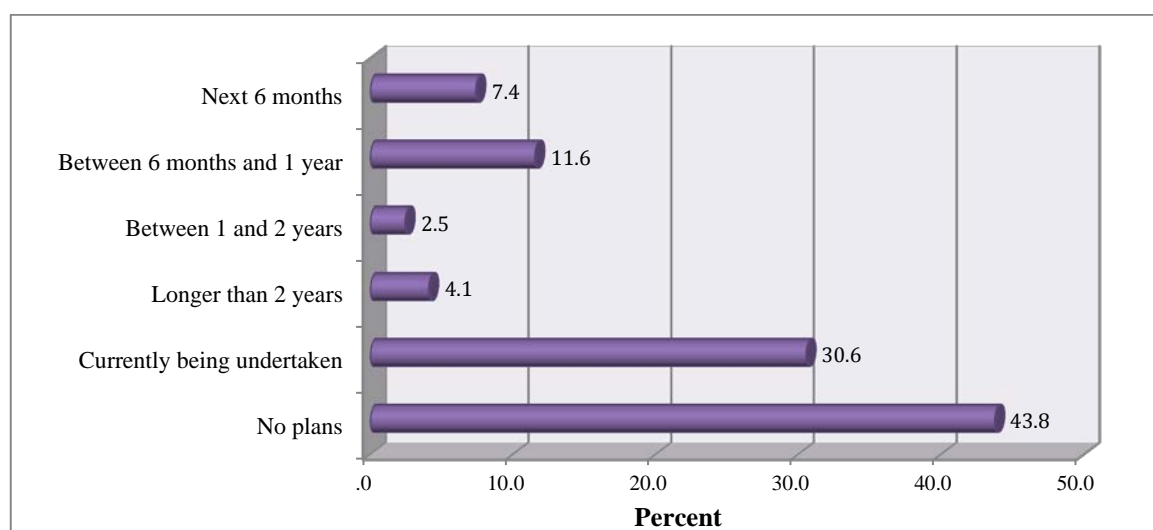


Figure 66: Development of a Mobile Platform

In a study into the use of mobile technology by civil society conducted by the United Nations Foundation and the Vodafone Group Foundation (Kinkade & Verclas, 2008) it was found that while mobile phones were still used most extensively for making voice calls and for text messaging, many civil society members use their mobile phones in other ways including: for taking and distributing photos and videos (thirty nine percent); gathering and transmitting data (twenty eight percent); and multi-media messaging (twenty seven percent). Eight percent of respondents reported using their devices for more complex activities like analysing data, while ten percent used it for mapping purposes.

4.9.3 An Analysis of Cellular Phones and Civil Society

Mobile telephony has become an integral part of society and has been described by the Economist magazine (2009) as a transformative tool. The International telecommunications Union (2012) estimates that there were approximately 5.3 billion mobile cellular subscriptions worldwide at the end of 2010 with ninety percent of the world population and eighty percent of the global rural population having access to mobile networks. In terms of mobile access in South Africa mobile services continue to grow and while SIM penetration is reported at more than 100% - with many subscribers owning multiple SIM cards - actual penetration rates in terms of access is estimated at at sixty-five percent (Esselaar, Gillwald, Moyo & Naidoo, 2010).

Text messaging (or SMSs) has become a permanent and ubiquitous part of the way society communicates. It is estimated that the total worldwide number of SMSs increased from approximately 1.8 trillion to 6.1 trillion between 2007 and 2010, which equates to approximately two hundred thousand text messages sent every second (International Telecommunications Union, 2010). In a study done by the United Nations Children's Fund (UNICEF, 2011) into the use of MXit by South African youth, it was found that of the over forty four million registered user in South Africa, sixty-eight percent of respondents stated that they are used the service mostly for talking to family and friends, while global and political issues captured only three percent of users. Recalling the discussion in section 2.7.5, the process of getting an idea into the public sphere first involves the transmission of ideas to individuals, and then relying on these messages getting echoed to friends and family. It is in this second step where messages are re-transmitted repeatedly that political opinions are formed (Shirkey, 2010), which makes channels like MXit vital to civil society.

In 2005 the Make Poverty History campaign – described as the biggest ever anti-poverty movement - came together with a call for the changing of trade policies that favoured rich countries and for rich countries to cancel third world debt (Makepovertyhistory, 2006). As part of this programme Oxfam Great Britain (Oxfam-GB) launched a campaign that relied extensively on text messaging to mobilise people in support of the campaign. The campaign asked individuals to text the word “BAND” in return for which they would receive a white wristband, which was the symbol for the campaign globally. The use of a shared short code²² helped the action reach over fifty thousand people. Currently, and as a direct consequence of the white band campaign, Oxfam-GB still uses text messages to inform people of planned

²² Short codes (also known as short numbers) are special telephone numbers, significantly shorter than full telephone numbers, that can be used to address SMS messages

campaigns and actions, and also for the organisation's fundraising efforts (Kincade and Verclas, 2008).

4.9.4 Mobile Phones and Civil Society: An International Perspective

In a study into the use of mobile technology by civil society it was found that eight-six percent of civil society organisations surveyed are using mobile technology in their work (Kinkade & Verclas, 2008). Surprisingly CSOs working in developing parts of the world (like Africa) are more inclined to exploit mobile platforms and technologies, than organisations in parts of the world that have a more established technology infrastructure. Almost all (ninety-nine percent) CSOs rate the impact of mobile technology as positive with almost twenty-five percent describing mobile phones as 'revolutionary,' while thirty-one percent state that mobile phones make their work easier.

The benefits of civil society's use of mobile technology includes: saving time (ninety five percent); the ability to quickly mobilise or organise individuals (ninety one percent); reaching audiences that were previously difficult or impossible to reach (seventy four percent); the ability to accurately transmit data (sixty seven percent); and the ability to rapidly gather accurate data (fifty nine percent).

4.10 AN ANALYSIS OF SOCIAL MEDIA USAGE DATA IN SOUTH AFRICA

Recalling research question one (section 3.2.1) the objective was to determine the extent of Web 2.0 adoption in civil society using a sample from a population of South African civil society organisations. The theme that emerges from the analysis of the empirical data is one of a sector having an overall low level of knowledge of social media services and an accompanying low level of adoption. This section will presents arguments as to why this may be and discusses social media adoption in respect of GDP per Capita, a country's Network Readiness Index, Internet and Broadband Access, Internet Usage and Mobile Phones.

4.10.1 Social Media Adoption versus GDP per Capita

This section establishes the relationship between the Gross Domestic Profit (GDP) per capita (PPP) of a country and the rate at which social networks are adopted in the population. It draws upon arguments advanced by Memmi (2010) that states that social networking sites are a typical example of Web 2.0 services. Rogers (2003) diffusion of innovations framework, which holds that the diffusion of innovations amongst organisations and individuals is the same, is also used.

A report by the Pew Research Centre's Global Attitudes Project (Pew Research Center, 2011a) states that the number of adults who have a presence on social networking sites is partly related

to Internet penetration rates, which in turn is influenced by the wealth of a country. One widely used measure of a country's wealth is Gross Domestic Profit (GDP) per capita, which refers to the market value of a country's goods and services produced in a given period of time. Gross Domestic Profit per capita is also a widely used measure of a country's standard of living. The scatter graph in Figure 67 illustrates the correlation between a country's GDP and the level of social networking adoption amongst the population.

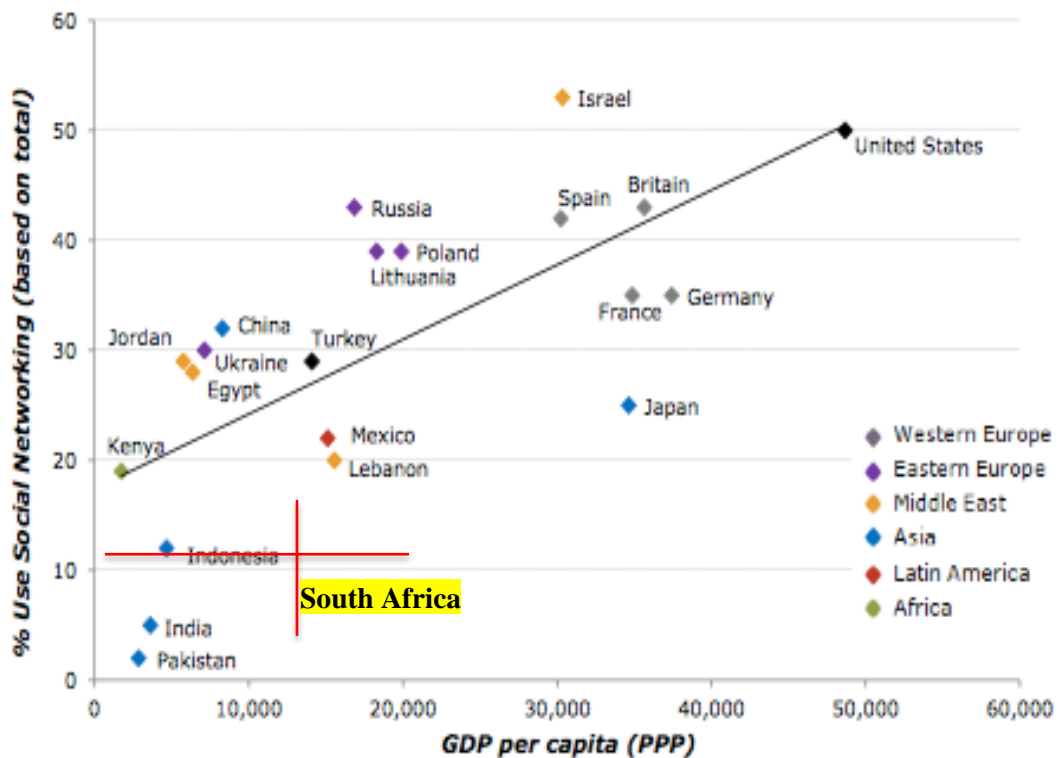


Figure 67: GDP per Capita (PPP)²³ and Use of Social Networking – Including South Africa (Adapted from Pew Research Center, 2011a, p. 5)

Amongst all of the respondent countries surveyed (Pew Research Center, 2011a) not only does the USA have the highest GDP per capita, but it also has one of the highest adult social networking populations. Pakistan and India in contrast have two of the lowest GDP's per capita and correspondingly they also have the lowest number of social networking users.

The GDP per capita for South Africa is listed at 10,977 by the International Monetary Fund and 10,486 by the World Bank (IndexMundi, 2011), which averages out to approximately 10, 721.

²³ Gross Domestic Product at Purchasing Power Parity (PPP) per capita is the value of all final goods and services produced within a country in a given year divided by the average population for the same year.

All figures are in current international dollars²⁴. Facebook has reached just under nine percent of the entire South African population but over eighty percent of the online population has a presence on the social networking site (World Wide Worx, 2011). The Internet research organisation Socialbakers (2011) estimates that there are 4 511 220 Facebook users in the South Africa, which equates to a 9.19% penetration rate of the entire population and an 85.12% penetration rate of the online population, which makes South Africa number thirty in terms of country's ranking for users of Facebook.

Plotting South Africa's GDP per capita along the X-axis and Facebook usage along the Y-axis (Using World Wide Worx figures as it is the more recent) reveals a point on the graph that lies below the regression line (highlighted in Figure 68). This point signifies the usage of social networking in South Africa. Remembering that social networking sites are a typical example of Web 2.0 services (Memmi, 2010) then the point on the graph is also an indication of the usage of social media (and not just social networking) in South Africa, which indicates a low level of social media usage in South Africa. The point falls well below the regression line which means that South African social media adoption should actually be higher with respect to its GDP per capita.

Research confirms that the adoption of social networking amongst surveyed South African CSOs mirrors to some extent the usage of social networking in the broader online public - 82.4 percent of CSOs versus 85.12% of the online population (section 4.3 details social media adoption in South Africa CSOs). Furthermore the majority of South African CSOs have little knowledge of many social media services (See section 4.3.1) with services like social bookmarking, blog, microblogging, podcasts and mashups relatively unknown. Organisations did have knowledge of social networks, photos/multi-media sharing and messenger applications and not surprisingly these are the services that have been adopted by South African CSOs i.e. knowledge mirroring adoption. This low level of knowledge and adoption supports the hypothesis of a country's GDP influencing adoption rates of social media.

4.10.2 Social Media Adoption and Network Readiness

The link between Information and Communication Technologies (ICTs) and the wealth of nations, based on accounting models that link use of ICT to productivity, has been well

²⁴ The Geary-Khamis dollar, more commonly known as the international dollar, is a hypothetical unit of currency that has the same purchasing power that the U.S. dollar had in the United States at a given point in time. It is widely used in economics. The years 1990 or 2000 are often used as a benchmark year for comparisons that run through time. The unit is often abbreviated e.g. 2000 US\$ (if the benchmark year is 2000) or 2000 Int\$.

established from empirical evidence (International Telecommunications Union, 2009). Emerging technologies play a prominent role in creating sustainable growth in competitive economies, by helping to modernise these economies and improving living conditions. They also remains crucial not only for enhancing the possibility of innovation and long-term competitiveness of developed countries, but also for encouraging fundamental structural changes to the economy, improving efficiency and also for reducing the digital, economic, and social divisions that exist in middle-income and developing countries (Greenhill, 2011). Information and communication technologies enable greater access to education, finance, and healthcare and improve the delivery of these basic services, with (Dutta, Mia & Geiger, 2011) adding that ICTs, particularly social media and mobile phone application, offer innovative and sophisticated channels of communication that enable new ways to form all types of social relationships.

The Network Readiness Index is a widely accepted measure that is used to evaluate an economy's readiness to leverage technological innovation for increased competitiveness; it does this by measuring the degree to which a country's economic infrastructure is conducive to ICT development and diffusion (Dutta & Mia, 2011). South Africa is rated as fairly stable and is at 61st place overall (out of 138) with notable strengths in the quality of its market, its regulatory environments and capacity for innovation, amongst others. On a less positive note individual preparation and uptake of ICT remains very weak, at 113th and 95th, respectively (Dutta, *et al.*, 2011). This is attributed in part, to the very high access costs to ICT with South Africa having high subscription rates for monthly residential fixed-line, fixed broadband Internet, and mobile cellular connections. The Hirschman Herfindahl Index (HII), which is a commonly used measure of market concentration, notes that South Africa's markets are very similar to other concentrated markets (like New Zealand and Mexico), and concentrated markets usually result in higher subscriptions especially for the very poor (Esselaar, *et al.*, 2010). Even a country like Canada, which is classified as uncompetitive in the mobile space, is rated higher than South Africa (Esselaar, *et al.*, 2010). Government readiness also remains poor with little success in promoting ICT with the government itself is not using ICT to improve the efficiency of its operations either, and is for the most part guilty of providing inadequate e-services to its citizens – with e-services having little impact on access to, or the quality of basic services.

4.10.3 Social Media Adoption versus Internet and Broadband Access

In recent years evidence proving the positive impact of broadband access on economic development, has begun to emerge, with broadband playing a crucial role in advancing socio-

economic imperatives like education, health, trade, and innovation (Dutta & Mia, 2011; The Berkman Center, 2010). Broadband has become a byword for growth and competitiveness and is a critical infrastructure for hosting emerging digital technologies with many new services unable to be deployed effectively without adequate bandwidth. Organisations and governments are unable to exploit the full potential of ICTs in the face of limited broadband connectivity. South Africa's draft broadband policy, introduced ostensibly to foster competition in the broadband sector, has been criticised for failing to address fundamental factors that constrain development, like market structure and institutional arrangements (Esselaar, *et al.*, 2010).

With respect to mobile wireless broadband access, little evidence has emerged of this significantly enhancing Internet penetration rates, with developing countries in particular still highly dependent on second generation mobile networks, in spite of the wide-scale availability of third generation networks technology (UNCTAD, 2009). In September 2010 there were 2.2 million wireless broadband subscriptions in South Africa.

4.10.4 Social Media Adoption versus Internet Usage

Rueda-Sabater & Garrity (2011) contend that while the Internet has already generated major economic and social benefits, most of its global impact is undoubtedly still ahead; it will characterise the decade of the 2010s and, as broadband networks become widespread, will profoundly change economic and social dynamics across the world. In addition, with improvements in the speed and quality of broadband combined with Web 2.0 technologies and applications, more economic and social benefit will be generated. The Internet and the applications riding on high-speed IP networks provide a unique and cost-effective way for economies to enhance national competitiveness and to rise above physical and geographic constraints.

The Pew Research Centre's Global Attitudes Project (Pew Research Center, 2011a) report also indicates that social networking adoption is largely determined by the overall Internet penetration rate of a country. In South Africa approximately 6,8 million people have access to the Internet, which makes South Africa the fourth highest in Africa (see Table 40 for Internet penetration rates for the top five countries in Africa).

World Regions	Pop (2011 est.)	Internet Users Dec. 2000	Internet Users 30-Jun-11	Penetration % pop.	Growth 2000- 2011
Nigeria	155,215,573	200,000	43,982,200	28.3 %	37.0 %
Egypt	82,079,636	450,000	20,136,000	24.5 %	16.9 %
Morocco	31,968,361	100,000	13,213,000	41.3 %	11.1 %
South Africa	49,004,031	2,400,000	6,800,000	13.9 %	5.7 %
Algeria	34,994,937	50,000	4,700,000	13.4 %	4.0 %

Table 40: South Africa's Internet Usage²⁵ (Internetworldstats.com, 2011)

Figure 68 provides some context with respect to Internet penetration and compares Internet usage in Africa to the rest of the world. Africa has an Internet penetration rate of 11.4% compared to a world average of 30.2%. The low South African Internet penetration rate – 13.9% - is a significant factor in the low adoption rate of social media. Social media adoption is dependent firstly (and obviously) on the adoption of the Internet; low Internet penetration rates then logically perpetuate low social media penetration rates.

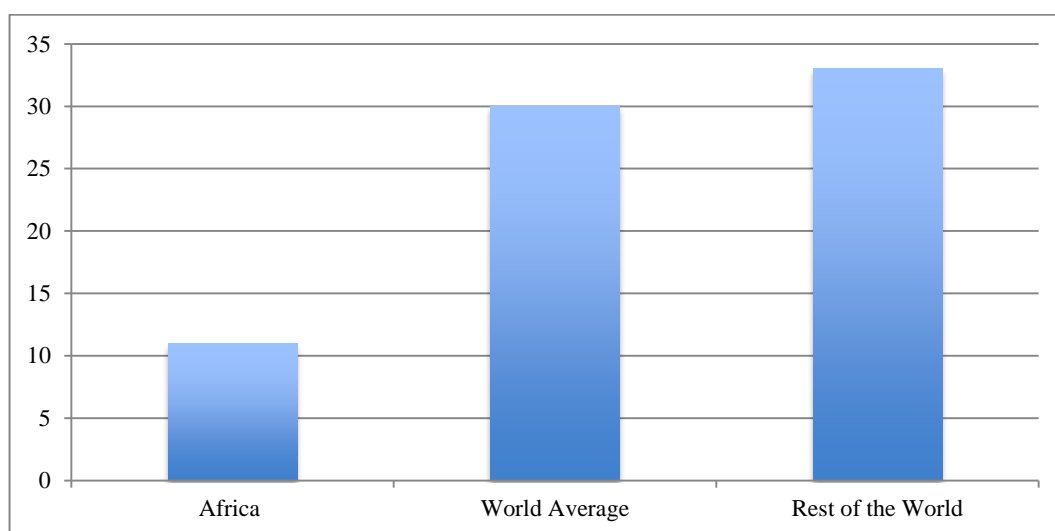


Figure 68: Africa Internet Usage versus Rest of the World (Adapted from Internetworldstats.com, 2011)

²⁵ (1) Internet Usage and Population Statistics for Africa are for December 31, 2011. (2) Population numbers are based on figures from the U.S. Census Bureau. (3) The Internet usage numbers come mainly from data published by WWW, ITU, the Nielsen Company and Facebook.

4.10.5 Social Media Usage via Mobile Phones

A report by the research group World Wide Worx (2011) indicates that thirty nine percent of South Africa's urban, and twenty seven percent of its rural population, which equates to six million people, access the Internet via their mobile phones; the study represents approximately twenty million South Africans over the age of sixteen and does not include people classified as 'deep rural.' The messaging service MXit is used by twenty-four percent of cell phone users, while social networking site Facebook has been adopted by twenty-two percent of mobile users. The report predicts that the microblogging service, Twitter, currently used by six percent of mobile users will increase in importance and will compete against MXit in the near future.

4.10 SUMMARY

South African civil society has by and large enthusiastically embraced technology, at least as far as computers and the Internet is concerned, which excludes Web-based technologies. Computers and ICTs in general have become integral to civil society's effective functioning. The impact of social media is less obvious with many organisations exhibiting a low-level of knowledge and associated low levels of adoption. It must be cautioned that social media – defined as a bundle of services – escapes being defined as one particular technology or innovation and it is therefore more difficult to qualify the adoption and the emergent patterns of adoption. Why certain services are regarded as more favourable, has been speculated upon in this study, and is a topic for future research. It must be noted that services that are actually adopted are generally adopted by a significant majority of organisations. The converse is also true for those services being less well adopted. Low adoption rates can be related to ease of use of the service, which is suggested by the theoretical frameworks. The role of cellular phones as a platform for social media services may also help explain adoption rates with certain services being ideally suited to the mobile platform and others less so. Instant messaging applications like MXit for example, are ideally suited to a mobile platform, while data mashup services still requiring larger display devices to be truly useful. In a not altogether surprising finding there is a strong positive correlation between the levels of knowledge exhibited for a service and the associated adoption patterns. While the emergent adoption patterns in this research did not conform to the theoretical frameworks, it did afford this research the opportunity to creatively visualise adoption patterns.

South African civil society is strongly positive of the impact of social media on their organisations, a fact belied by the low adoption rates of these services. Interrogating the variables of collaboration, publishing, mobilisation and observation tested the strategic use of

social media in South African CSOs. In general organisations were optimistic of social media's ability to support the strategic function (ascertained by using responses to questions relating to the strategic variables of observation, publishing, mobilisation and collaboration). A significant proportion of organisations utilise cellular phones for fairly advanced reasons (like accessing the Internet) as compared to the just using it for making calls and the ubiquitous SMSs. Given the high penetration rate of cellular phones in South Africa this is not unexpected. As mentioned in the literature cellular phones have the potential to become the single most transformative tool for development. Its ability to eliminate the boundaries of time and space is always going to be a vital tool in the arsenal of civil society in order to propagate alternative discourses, stimulate debate and change perceptions and attitudes.

Many arguments are proposed to explain social media adoption rates in South African CSOs, both at a country level and at an organisational level. South Africa's recent past, often turbulent, violent and always unequal, is also a factor that must affect adoption and is an area for future research.

4.11 CONCLUSION

The picture that emerges is one of a sector not fully embracing social media and a wider populace slowly awakening to the potential of social media: there were a little over one million Twitter users in South Africa in the middle of 2011 which represents a twenty-fold increase in a just over a year (in May 2010, the number was a 55 000). MXit is South Africa's most popular social media service, with approximately ten million active users, while Facebook has reached only 8.7% of South Africans, which equates to 80.7% of the online population.

Factors that affect the uptake of social media have been presented and provide mitigation for this slow uptake. What remains to be seen is what happens going forward. The Pew Global Digital Communication report (Pew Research Center, 2011a), in a survey of twenty-one countries, reveals there has been no significant changes in social networking usage since 2010, with two notable exceptions being Egypt and Russia - countries where social media has played a prominent role in recent political upheavals (Kessler, 2011; Kirkpatrick, 2011). In both countries social media adoption has increased by over ten percent during the past twelve months; in the case of Egypt from eighteen percent to twenty-eight percent, and in the case of Russia from thirty-three percent to forty-three percent (Pew Research Center, 2011a). The symbiotic relationship that exists between social media and popular protest has meant that while social media has largely driven the protests, growth in some social media services has in turn

been influenced by social unrest, with the Facebook user population approaching one billion, two fifths of whom joined since the start of the Arab Spring (Mason, 2012).

South Africa is not immune from social unrest. In recent years there has been a surge in political protest against slow pace of service delivery, corruption and nepotism. Although the United Nations' Human Development Index (United Nations Development Program, 2010) considers South Africa to be a middle-income country, there is a large disparity in income distribution across the population; an estimated thirty-nine percent of the approximately forty million strong population survive on less than ZAR 388 a month (USD 55). An obvious consequence of poverty, high levels of unemployment, and service delivery problems is social unrest (UNEP, 2011). A leading member of South Africa's ruling party has publicly warned of the danger of an African-style Arab Spring if the South African government does not effectively tackle rising unemployment among the youth (Ngalwa, 2012) while a well known South African author and scenario planner, remarking on the similar socio-economic trends in South Africa as those in the Arab Spring countries, highlighted the possible impact of social networks in facilitating and encouraging protest action (Cole, 2012).

South Africa's Gini co-efficient²⁶ is approximately 0,6 and along with Brazil has one of the most unequal income distributions in the world (The World Bank, 2011a). One consequence of the large disparity in socio-economic levels is that Internet access is largely confined to wealthy and the well-educated. Recalling the diffusion framework, Rogers (2003) states that early adopters have more years of formal education than do late adopters, and are more likely to be literate. Technology adoption, rather than offering a developmental alternative, had the potential to reinforce the existing gaps between rich and poor.

This chapter has presented the results of a survey into the adoption of Web 2.0 social media by South African civil society organisations. It has described and presented arguments to explain the findings. The next chapter is an in-depth case study analysis of the environmental justice organisations Greenpeace and analyses the results of various interviews held with senior management and campaign managers.

²⁶ The Gini coefficient is a number between 0 and 1, where 0 corresponds with perfect equality (where everyone has the same income) and 1 corresponds with perfect inequality (where one person has all the income — and everyone else has zero income).

CHAPTER FIVE: WEB 2.0 ADOPTION IN GREENPEACE

Insights from Greenpeace and the Environmental Justice Movement

There will come a time when the Earth grows sick and when it does a tribe will gather from all the cultures of the World who believe in deeds and not words. They will work to heal it...they will be known as the "Warriors of the Rainbow."

Native American prophesy

5.1 INTRODUCTION

Using Greenpeace as a case study, chapter five employs structuration theory, diffusion of innovations and civil society frameworks (discussed in chapter three) to describe and analyse the impact and effect of Web 2.0 adoption on transnational advocacy. This qualitative analysis draws extensively on interviews held with the Greenpeace senior management team (SMT) and with campaign managers in five Greenpeace national and regional offices worldwide. Four of the offices also completed a survey, which describes their individual social media adoption patterns and characteristics (See section 5.3.7 and Appendix C respectively for a discussion and copy of the survey protocol). Greenpeace's newly formed digital media unit (which was the fifth office interviewed) functions along the lines of an internal think-tank that researches the adoption and strategic use of social media across Greenpeace; it does not operate in similar fashion to national offices and consequently was not a target for the survey.

This study is interpretive in nature and to a large extent involves the study of social practices in the context in which they occur. The presentation of the evidence thus involves detailed 'thick descriptions' of organisational contexts and practices, emphasising the perceptions and explanations of human actors in the context studied (Doolin & McLeod, 2005, p. 99).

Due to the large amount of empirical data that was analysed the following strategy for the presentation of the data in this chapter is employed: section 5.1 (this section) introduces the theoretical constructs that underpin the analysis; section 5.2 then presents a history and description of Greenpeace; the data collection which includes a description of the individual offices involved in the data collection process is presented in section 5.3; the three individual campaigns are described and analysed in sections 5.4 and 5.5 respectively; section 5.6 concludes the chapter. Figure 69 illustrates where this chapter is situated within the overall research strategy. The analysis embeds shorter comments from the interviews in quotes within paragraphs, while more extensive extracts are indented. To maintain anonymity, the eighteen interviewees are referred to as Respondent1 through to Respondent18. Internal Greenpeace

documents that were referenced are referred to as Document1 through to Document5 and are not included in the reference list.

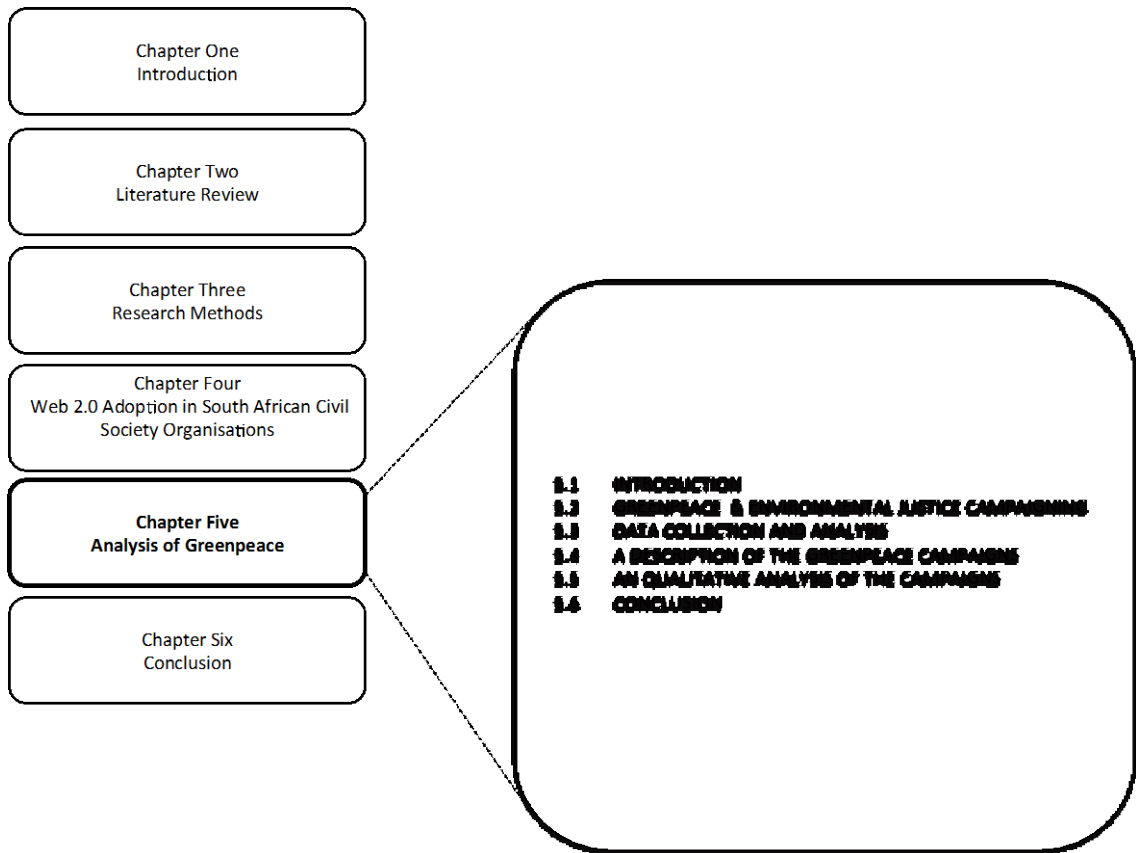


Figure 69: Chapter Five within the Overall Research Study

The following theoretical constructs inform the analysis in this chapter:

- (a) Yang (2009) argues that any approach to the analysis of online activism must be able to capture the multi-dimensional interactions that both enable and constrain online campaigning including: state power, culture, the market, the mutual constitution of online activism and civil society, and transnationalism.
- (b) Adaptive Structuration Theory (AST) is a theoretical framework that employs the constructs of social structures, rules and resources to describe the multiple interactions that occur between advanced information technologies (AIT), social structures, and human interaction (DeSanctis & Poole, 1994). During the development of an advanced technology, organisational structures like reporting protocols and standard operating procedures are modified, enhanced, or combined with manual procedures, and then incorporated into the technology, thereby creating new structures. These technology and action structures are related recursively. The social structures of AITs have been described with respect to the

values and goals embodied in their original intention, which has been termed its ‘spirit’ (Poole & DeSanctis, 2004, p. 126).

The above constructs, together with the empirical data, and real-world campaigning examples will be used to contextualise the impact of Web 2.0 social media on transnational advocacy.

5.2 GREENPEACE & ENVIRONMENTAL JUSTICE CAMPAIGNING

Greenpeace, one of the largest global environmental justice movements, is considered the organisation that has done the most, through its media-orientated campaigns and actions, to highlight global environmental issues (Castells, 2004) with Diani (1999) describing Greenpeace as an excellent example of a “professional protest organisation.”



Figure 70: Greenpeace Homepage (Greenpeace , 2012a)

The origins of Greenpeace are to be found in the anti-Vietnam war movement when young Americans – mostly anti-war activists - choosing to avoid being drafted into the war, made their way to Vancouver, Canada where they were seen as the heroes of the counter-culture and of protest (Fitzgerald, 2011). It was America’s intention to undertake nuclear testing on the island of Amchitka, Alaska that galvanised these activists into action. Apart from the potential environmental damage, Amchitka is located on a geological fault line and has a natural susceptibility to earthquakes, which would have been exacerbated by a nuclear explosion. Ultimately two disparate movements, the environmentalists and the militant pacifists joined

forces to protest against these tests and in that action an organisation that was to become Greenpeace was formed. The strategy from the beginning has always been to capture as much attention as possible in order to legitimise their protests so as not to be seen as just ‘a bunch of hippies with no resources’ (Fitzgerald, 2011). The founding principle of Greenpeace has been to always bear witness to events i.e. to perform some action to oppose any immoral or unethical government or corporate behaviour, even if that meant facing jail or death (Fitzgerald, 2011). The extensive use of the available media is another founding principle of the organisation.

This first campaign of Greenpeace against the hydrogen bomb testing in Amchitka is illustrative of the use of direct action and of the use of the media. On board the ship that had been chartered to go to Amchitka were several journalists including Bob Hunter (who went on to become the first president of Greenpeace) who sought to maintain public interest in this improbable voyage by filing his daily newspaper column from the ship. These columns, along with daily radio transmissions, caught the attention of the public, in no small part due to Greenpeace members on land disseminating these reports to newspapers and radio and television stations. While the tests were eventually cancelled, not all due to the protests of Greenpeace, the organisations had none the less made an impact and had been noticed by the media and the public alike.



Figure 71: Exploiting the Media to ‘Bear Witness’ (Greenpeace, 2006; Times Live, 2011)

Images and photographs are an essential part of Greenpeace’s campaigning strategy (Figure 71). The idea was to use images to challenge people to make a moral stand against actions that are seen as harmful, unethical or immoral. The image of a boat in front of a harpoon trying to save a whale has become a metaphor for challenging people to embrace alternate discourses, for stimulating debate and eventually perpetuating changes in behaviour (Fitzgerald, 2011).

Rex Weyler, one of the founding members of Greenpeace recalls the introduction of the concept of the ‘mind bomb’, which was in essence the global dissemination of electronic images, intended to “explode in the collective consciousness.” In the case of Greenpeace’s anti-whaling campaigns the mind bomb was intended “to reverse the Moby Dick image of brave little men in tiny boats hunting a leviathan and replace it with the reality of modern whaling, huge mechanical factory ships and exploding harpoons hunting down the last remnants of the

peaceful, intelligent whales. Our mission was to plant this image into the collective consciousness” (Weyler, 2012).

Changes to the climate and the environment occurs over long periods of time, and attempting to visualise these changes through traditional mass-media and mediums like photography, which support the ‘here and now’ is difficult (Doyle, 2007). In contrast social media offers organisations like Greenpeace a powerful platform for the displaying of images, the dissemination of information, and an ecosystem for the discussion of issues. It also affords the opportunity for more than just displaying images by providing a medium to present a story using multiple tools over a period of time, to large parts of the world’s online population. In an interview on CNN Greenpeace International Executive Director, Kumi Naidoo stated that even though direct action is a cornerstone of Greenpeace’s campaigning strategy, the key to campaigning in an increasingly connected world, is the collective power of the Internet and social media (Naidoo, 2010b).

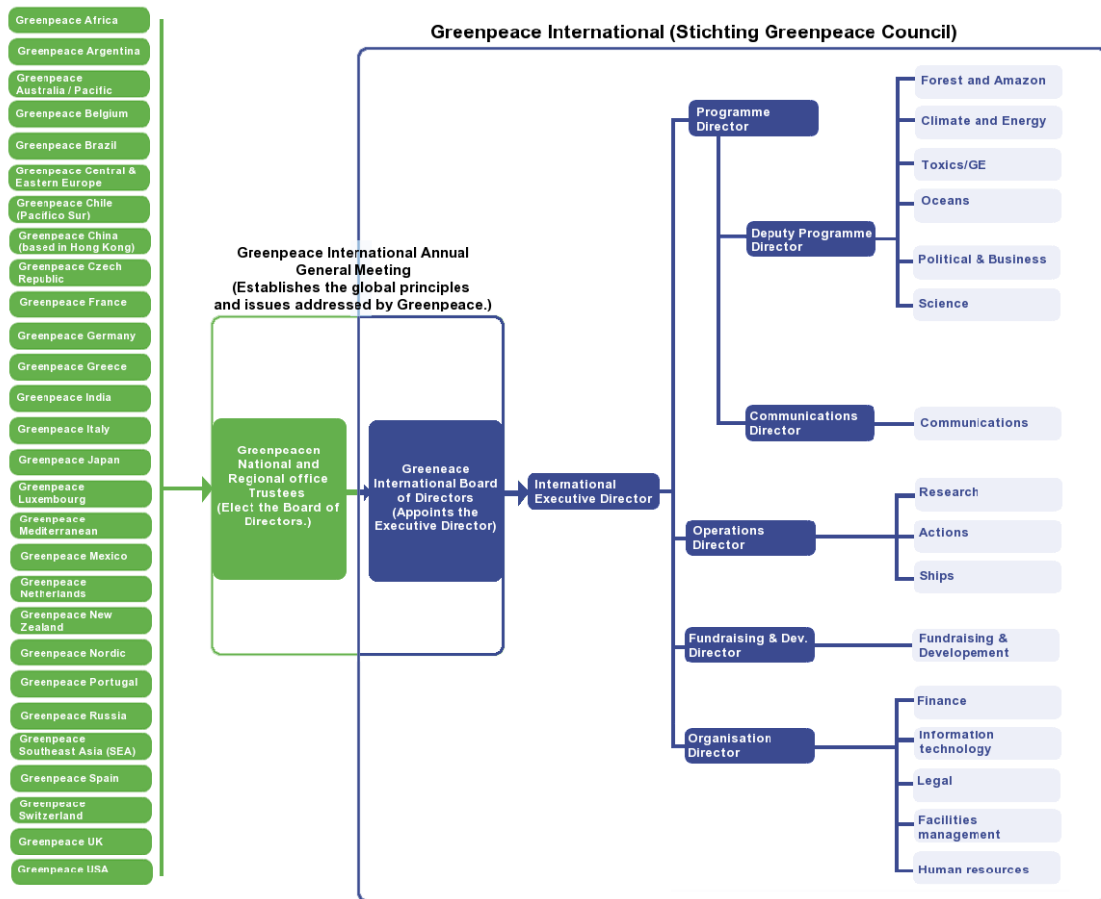


Figure 72: Greenpeace Organisational Structure (Wikipedia, 2011a)

Greenpeace is a transnational, networked organisation that has a presence in over forty countries through its twenty-eight national and regional offices (the organisation's structure is depicted in Figure 72). Greenpeace is currently headquartered in Amsterdam, in the Netherlands. It is supported by individuals and trusts (with no government or corporate funding), has approximately three million supporters globally, with revenue estimated at over one hundred million euros (Greenpeace, 2009). Greenpeace is a centralised organisation with and a globally decentralised network of individual offices operating independently and modifying their aim, objectives and campaigns to suit the local context. The head office formulates the strategy for global campaigns.

5.3 DATA COLLECTION AND ANALYSIS

While the broad strategy for global campaigns are largely initiated and coordinated by Greenpeace International, the details of the campaigns are independently developed and carried out by Greenpeace national and regional offices (NROs) and customised to the local context within which they operate. The Greenpeace NROs are firmly entrenched in the communities in which they campaign. Five offices participated in the interview process: Greenpeace International and the national/regional offices in Africa, Argentina, India, and the Digital Unit. As noted previously, four of these NROs also completed a survey, with the digital media unit not being a suitable candidate for a survey.

The researcher investigated each office and country in which the office was located prior to conducting any interviews. The intention was to, as Walshman (2006) states, 'be there' in both body and spirit. A brief description of each office and the host country is provided in the next section.

5.3.1 Greenpeace International

The Greenpeace International office is located in Amsterdam, Netherlands. The country has a population of just fewer than nineteen million people (Central Intelligence Agency, 2012a) with sixty-seven percent of the population between the ages of fifteen and sixty-four. Ninety-nine percent of the population are literate²⁷. There are over nineteen million cell phones in circulation, and almost fifteen million Internet users, which represents approximately eighty percent of the population. The office was formed in 1980, employs over one hundred people, and has a financial turnover greater than one million Euros (which is approximately over ZAR ten million).

²⁷ Literacy is defined as being all persons over the age of fifteen who can read and write (CIA, 2011)

5.3.2 Greenpeace Africa

The Greenpeace Africa office is located in Johannesburg, South Africa. South Africa has a population of approximately fifty million people (Central Intelligence Agency, 2012b) with sixty-five percent of the population between the ages of fifteen and sixty-four. Approximately eight-six percent of the population are literate. There are over fifty million cell phones in circulation and there are over four million Internet users, which represent approximately eleven percent of the population. The Greenpeace Africa office is responsible for all actions on the continent and works closely with its newly opened satellite offices in Kinshasa, Democratic Republic of Congo and Dakar, Senegal. The majority of the actions are based in South Africa and focus on the use of coal and the building of new coal-fired power stations. There are also campaigns in opposition to South Africa nuclear ambitions. The effects of over fishing and the decimation of the oceans fish stock in West Africa occupy some of the campaigning effort of the Africa office. The office was formed in 2008, employs between fifty and one hundred people and has a financial turnover of over ZAR one million.

5.3.3 Greenpeace Argentina

The Greenpeace Argentina office is based in the capital Buenos Aires. The country has a population of just over forty-one million people, with sixty-three percent of the population between the ages of fifteen and sixty-four. Over ninety-seven percent of the population is literate (Central Intelligence Agency, 2012c). There are over fifty-seven million cell phones in circulation and 13.6 million Internet users, which represents approximately thirty-one percent of the population. The office was formed in 1991 and employs less than fifty people.

5.3.4 Greenpeace India

The Greenpeace India office is based in Bangalore, India. The country has a population of just over 1.1 billion people, with sixty-five percent of the population between the ages of fifteen and sixty-four. Just over sixty percent of the population are literate (Central Intelligence Agency, 2012d). There are over seven hundred and fifty two million cell phones in circulation and 61.3 million Internet users, which represents less than one percent of the population. The office was formed in 2001 and employs between fifty and one hundred people.

5.3.5 Greenpeace Digital Media Unit

The Greenpeace Digital Unit is based in Washington DC, USA. The office was established in October 2011 with the objective of creating an organisation-wide digital strategy and also developing a central body of knowledge around social media campaigning. Structurally the unit

intends to adopt a network-type model that sits in the center of the organisation “between and among all the national and regional office” (Respondent8, 2011). The unit will function along the lines of a digital mobilisation lab that that can support the entire organisation. In essence the unit intends to “create a community of practice around digital mobilisation and supporter globalisation” (Respondent1, 2011).

5.3.6 Content Analysis

Recalling from chapter three, eighteen interviews were conducted (see section 3.6 for details of the interview data collection process) which included the senior management teams (SMTs) from three Greenpeace national / regional offices (South Africa, India and Argentina), the Greenpeace International office and the Greenpeace Digital Media unit. Three campaign managers, one from Argentina and two from Greenpeace International were also interviewed. The interviews were either held in person or via Skype and were recorded and transcribed on completion. The management of the data (transcription and the content analysis) are described in sections 3.6.3.1 and 3.8.2 respectively.

The qualitative data was subject to content analysis, also called reflective interpretation or interpretive analysis (Martin, 2003). Strauss (1987) suggests that content analysis be used in the reduction of qualitative data to develop a more consolidated picture; while the purpose of reflective interpretation or interpretive analysis is to develop a coherent interpretation that is consistent with the views expressed by the interviewees. The qualitative analysis tool, NVivo[®] and word clouds (introduced in sections 1.10 and 3.8.2) was used to identify the constructs that emerged from the interviews.

5.3.7 Targeted Survey

A targeted survey of the four offices in which interviews were conducted, was also undertaken, the results of which are described in Table 41. With respect to levels of knowledge of social media services (with one equal to ‘not all knowledgeable’ and five equal to ‘very knowledgeable’), all of the offices indicated high to very high levels of knowledgeable. Social networks (e.g. Facebook), microblogging (e.g. Twitter) and messenger applications (e.g. Skype) received a score of five (very knowledgeable) from all of the four offices. Similarly all offices indicated a value of three for data mashups. All offices have, at varying different times: adopted social networks, publish podcasts, maintain their own blogs, make use of microblogging services, and exploit messenger applications. Only the India office has adopted social bookmarking and only the Argentinian offices makes use of data mashup services.

Survey Question	International	Argentina	Africa	India
When did your organisation begin using computers?	> 10 years	> 10 years	3-5 years	< 3 years
When did your organisation begin using the Internet?	> 10 years	> 10 years	3-5 years	< 3 years
Integration and Influence of ICTs and Social Media (1 = Not knowledgeable at all, 5 = Very knowledgeable)				
Indicate the extent to which ICT has been integrated into the daily operations of your organisation	4	4	5	5
The use of Web 2.0 social media has had a significant positive influence on the organisation's relationships with other organisations	4	4	4	4
The use of Web 2.0 social media has positively influenced the organisation's aims, missions and goals	5	5	4	4
The use of Web 2.0 social media has increased dialogue with supporters	5	5	5	5
Level of knowledge in your office regarding the use of the following Web 2.0 services (1 = Not knowledgeable at all, 5 = Very knowledgeable)				
Social Networks (e.g. Facebook, MySpace)	5	5	5	5
Social bookmarking (e.g. del.icio.us, Social Marker)	5	5	3	4
Podcasts (e.g. Juice, Podcaster, PodProducer)	4	4	4	3
Photos / multimedia sharing (e.g. Flickr, YouTube)	5	5	4	5
Blogs (The Huffington Post, TechCrunch)	5	5	4	5
Microblogging (e.g. Twitter, Tumblr)	5	5	5	5
Wiki's (Wikipedia)	4	4	3	4

RSS feeds (FeedReader, Google Reader)	5	5	3	4
Data mashups (Ushahidi)	3	3	3	3
Messenger applications (e.g. Skype)	5	5	5	5
When did your organisation begin using the following Web 2.0 services?				
Social Networks (e.g. Facebook, MySpace)	Between 2-3	> 3 years	Between 2-3	> 3 years
Social bookmarking (e.g. del.icio.us, Social Marker)	Not used	Not used	Not used	> 3 years
Downloading of podcasts (e.g. Juice, iTunes)	Not used	> 3 years	Not used	> 3 years
Publishing podcasts (e.g. Podcaster, PodProducer)	Between 2-3	> 3 years	Between 1-2	> 3 years
Photos and Multimedia sharing (e.g. Flickr, YouTube)	Not used	> 3 years	Not used	> 3 years
Creating & maintaining own blogs (Blogger, WordPress)	Between 2-3	> 3 years	Between 1-2	> 3 years
Monitoring the blogosphere (Technorati)	Not used	> 3 years	Between 1-2	> 3 years
Microblogging (e.g. Twitter, Tumblr)	Between 2-3	> 3 years	Between 1-2	> 3 years
Wiki's (Wikipedia)	Between 1-2	Between 1-2	Not used	> 3 years
RSS feeds (FeedReader, Google Reader)	Between 1-2	Between 1-2	Not used	> 3 years
Data mashups (Ushahidi)	Not used	> 3 years	Not used	Not used
Messenger applications (e.g. Skype)	Between 2-3	Between 2-3	Between 1-2	> 3 years
How many members has your organisation attracted to its various social networking sites?	10,000-50,000	10,000-50,000	2001-10,000	> 50,000
What is the value of the fundraising attributed to social networks per annum? ²⁸	> 200,000	> 200,000	> 200,000	100,001 - 200,000

Table 41: Targeted Survey Data

²⁸ All values have been converted to ZAR

Both the Greenpeace International and Argentina offices have deployed computers and the Internet for over ten years while the Africa offices has done so for between three and five years. The India office has adopted both computers and the Internet less than three years ago, in spite of having being formed in 2001 as opposed to the 2008 formation of the Africa office. All offices indicate a highly level of integration of ICTs into the daily operations of their respective organisations. Similarly all offices reported positively on the influence of social media on Greenpeace’s relationship with other organisations, on organisational missions and goals, and on social media’s ability to increase dialogue with supporters.

5.4 A DESCRIPTION OF THE GREENPEACE CAMPAIGNS

The environmental movement has been particularly quick to adapt to communicating with new cutting edge technologies, particularly in their use of the Internet. Greenpeace, in particular is renowned as much for its environmental justice campaigning as it is for it’s direct and high profile actions, and the two are closely related.

The three global campaigns selected for an in-depth analysis displayed an effective use of social media: (1) The first was a campaign against the use of toxic chemicals in the production of computers and was aimed at Information Technology (IT) company Apple, (2) second was a campaign against deforestation in Argentina (3) and the third was the campaign aimed at Facebook and the use of ‘dirty power’ in the company’s data centers. All the campaigns are considered strategic with respect to the organisation’s use of technology.

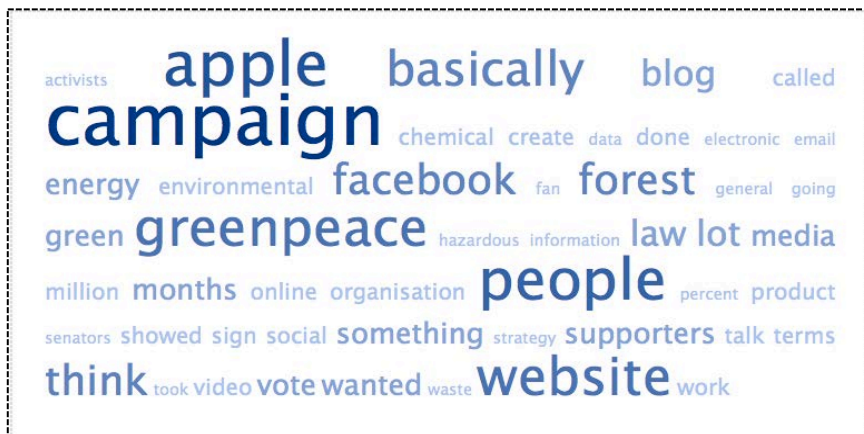


Figure 73: Word Cloud Generated from Campaign Interviews

Figure 73 represents the key concepts that emerged from the word cloud, which was generated from interviews conducted with the campaign managers involved in the three campaigns. Using the literature and extracts from the interviews the next section describes the campaigns in detail.

5.4.1 The Green My Apple Campaign: An ICT Sector Focus

With the advancement of Information and Communication Technologies (ICT) there has been a rapid and marked increase in the number of electronic products being produced and sold— not least in the sales of personal computers (PCs) and mobile phones. The use of hazardous substances in the manufacture of electronic products has increasingly become the concern of governments and civil society organisations. In the United Kingdom, for example, a number of legal codes have been enforced which (1) restrict the use of certain hazardous materials often used in the manufacture of electronic products; (2) requires producers of ICT equipment to consider environmental performance at design time; and (3) ensures that manufacturers pay for the cost of treatment, recycling and disposal of waste equipment (www.parliament.uk, 2007). Furthermore, organisations like MakeITFair have been very vocal in exposing environmental and humanitarian issues that are connected with the extraction of certain metals that are vital in the production of certain electronic equipment. For example the mining of coltan²⁹ in war-ravaged areas such as the Democratic Republic of Congo is of particular concern (The Climate Group, 2008).

In 2004 Greenpeace's initiated its Guide to Greener Electronics that evaluates electronics company's policies and products across a range of environmental criteria including the need for environmentally responsible supply chains, the elimination of toxic chemicals, and a sustainable policy for the elimination of e-waste (Greenpeace, 2011b). This was also about the time that the organisation launched its campaign to remove the most damaging lethal substances used in the production of electronic products, and to improve recycling policies. In 2006 the first ranking guide that rated companies based on a set of pre-determined criteria, in the hope of applying pressure to improve company policies and practices, was published (Rushprnews, 2007).

In late 2006 Greenpeace initiated the 'Green My Apple' campaign, which was part of the larger electronics sector campaigns. The objective of the campaign was to push the electronics sector to eliminate the use of hazardous chemicals used in the manufacture of their products and also for these companies to take responsibility for the disposal of any waste products. The Green My Apple campaign specifically targeted Apple because it is one of the leading companies in the sector and is seen very much as a trendsetter and "if Apple does something others will follow" (Respondent16, 2011).

At the time of the campaign Apple was still using Polyvinyl Chloride (PVC) in the manufacture of their products like the iPod Nano[®] and Mac Book[®]. The tactic that Greenpeace adopted for

²⁹ Coltan is a vital mineral in the manufacture of mobile phones (Alden, 2012).

this campaign was to focus primarily on Apple customers, because there was a belief that Apple was immune to any other external pressures except for the opinion of its customers. In the words of the campaign manager (Respondent16, 2011) “our analysis was very clear that Steve Jobs only listened to the fans of Apple. He does not listen to Government, he does not listen to regulation, he is actually outside of any box of regulation that you can put, hence therefore he is very subject to pressure by the fans of Apple.”

But Apple's famously loyal fan base (witness the lines around Apple stores when a new product is launched) also needed to be treated differently which meant that the entire campaign needed a different tact: “the usual style of the Greenpeace campaign of going and protesting in front of a shop was not even an option, so we had to basically come up with new way of reaching that audience and that is where we came up with the Green My Apple website” (Respondent16, 2011).

The Green My Apple website was designed to imitate Apple's own site and had at its core a single unifying theme and the caption: ‘I love my Mac. I just wish it came in green’ (Figure 74).



Figure 74: Spoof Website for ‘Green My Apple’ Campaign (Greenpeace, 2007a)

The web site was designed to be interactive, where Apple customers who were concerned about the environment and Apple's response to environmental issues, could get information about the campaign, and the particular focus on Apple to take the lead in environmental issues. Importantly the site highlighted the various ways Apple customers could show their support.

Supporters and customers could send an email or they could recommend the site using social networking services like Digg, and del.icio.us. Supporters could also blog about the campaign (see examples from the blogosphere further down in this section). The campaign also used the Web in other ways. For example an alternative spoof keynote speech by Steve Jobs, which announced the phasing out of dangerous chemicals, was created. This became an instant hit on YouTube having been viewed over one hundred thousand times in the matter of a few days (Rushprnews, 2007).

In what is attributed to be one of the few occasions that Steve Jobs (Jobs, 2007) has made such a wide-range and extensive communiqué, the following statement was released (The full statement can be found in Appendix E):

“Apple has been criticized by some environmental organizations for not being a leader in removing toxic chemicals from its new products, and for not aggressively or properly recycling its old products. Now I’d like to tell you what we are doing to remove toxic chemicals from our new products, and to more aggressively recycle our old products.”

He then goes on to discuss the various chemicals in great detail and ends with the following words:

“Today is the first time we have openly discussed our plans to become a greener Apple. It will not be the last. We will be providing updates of our efforts and accomplishments at least annually, most likely around this time of the year. And we plan to bring other environmental issues to the table as well, such as the energy efficiency of the products in our industry. We are also beginning to explore the overall carbon “footprint” of our products, and may have some interesting data and issues to share later this year. Based on our tangible actions and results over time, hopefully our customers, employees, shareholders and professional colleagues will all feel proud of our on-going efforts to become a greener Apple.”

The current Apple website has an entire section related to the company’s carbon footprint, use of materials in the manufacture of their products and a host of other facts and figures (Apple, 2012). The following extracts from the blogosphere are taken from the MacUser website (Macworld, 2006) and illustrate the range of comments that were generated during the campaign:

- “Off course they pick Apple. They were almost the last in the report and as you said they are the most visible. It is marketing - the same thing Apple is so good at. I would prefer that the company that makes my iMac would be the greeniest on that list.”

- “If, in fact, Apple is lagging behind its peers in terms of recycling and practices that are environmentally friendly, then I applaud Greenpeace for calling them out on it.”
- “Steve Jobs isn't playing their game. He doesn't write big checks to eco-groups and he doesn't beat up on the public about eco-issues. That's why Apple's at the top of Greenpeace's hate list. It has nothing to do with the environment or toxic chemicals.”

Figure 75 shows the status of the blogosphere during the time of the Green My Apple campaign, and a noticeable spike can be seen over May through to June indicating a marked increase in the chatter with respect to the campaign.

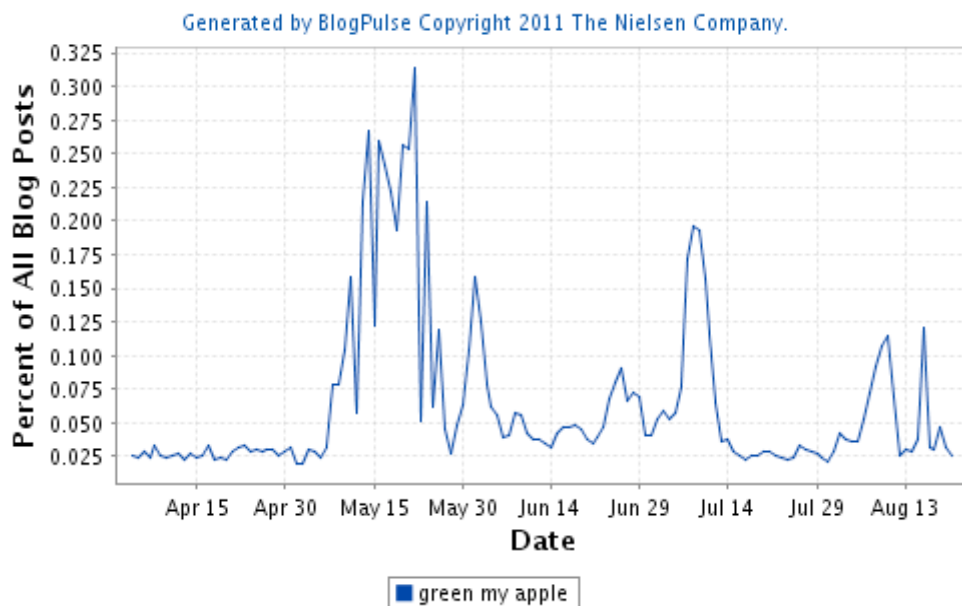


Figure 75: Analysis of the Blogosphere (Rushprnews, 2007)

5.4.2 The Forest Law Campaign: Protecting Argentina’s Forests

Ancient forests are an essential part of the carbon cycle and deforestation has been identified as a major reason for the rise in atmospheric carbon emissions (Bruges, 2008). The Forest Law campaign was prompted by the fact that every hour an area of forest the size of forty soccer fields was being cleared in Argentina. These forests were inhabited by indigenous tribes and were also home to numerous endangered species and in total three hundred thousand hectares (three thousand square kilometres) of natural forest were being destroyed in Argentina each year (Kincade and Verclas, 2008). The Forest Law campaign (or *La Ley de Bosques*) sought to reverse this devastating deforestation. The essence of the Greenpeace campaign was to target the Ministers of the two houses of parliament just prior to elections. The system of Government

in Argentina means that every two years, each one of the twenty-four electoral districts elects Senators as their representatives.

The campaign targeted Senators in particular and aimed to place pressure on the Senate to approve a new Forest Law. It did this by placing a new proposed Forest Law at the center of the election agenda and urged people to vote for the Forest Law rather than for a particular candidate (Respondent14, 2011). The campaign used the Web, mobile phones, television coverage, and newspapers in an attempt to get one million people to sign a petition in support of the Forest Law.



Figure 76: Forest Law Campaign Website (Greenpeace, 2011)

The online activity was supported with direct action with activists setting up camp and occupying the trees from where they blogged and transmitted reports and updates. The website also provided information and “displayed real-time banners on the website counting the votes and information exposing what was happening in the forests” (Respondent14, 2011).

A dedicated petition microsite³⁰ was set up which contained a form people could complete and submit. The website, also requested individuals to submit both their email addresses and mobile

³⁰ A microsite is an Internet web design term referring to an individual web page or a small cluster (around one to seven) of pages which are meant to function as a discreet entity within an existing website or to complement an offline activity. The microsite's main landing page most likely has its own domain name or subdomain.

phone numbers. About three hundred thousand phone numbers were collected in this way, while another fifty thousand were collected through email requests or by traditional direct campaigning, for example through volunteers stationed on busy streets. The campaign eventually collected over 1.5 million signatures, far exceeding initial expectations.

The campaign also used the organisation's mobile phone network to send text messages urging people to call their specific legislators and lobby for the law by (additional messages were sent informing people which were their legislators to be targeted). The mobile network was also used to send urgent alerts about other actions or news.

The Forest Law, Argentina's first legal statute that offered protection to the forests, was eventually passed in 2007. It included a one-year moratorium on the clearing of indigenous forests (thereby giving the state time to develop adequate forest management controls); it established a process of public hearings; and introduced the concept of environmental impact studies (Kincade and Verclas, 2008). One final comment from the campaign manager is illustrative of the use of social media in campaigning (Respondent14, 2011),

“It was interesting that people talked about how easy it was to be help. It's not just about information but also about how you tell the story to the people. This is key. The place of the cyber activists was put in the center. So for winning we need you. It is something we have to improve all the time, our ability to tell a good story. Right now more synergy between traditional and social media. Something people talked a lot about how to use Internet to avoid censorship.”

5.4.3 The Unfriend Coal Campaign: A Focus on Clean Energy

It is estimated that the manufacture, use and disposal of ICT equipment contribute around two percent of global emissions of carbon dioxide, which is expected to increase to approximately three percent by 2020 (The Climate Group, 2008). The huge volumes of data that is currently generated and maintained to be made instantly available has led to an enormous increase in the number of data centres that house the storage devices that hold this information. In 2002 the global data center carbon footprint was 76 MtCO₂e (Metric tons carbon dioxide equivalent). It is predicted to triple to an estimated 257 MtCO₂e by 2020, making it the fastest-growing contributor to the ICT sector's carbon footprint (The Climate Group, 2008).

Based on existing estimates for data-center power consumption, and from data gathered from electricity utilities' reports on their energy sources, Greenpeace estimated that Facebook was over fifty percent reliant on coal, Apple was second at 54.5 percent, with Google and Amazon's dependence estimated at 34.7 percent 28.5 percent respectively (Greenpeace, 2011a). With

energy consumption by datacentres growing rapidly, each of Facebook's US datacentres is estimated to consume the same electricity as thirty thousand US homes (Meikle, 2011). Greenpeace had rated Facebook's data centers as amongst the most polluting in the world (Sayer, 2011). In late October 2010 Facebook announced plans to build a new data center in Sweden, which would use hydroelectric technology to power the servers, and where the cold climate could be exploited to cool the data center. This was the only data center that Facebook undertook to power with clean and renewable energy (Sayer, 2011).

The campaign against Facebook involved the setting up a Facebook page called 'Unfriend Coal' (Figure 77) which asked supporters to pressure the social media company to re-examine its environmental policies. The campaign exploited Facebook itself and included photo-protests, music videos, petitions and events at Facebook offices worldwide. The campaign set a number of milestones along the way including a world record for the most comments on a single Facebook post in one day, with supporters posting approximately eighty thousand comments in at least eleven languages on the Facebook 'Unfriend Coal' page in a twenty-four hour period (Greenpeace, 2012b).

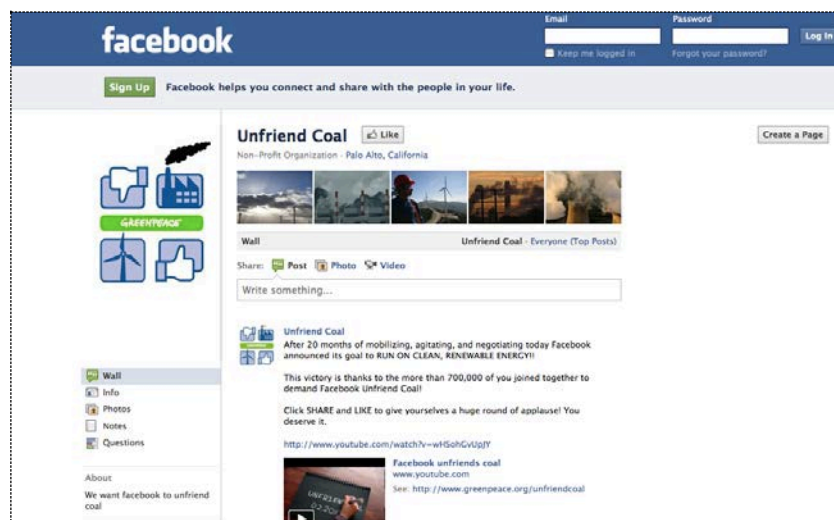


Figure 77: Unfriend Coal Facebook Homepage (Facebook, 2012b)

After nearly twenty months of campaigning, on 15th December 2011, Facebook and Greenpeace reached a consensus that saw the organisations agree to cooperate to promote clean energy options and to encourage power generation companies develop renewable energy alternatives (Meikle, 2011). Facebook also undertook to distribute the results of its research into energy efficiency through the Open Compute Project, an organisation that it set up to promote low-cost, low-energy computing infrastructure (Sayer, 2011). The statement from Facebook (2011) said in part (the full statement is reproduced in Appendix G):

“Facebook is committed to supporting the development of clean and renewable sources of energy, and our goal is to power all of our operations with clean and renewable energy. Building on our leadership in energy efficiency (through the Open Compute Project), we are working in partnership with Greenpeace and others to create a world that is highly efficient and powered by clean and renewable energy.”

Godelnik (2011) argues that the new agreement between Greenpeace and Facebook demonstrates how Greenpeace is becoming one of the most powerful players in the world when it comes to mobilising businesses and encouraging them to do the right thing.

5.5 A QUALITATIVE ANALYSIS OF THE CAMPAIGNS

This section reports on the analyses of the interviews conducted with the senior management teams (SMTs) of five Greenpeace offices and three campaign managers. The senior management comprises National Directors who are individually in charge of specific areas of the daily operations including programmes and issues which embraces the campaign areas, Internet campaigning, science, research, and the political and business divisions. A SWOT (strengths, weaknesses, opportunities, threats) analysis extracted from two internal Greenpeace documents³¹ (Greenpeace Internal Document1, 2009; Greenpeace Internal Document2, 2010) provide some insights into the organisations Internet and social media strategy (and a secondary strategic aim of recruiting twenty million supporters by 2012):

- **Strengths:** Greenpeace has a strong global cyberactivist base and a growing presence in social networking platforms.
- **Weaknesses:** The primary purpose of the organisation’s website is to convert visitors to supporters. The website has a high ‘bounce rate’ (which is the number of visitors who click away immediately from whatever page they arrived at) reflects Greenpeace’s institutional silo’s which results in a lack of campaign narrative emerging from the website in a coherent manner.
- **Opportunities:** The Greenpeace website is designed at informing its supporters, partners and donors, and is ideally positioned to take advantage of the new communications paradigm by establishing a dialogue with its supporters. Greenpeace’s action-orientated style makes it possible for more effective engagement by allowing its supporters through emerging technologies to take actions that have a real effect.

³¹ These documents are internal Greenpeace documents and permission to quote from them has been obtained.

- Threats: Greenpeace is in danger of losing its leadership position to new more ‘web-savvy’ environmental organisations.

Porter (1996) states that in order for organisations to survive they must establish a difference they can defend and the essence of strategy is choosing to perform activities differently than rivals do. Planning, according to Ackoff (1970) is to conceive a desired future as well as the practical means of achieving it. While every organisation maintains some degree of strategic planning, the restructuring of technological capabilities and the management of a technological transition can be difficult with new sets of knowledge competencies having to merge with the organisations existing capabilities (Mintzberg, 1978; Srivastava & Finger, 2006). This is true for Greenpeace as one of the senior managers interviewed attests to (Respondent4, 2011):

“Now a strategy by definition looks more into the longer term. And in the longer term who knows what’s going to happen? So if you look at what we would have known three years ago as opposed to what happened today with Twitter and social networking and YouTube and the like and suppose we have to build like a real whole strategy what is the direction and what is the money and what are the initiatives, and built a classic strategy model, we probably would have done something that was rather different and would have had to change it completely in order to be where we are now.”

An illustration of the strategic nature of social media to the organisation is encapsulated in the extract from an internal document that argues that the number of supporters the organisation attracts is related to the breadth and attractiveness of the organisations presence on the Web i.e. there needs to be presence on many sites in cyberspace like Google search rank, on Facebook, Twitter, and “talked up through word of mouse.” Furthermore, the organisation needs a compelling offer of tools and information that will get users to develop a real relationship and profile with Greenpeace, and in that way, see the organisation as a source of all information related to a particular campaign. The hope is that once supporters have had a positive experience with the organisations primarily through its website and through the use of social media tools, they will make the Greenpeace website the centre of their activism.

The following sections analyse the campaigns with respect to the following theoretical constructs and concepts: Redefining and Restructuring of the Organisation, types of advocacy, placing supporters at the center of a campaign, creating networks and communities, Strong and Weak Ties and Clickactivism.

5.5.1 Redefining and Restructuring of the Organisation

An obvious and important area of analysis is an understanding of the structural changes brought about by the adoption of social media. Specifically, does the interactive nature of social media clash with traditional civil society culture and attitudes, and are CSOs flexible enough to accommodate a dialogue that supporters increasingly demand and expect. To what extent are CSOs moving toward the new type of online CSOs, if at all, or even to what extent are new methods of online advocacy being adopted. Cleaver (1998) for one argues that the Internet is changing the ways in which CSOs are structured.

Two theoretical constructs are of interest. Firstly, one of the stages of innovations described by Rogers (2003) is that of ‘redefining’ or ‘restructuring’ an example of which is the creation of a new organisational unit. In the case of Greenpeace two new organisational units have been created both aimed at harnessing the potential of social media. The first is the Digital Media unit based in Washington DC, United States and the second is the Innovation Lab based in Buenos Aires, Argentina. The purpose of the media unit in the words of the new media director is to harness the knowledge that exists within the organisation and to create a “knowledge management structure and a community structure that allows that information to be passed around” (Respondent2, 2011).

Secondly Adaptive Structuration Theory argues that during adoption of an advanced technology, established institutional structures (e.g. reporting protocols and standard operating procedures) are modified and enhanced thereby creating new structures (DeSanctis & Poole, 1994). The following extract from an interview with Respondent1 (2011) alludes to the changes in structure that will increasingly shape the organisation as a consequence of social media adoption:

“Now we still need to actually articulate and write down effectively a digital strategy right? Because it will be a different kind of strategy. It will not be the kind of strategy that tells us exactly what we want to do because we don’t know if the market will move too fast. But in order to tell us where we are leaving or if we are not leaving, what are the kind of capabilities do we need to have and what the structures are that we need.”

Two other concepts with relation to organisational changes brought about by adoption of technology are important, namely coherence and cohesion. Nugroho (2008) states that one of the impacts of Internet use at the intra-organisational level may be to affect an organisation’s identity, which is associated with an organisation’s internal coherence and cohesion; coherence and cohesion relate to an understanding of organisational identities, roles, responsibilities, and

the manner in which resources must be deployed to support the strategic intent of the organisation (Stiglitz, 2000).

It has always been the actors at the 'sending end' of a campaign who determine how issues are defined and framed, and the Internet has given civil society even more power to shape the public discourse (Mann, 2008). However messages must appeal to the agendas of distant audiences to gain support and care must be taken not to alienate a supporter base through goals and targets that are incompatible with local initiatives. What emerges in this study is that the need to develop a dialogue with supporters, necessitated by the new paradigm of interactive communications, affects Greenpeace campaigner's³² traditional and well-established roles and identity. What is also apparent is that even though there is recognition of the need to establish a relationship and dialogue with supporters, the idea has not been fully accepted within the organisation. Respondent9 (2011) states "even on our Facebook page we are still talking to people instead of with people. And the whole area of how we with engage people, we still haven't cracked it." Respondent5 (2011) further noted, "we are not used to it, we are used to being quite insular, in the sense that you know it's the staff, it's the professional staff who develop and implement our campaigns and then we tell people about them and people give us money. And social media breaks that down and because our supporters who use social media are increasingly accustomed to having a response and to being able to input in ways that they decide, and we need other ways of opening ourselves up to that response."

Cohesion relates to group morale (Knox, Savage & Harvey, 2006). The greater the cohesiveness in an organisation the more chance there is that its members share a collective identity, that roles are clearly understood, and where there is mutual respect and trust for each other (Reynolds, 2003). Identity is distinguishable from roles with identity being sources of meaning for the actors themselves and roles being defined by norms structured by institutions within society, for example a person could be a teacher, student, smoker, union member and soccer player at the same time (Castells, 1997). Direct action has been a founding principle of Greenpeace, and its campaigner's, who have been at the center of these actions, face a turning point in the light of new emerging technologies that demand new interactive ways of campaigning. As Respondent5 (2011) states "most of tensions are with the campaigners, old school campaigners are not so used to working with these kinds of tools, and our responsibility is to train them better to understand this new field of possibilities. Sometimes campaigners think it's not so important what other people say, they think they are not experts they don't understand the issues." Another respondent cited an example of the opinions of a supporter focus group

³² Campaigners are Greenpeace members who conceive, initiate and manage campaigns and actions.

being dismissed by a campaigner with a display of exasperation at the fact that these particular supporters were not familiar with certain aspects of the campaign being discussed in the focus group (Respondent13, 2011). A final note on creating a dialogue comes from Respondent9 (2011) who uses the concepts of analogue and digital to argue that 'old school' CSOs were analogue organisations and the challenge is to become digital. He also warns that this necessary transformation will not be easy "because there is a cultural change that involves dialoguing with people and taking seriously what other people say about us and getting out of the ivory tower where decisions are taken, and sharing and being able to accept criticism coming from outside and taking it seriously and being forced to change in issues where you don't think you have to change" (Respondent9, 2011).

A final and important point about restructuring occurs at the organisational level. In this study it relates to how traditional CSOs like Greenpeace are considering restructuring in the face of organisations like Avaaz, which are entirely online. The following comments (Respondent11, 2011) are illustrative of the thinking within Greenpeace "and while I think Avaaz has tremendous power to reach a great number of people they will also of course shape their programme according to the will of those people, so they keep looking at the popularity of a particular course before they taking action on it." The differences between Avaaz and Greenpeace was described by Respondent12 (2011) in military terms with Greenpeace being described as the infantry and organisations like Avaaz being the cavalry:

"The infantry takes very difficult issues, difficult paths and it slogs up the hill and prepares the battlefields and does things like Greenpeace has done with climate change when we started addressing it back in the 1980s or genetic engineering, we get it into the public spotlight, in a way it wasn't previously in a public spotlight; and the cavalry once the battlefield is set, comes charging in with a lot of power and can join the battle in a very creative way. Avaaz is much more the cavalry, its nimble, it's very fast it can jump into a situation where that kind of fire power is called for, and Greenpeace will tend to be much more, this is strategic goal for this campaign and stick with it for year after year, after year, after year. And those are the two very different models and I think that they are both completely valid, and I think the greatest opportunities are where we can cooperate and we've seen this with a couple of issues when we worked together with Avaaz, where they bring tremendously big numbers in to anything we are doing on line and we can set the field and bring a set of committed activists into that."

5.5.2 Types of Advocacy

This section analyses the campaigns in light of the following concepts: types of advocacy and approaches to influencing policy.

Jones (2011) identifies a variety of activities to influence policy that include approaches that take either the ‘inside track’ or the ‘outside track.’ Inside track approaches, as the name implies involve being closely associated with key stakeholders and decision-makers, while ‘outside track’ approaches employ more direct action and attempts to wield influence through confrontational politics and to apply pressure where organisations are susceptible. There is also a distinction between approaches that are led by evidence and research versus those that involve primarily values and interests (Figure 78).

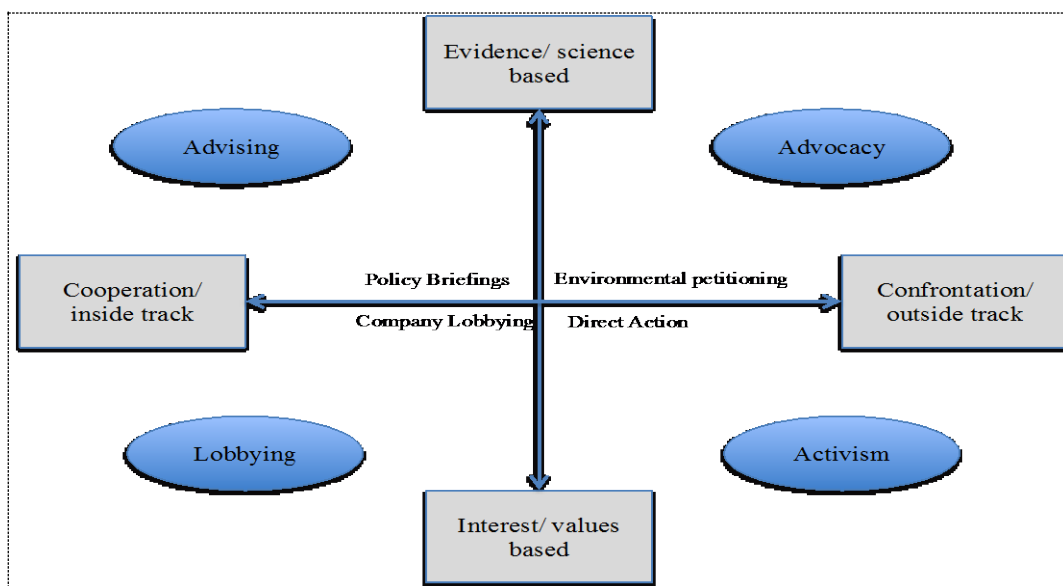


Figure 78: Policy Influencing Approaches (adapted from Jones, 2011, p. 2)

While direct-action campaigning is one of the founding principles of Greenpeace, all the campaigns that were analysed in this study employed various combinations of approaches to achieve their goals. For example, the science of climate change has always been an important aspect of Greenpeace’s evidence-based arguments and anchors many of their campaigns. As far back as 1995, Mormont & Dasnoy (1995) argued that as an environmental group, Greenpeace was influential in establishing the scientific basis for climate change and also for communicating what is a very complex set of arguments, to the public. As Pearce (1996, p. 74) notes Greenpeace starting taking scientific evidence seriously very early on in the organisations life and they “began to drop the early aura of hippy karma and tarot cards, which in the past had often dictated policy, and underwent a slow conversion to science.”

The dedicated Greenpeace Science Unit, based in Exeter in the United Kingdom oversees all of the organisations scientific work. The Science Unit (Greenpeace, 2007b) argues that many environmental issues facing society like climate change, the increase in the size of the ozone, and the impact of genetically modified foods, can only be detected and understood through science and states, “we depend on science and technology to provide solutions to environmental threats.” Having a dedicated Science Unit also means that Greenpeace campaigns have the benefit of highly targeted and specific scientific research and analysis, which can be made available quickly and timeously. The unit’s role within the organisation is to shape Greenpeace campaigns, influence policy and change opinions. The unit also commissions scientific research reports and investigations in support of campaigns. Research, which in addition to providing science-based alternatives, has the ability to inform the public and is a source of alternative discourses.

Confrontation versus Cooperation

Mayoux (2003) identifies two types of advocacy: the first is adversarial advocacy which uses direct-action approaches like protests and other forms of dissent that gives voice to oppositional politics and alternate discourses; the second is negotiated advocacy which places an emphasis on negotiations between stakeholders and decision-makers on both side of the conflict, and attempts to breach any impasse by building consensus. Advocacy campaigns often employ both elements in parallel or sequentially, with adversarial advocacy often serving as a prelude to negotiations. This approach often matches the campaign itself as it moves from the causes of the conflict through to the available solutions.

Many Greenpeace campaigns, and the campaigns analysed in this study, employ a combination of confrontation and cooperation/negotiation. In the Forest Law campaign for example, in addition to the online-activism centered around the website and the use of text-messaging, Greenpeace deployed activists to set up a camp in the forests where the logging was occurring, and to stream live images of the deforestation as it occurred. While not as successful as anticipated due to very bad weather conditions, direct action also included a protest march on the Congress building. The Green My Apple campaign also employed direct action including visiting Apple stores in various cities and attempting to subvert showroom computers by replacing authentic Apple homepages with the Green my Apple messages (Greenpeace, 2007a). During the Unfriend Coal campaign supporters delivered their message directly to Facebook's staff at the company’s offices in Austin Texas, while in North Carolina the company’s Forest City data centre was the site of students protesting the company's energy choices (Greenpeace, 2012b).

The campaigns also had an element of cooperation, which were less obvious than the very public confrontational elements of the campaigns. During the Unfriend Coal campaign, even while the very public action-orientated campaign was taking place, overtures were being made to Facebook's management urging them to heed the demands of the campaign. The following is an extract from a letter from the Greenpeace International Executive director to Facebook's founder and CEO (See Appendix F for the full statement):

“Given that your corporate and public policies on the environment have not been articulated, we would welcome the opportunity to sit down with you and your team to hear what work Facebook has planned and to discuss the steps we feel would put Facebook in a leadership position on climate change within the IT sector.”

Two other Greenpeace campaigns are illustrative of the strategy of employing confrontation and cooperation:

1. In the first example Greenpeace highlighted the environmental practices of two large highly visible international corporations, McDonalds and Unilever, who had been buying the raw materials required for their production processes from developing countries where forests were being extensively deforested (Greenpeace, 2004). In 2006 this strategy paid dividends when McDonald's agreed to cooperate with Greenpeace after evidence emerged which showed that McDonalds's chicken products had been fed on soy grown in deforested areas of the Amazon rainforest. This partnership led to a landmark moratorium on the purchase of Brazilian soy grown on newly deforested land and both companies, working together, were able to apply pressure on suppliers to develop more sustainable environmental policies (Cooper, 2009).
2. The second example occurred during the 2000 Sydney Olympic Games where Greenpeace Australia, in the build-up to the games started working with the Organising Committee in an attempt to host the first environmentally friendly Olympics. But when the sponsors with the knowledge of the Organising Committee reneged in their commitment to using Greenfreeze (an ozone- and climate-safe refrigerant) Greenpeace moved from cooperation to confrontation and as Hartman & Stafford notes (2006) the 'gloves came off.' It was also the moment that Greenpeace launched its now-famous protests against Coca-Cola, including a campaign that contained photos of distressed polar bears on melting icebergs with the slogan “Enjoy Climate Change” which caricatured Coca-Cola's world-famous trademark and font (Hartman & Stafford, 2006). But even in the face of such public confrontations, Greenpeace activists, in an act that belies their anti-business image, helped

the company develop alternatives that helped fix its environmental mistakes. Hartman & Stafford (2006) calls this contradictory mix of traditional activism and opportunistic cooperation an inside-out strategy, which they argue forms the core of Greenpeace's campaigning.

Cooper (2009) argues that global business is connected through a set of complex symbiotic relationships between suppliers, manufacturers and retailers and that organisations like Greenpeace are adapting and beginning to exploit these relationships in order to change organisational behaviour and effect change. Hartman & Stafford (2006) contend that using a strategy that offers cooperation whilst at the same time threatening confrontation, Greenpeace no longer just ambushes offending organisations but it also co-authors solutions.

5.5.3 Placing Supporters at the Center of a Campaign

The Greenpeace internal documents emphasise the need to move away from the tradition mode of civil society operations. One-to-many communications, calls to actions via online petitions and organisational newsletters, the imploring of donations, and a one dimensional communication with organisations must be replaced with 'conversations' with supporters where their actions and behaviours generate content that can be dynamically repurposed and which eventually lead to real-world activities (Greenpeace Internal Document3, 2011). The document proposes that Greenpeace use social media to do more than just communicate and incite, but rather it must be a tool in the hands of supporters that allows them to participate in a meaningful and engaged manner.

Greenpeace Argentina has successfully attempted the strategy of placing supporters at the center of campaigns as the extract from the interview with the Forest Law campaign manager attests (Respondent3, 2011):

"Each cyber activist helps us to reach our target. We start involving more and more people in the design and the way we push our campaigns. We evolve more when we start working with these social tools, where the people can organise themselves and create things in collaborative work. The last step we reached a couple of years ago where we moved from a centralised model. Like a big net of nets that we work in. Now we have a model where Greenpeace is not in the middle, but all the people, cyberactivists, volunteers and donors share some content and all the connections are between the people. We help people that are connected by Greenpeace by social media but also between connections, between cyberactivists and the other social media people so they receive the

content from us or from other users, but the discussion that they are having will help other users to change the way we communicate or the way we create our campaign.”

The diagram on the left in Figure 79³³ illustrates the traditional method of campaigning with Greenpeace at the center of the campaign; the diagram on the right points to the new strategy for campaigning that places supporters at the center of the campaign.

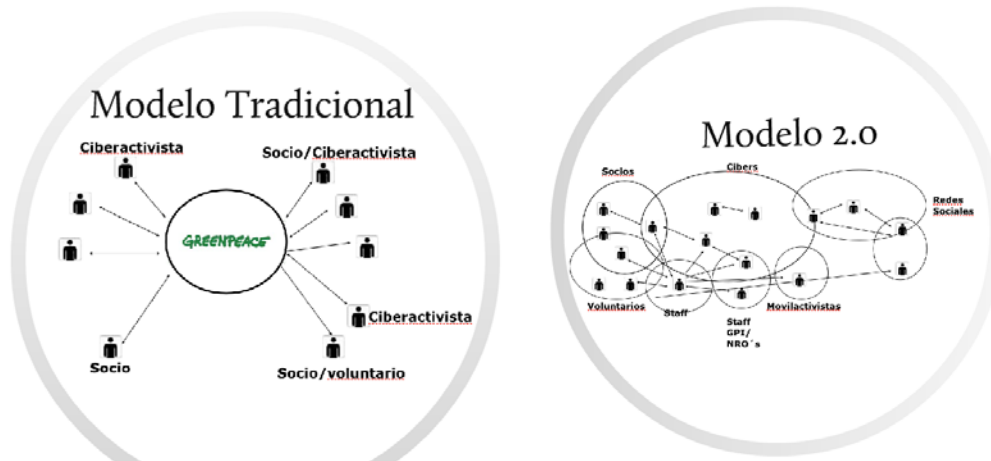


Figure 79: Traditional versus New (Greenpeace, Internal Document3)

The director of the media unit (Repondent13, 2011) who’s brief is to understand the role of social media in campaigning, notes:

“I think that the organisation is going through a massive shift right now. Certainly one of the missions that I have through this digital mobilisation lab is to figure out and demonstrate how we can campaign with supporters at the center of the work so a much more supporter-centric or supporter driven model.”

Some elements of this strategy are evident in individual campaigns. In the Forest Law campaign for example, supporters were empowered to use material from the website which allowed them to engage meaningfully. In particular supporters were encouraged to re-use (cut and paste) any of the information from the website, repackage and distribute as widely as possible (Figure 80).

This served to move the focus away from Greenpeace to the actual campaign itself. As one respondent stated supporters were increasingly more concerned with the actual issues that the campaign was focussed on rather than on the organisation that was spearheading the campaign (Respondent10, 2011).

³³ While the text in the diagrams is in Spanish, they do not detract from an understanding of the concepts being communicated. The researcher believes it is important that the original diagrams are used for the sake of authenticity

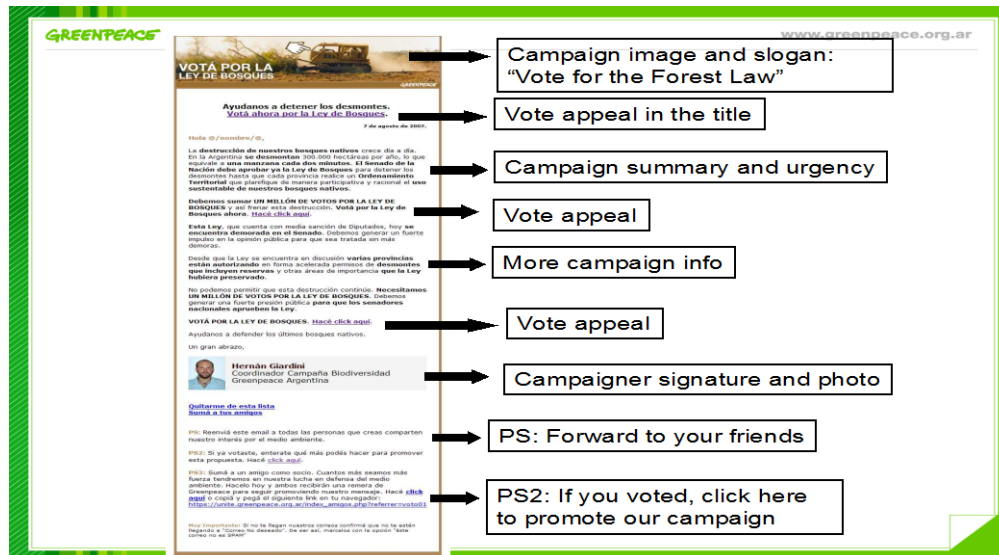


Figure 80: Empowering Supporters (Greenpeace, Internal Document3)

As far back as 1999 Ronfeldt *et al.*, (1999) in the course of analysing the Zapatista conflict in Mexico (which has been termed the first Netwar) remarked that the information revolution favours the network form of campaigning and that within weeks of the Zapatista campaign the conflict became less about the EZLN (the organisation) and more about the actual campaign. In a final comment it was noted that even the campaign material on display during the Forest Law campaign was devoid of any Greenpeace branding illustrating the emphasis on the campaign rather than the organisation (Respondent12, 2011).

While the Internet and in particular the World Wide Web has given social movements more power to shape a public image thereby ‘altering the landscape of protest’ (Owens & Palmer, 2003), social movements run the risk of alienating its supporter base by defining campaigns based on what will resonate with the media and other global publics rather than what will resonate with supporters (Mann, 2008).

5.5.4 Networks and Virtual Communities

Technology-enabled networks and the ability to form online communities are important properties for CSOs and specifically for their campaigning objectives. This section first provides a brief introduction to the concepts of communities and networks and then discusses important characteristics of these networks. Castells (2001) states that networks have always existed throughout the history of humans, but now they have taken on new form and function and have evolved into information networks as a consequence of being powered by the Internet. Virtual communities are described as technology-enabled forms of support for a new kind of sociability, different but not inferior to previous forms of social interactions (Castells, 2001).

Networks and virtual communities are the backbone of citizen-enabled campaigning in the information age.

Networks exist both within organisations and also between organisations and supporters. Internal networks are important sources of knowledge for organisations and as Rogers (2003) argues, highly complex organisations embody high-levels of knowledge and expertise amongst members, which in turn encourages innovation. There is recognition of this inherent knowledge within Greenpeace, which has in part motivated the formation of the digital media unit. As one respondent points out (Respondent18, 2011) many people across the Greenpeace organisation, all with differing roles and responsibilities, are involved in digital mobilisation campaigning and the aim of the unit is to “seek out and find those pockets of innovation and places where people are testing and trying new things and then to support that and grow and enable that to happen.”

Collaboration and networking has always been an important part of civil society’s *modus operandi*. The Forest Law campaign afforded the opportunity for Greenpeace Argentina to collaborate on a wide scale: firstly with volunteers and activists, and also with traditional media and other CSOs. Many organisations carried the Greenpeace message on their websites, both from within and outside of civil society. In the Forest Law campaign there was extensive collaboration with other civil society organisations, which included the campaign being given prominence in the newsletters of other organisations and also a coordinated international day of blogging (Figure 81).



Figure 81: Collaboration Examples (Greenpeace, Internal Document3)

This collaborative effort became, the words of the campaign manager (Respondent11, 2011) “the biggest online community in Argentina and Latin America.”

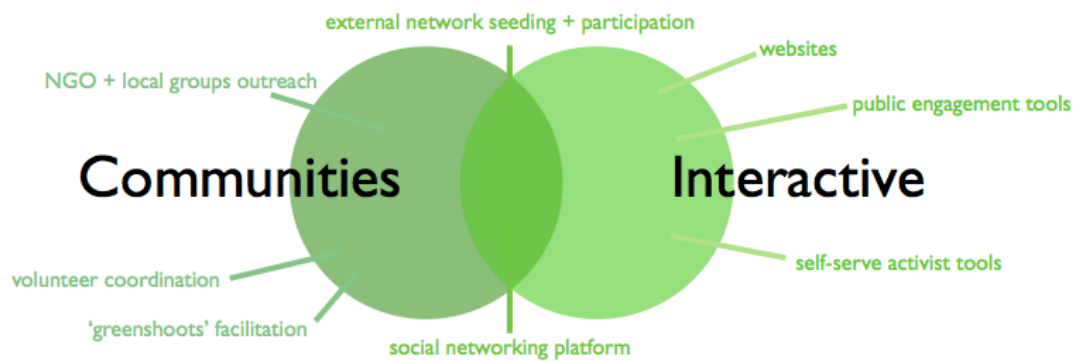


Figure 82: Greenpeace’s Interactive Communities (Greenpeace, Internal Document4)

Figure 82 is extracted from a Greenpeace internal document and illustrates the focus within the organisation on the development of communities and interactive modes of communication.

Individualisation in Online Communities

The Internet and social media affords people the opportunity and ability to filter information, join groups and engage in conversations, all of which is based on very specific personal preference referred to by Negroponte (1995) as the ‘Daily Me’ and by Sunstein (2001) as the ‘Daily We’. One of the criticisms of the online communities that form in the social media space is that people gravitate towards groups that espouse their views, which has the potential to polarise the discourse. For example the use of Real Simple Syndication or Rich Site Summary (RSS) is a group of applications that aggregates content from various web sites based on individual’s specific criteria, thus removing the need for users to check multiple sites for new content. One consequence of this level of individualisation is that it potentially allows people to restrict themselves to certain points of views, which are almost always points of views to which they already subscribe. While this behaviour has always existed (e.g. people choosing newspapers and magazines that mirror their opinions) there is now a difference in degree with emerging technologies increasing individual control over content. Sunstein (2001) cautions that systems that exhibit perfect individual control runs the risk of reducing the importance of the public sphere and of common spaces, which are places that ensure that people will encounter information on issues of importance irrespective of whether they have chosen the encounter.

Despite the potential of the Internet to bring together communities that have diametrically opposing views, paradoxically there is evidence indicating that individuals still favour and seek out news and information that aligns with their own views; evidence also exists that illustrates selective exposure occurring in online political discussion arenas, which may lead to political

polarisation (Kushin & Kitchener, 2009). While the evidence points to virtual communities being fairly homogeneous in terms of values and viewpoints, in practice this has not been the experience within Greenpeace. As Respondent12 (2011) notes Greenpeace has seen some diversity in its online supporter communities, particularly on Facebook, with groups that instinctively should not be tolerant of each other “holding together as a community.” He further notes (2011) that these diverse communities straddle “bible belt US, that believes in the stewardship of the planet and yet Greenpeace protecting the whales, protecting the seals, they see this as consistent with the Christian mission and they like Greenpeace and its great. And there are also people there who are keen to overthrow the States and who love the fact that we actually take direct actions against corporations, against Government and see us as an anti-capitalist organisation and there’s a wide spectrum of support that we got from very unusual corners.”

5.5.5 Strong Ties, Weak Ties and Clickactivism

Clickactivism is a term that has been coined to describe the purely online activity of supporting a cause or campaign exclusively in cyberspace i.e. the level of participation requires only that a supporter, for example, send (or simply forward) an email, sign an online petition or make a post to a social networking site. It is the domain of online organisations like Avaaz, but increasingly it is a tactic that has been employed by established CSOs as well. An internal Greenpeace document states that civil society lacks innovation in the digital space and risks diluting the spirit of activism through clickactivism (sometime spelt clicktivism, and also referred to as slacktivism). White, (2010) writing in the Guardian argues that organisations increasingly ask less and less of their members, which has the potential to reduce activism into a series of petition drives based on current events.

While White (2010) somewhat disparagingly describes this trend as “clicktivism is to activism as McDonalds is to a slow-cooked meal,” it has been pointed out that clicktivism is not always a low-risk option. As Respondent16 (2011) argues, in parts of the world where there is no focus on civil liberties, the clicking of a button or the signing of a petition implies that the person’s name is digitally recorded with a time stamp and “in many contexts that will get you fired, that will get you arrested, that will get you disappeared, that will get you killed and that’s the reality that human rights activists and journalists and so on experience all over the world.” Even the use of a pseudonym does not afford protection because people can still be identified by an IP address.

Clickactivism is closely related to the concept of strong and weak ties and has been vigorously debated with respect to online activism and in particular with regards to the use of social media in campaigning. All social networks contain two types of connections (or ties), which are termed either strong or weak. Strong ties involve frequent contacts, emotional intensity and solidarity; weak ties are casual, superficial, do not enable the formation of communities but are nevertheless important for the circulation of new information (Memmi, 2010).

Gladwell (2010) writing in the *New Yorker* magazine provoked a flurry of responses when he suggested that cyberactivism associated with social media, is built around weak-ties which is a low-risk option that very rarely leads to high-risk activism, and does not achieve any meaningful change. He uses various examples of activism and advocacy from the American civil rights movement through to the Italian extremist group, the Red Brigades, to argue that traditional activism and activists show a strong-tie phenomenon. In the case of the Red Brigades, almost seventy percent of recruits had at least one good friend already in the organisation and the same is true of many of the men who join the Mujahideen in Afghanistan. Even spontaneous revolutions like the bringing down of the Berlin wall were at the core strong-tie phenomena.

In a counter-argument to Gladwell, Shirky (2010) argues that changing public opinion requires two steps: in the first step ideas, thoughts and debates are transmitted by the media, and in step two these are then re-transmitted by friends and family. It is in this second social step that political opinions are formed. In both these steps, the Internet and social media in particular can make a difference. Shirkey (2010) further contends that political activism has to be accompanied by a civil society literate enough and densely enough connected to discuss the issues being presented, and mass media alone does not change people's minds. Respondent17 (2011) in a riposte to Gladwell argued that the article was flawed for a number of reasons especially in ignoring the value of social media to amplify your campaign: "what's frustrating about that article for a number of people in this space is that he grossly undervalues or refuses to acknowledge the role of social media communications at all. It's not a binary thing right? So when you look at Egypt, of course it was not a Facebook revolution, it did not happen because of Facebook but it could not have happened without Facebook and social technologies to enable people to see that they were not alone, to be able to share information that previously they could not have."

While it is true there are mixed views on the actual role of social media in various protests and actions, the role of social media is more likely to be one of creating the material conditions for coordination and cooperation amongst activists. Activists use the tools of the day to frame views and coordinate their actions and it would be impossible to analyse any number of recent

protests actions without discussing social media. The advent of social media is an addition to the activist landscape and not a replacement.

A particular strength of weak ties is the ability to engage with new ideas. For example, weak ties between one person in a closely knit group and an acquaintance (weak tie) in another group becomes not merely a trivial acquaintance, but rather a crucial bridge between the two densely knit clumps of close friends. These distinct groups would not have been connected to one another at all were it not for the existence of these weak ties. Logically it follows that individuals and groups with fewer weak ties will be deprived of information from distant parts of the social system, which serves to insulate them from the latest ideas (Granovetter, 1983).

Small World Theory and Social Networking Density

Another closely related concept is that of small worlds (also called small world patterns or networks). A small world is a graph with both local clustering and short distances between nodes; short distances promotes accessibility, while local clustering and redundancy of edges prevent disconnections and promotes reliable and accessibility (White & Houseman, 2003). Two characteristics of small world networks are that when balanced properly they let messages move through the network effectively, and secondly in small world networks large groups are sparsely connected (Shirky, 2008).

These dense and sparse characteristics of small world networks manifest themselves in social networking communities. In a report by the Pew Internet and American Life Project (Pew Reserch Center, 2012) it was found that with respect to the density of people's friendship networks, people's friend's lists on Facebook are only modestly interconnected i.e. a fully connected list of friends would have a density of one (everyone knows everyone else). As an example of what this means, if you have ten friends (n), the number of possible friendship ties among everyone in your network is forty-five (possible ties= $n*(n-1)/2$), while the average Facebook user's friends list has a density of 0.12 which means that for the average twelve percent of the maximum friendship linkages exist between friends.

Civil society organisations can exploit small world networks by adopting both dense and sparse connections i.e. by first encouraging small groups to connect tightly, and then aiding the connections between these groups (Shirky, 2008). Small world theory has been adopted by Greenpeace (as illustrated in Figure 83), which shows small groups of cyberactivists connecting to each other to form a larger network.

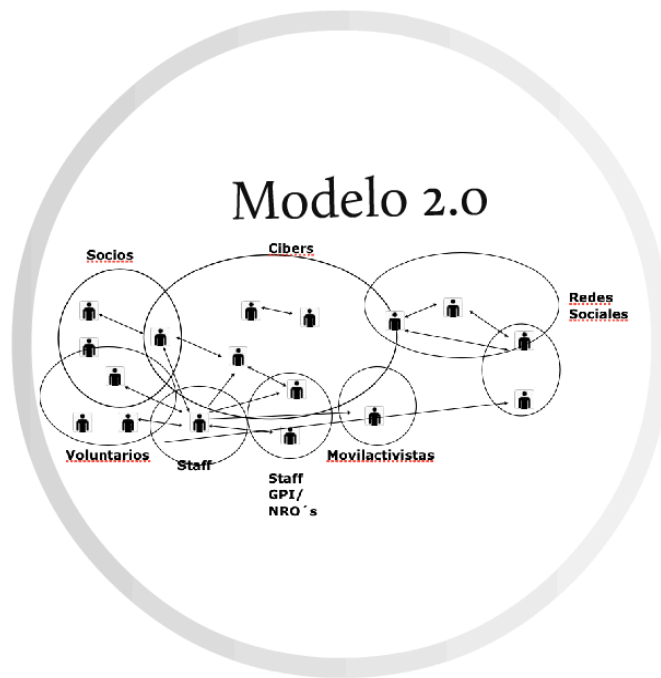


Figure 83: A Practical ‘Small World’ Example (Greenpeace, Internal Document3)

Ladders of Engagement

The concept of strong and weak ties is well understood in CSOs and getting supporters to increased levels of engagement and action has long been a focus within civil society. Groundwire (Groundwire, 2012) is a CSO that was founded in 1995 with a goal of providing expertise, advise and education to environmental groups in their use of the Internet to build stronger ties to the public and to each other. The organisation uses the concept of the ‘Engagement Pyramid’ to describe the process of actively getting supporters to higher levels of involvement in campaigns. In this process supporters theoretically traverse from being mere observers to eventually being leaders of campaigns. At the bottom of the Engagement Pyramid, communications and relationships are technology-centric and more automated; at the top, they are more personal and labour-intensive. Rosenblatt (2010) observed that automated communications (typically at the bottom of the pyramid) tend to become less effective in engaging people when personal relationships become increasingly critical to success. Greenpeace’s version of this concept is the ladder of engagement. Respondent17 (2011) argues that easiest way for the organisation to pursue this increased level of engagement is to simply ask supporters and the challenge is “less that people are unwilling to do these things as much as we don't want to spend the time required to come up with the creative ways in which people could do something that we asked them that would have a meaningful impact on the campaign.”

A final (negative) note on weak and strong ties and clickactivism come from Respondent 16 who states that clickactivism does not give the person participating the feeling of experiencing anything new and that the 'experience' is forgotten within a couple of minutes, suggesting that the campaign has made very little serious impact on that particular person's outlook. He further uses the example of the 1963 American Civil Rights March led by Martin Luther King in Washington DC as an example of 'real' activism and states "that issue is about experiencing, it is something that in a way shook your soul for ten minutes, for a whole day, it doesn't matter. It is not something that passed by without leaving an impression in your soul. This is the thing that I think Avaaz has taken this very lightly. I tend to consider this kind of cyber activism as zombie activists, because these people they click, simply because they click."

Weak or strong ties notwithstanding the importance of a human network in advocacy is well recognised. For example during the Burmese monks protest in 2007, and despite an Internet penetration rate of 0.1 percent and government censorship, reports and images were sent at regular intervals by activists and everyday citizens with increasing levels of engagement appearing seemingly without any concerted effort. As Sigal (2009, p. 15) states "Additionally, local groups and activists in Burma that previously lacked a public presence gained access to telecommunications and media tools and became visible and influential players on the national and the global stage. Long-time Burma-watchers found themselves communicating with groups of activists that appeared to have sprung fully formed out of nowhere."

With social networks being used predominantly to maintain pre-existing ties, whether strong (close friends) or weak (acquaintances) the question that arises is 'what really is new with emerging interactive social media technologies?' The answer may be that these new systems make relational structure explicit. However it is not yet apparent whether this new paradigm fundamentally changes human motivations and social relations (Memmi, 2010).

5.5.6 Multi-dimensional Interactions

This section analyses Greenpeace's social media-led campaigns in light of the multi-dimensional interactions that both enable and constrain online activism. The analysis draws upon the following constructs as espoused by Yang (2009): The ability of CSOs to respond creatively to the state's ability to channel activism; the ability of social media-led collective action to mobilise emotions within a cultural context; and market forces that impact online activism

State power has the potential to channel online activism, with politically tolerable issues having more chance of entering the public sphere and becoming contentious events. But even as power

attempts to shape contention (by for example attempting to control the Internet) activists are not “captive audiences” but “skilled actors” who have the ability to respond creatively and are able to operate close to the boundary of acceptable channels (Yang, 2009, p. 13). While power constrains contention it also responds and adapts to it. The following two examples are illustrative.

On 7th November 2011 Greenpeace Africa activists chained themselves to the gates of South Africa’s latest coal-fired power plant. The activists were protesting against the dependence of South Africa’s power grid on coal and the vast amounts of money being pumped into these initiatives. An extract from the Greenpeace blog that accompanied this action states, “This morning I’m writing from the top a 110m high crane inside the construction plant of Eskom’s next colossal coal-fired power station, Kusile. I’m here with five other climbers to highlight the true cost of coal power in South Africa” (Greenpeace, 2011b).

On 17th June 2011, the International Executive Director of Greenpeace, Kumi Naidoo was, along with a colleague, arrested after scaling an oil rig off Greenland in protest against drilling in the Arctic (Figure 85). The activists were detained in Greenland’s capital on charges of trespassing and violating a Dutch court’s injunction secured by the oilrig’s operator (Huffington Post, 2011a).



Figure 84: Direct Action (Greenpeace, 2012c, Greenpeace, 2012d)

The examples above illustrate Yang’s (2009) argument that political opportunities are a matter of perception and, in the face of state power activists are not mere bystanders, but push the boundaries of protest. The closing of opportunities can in fact galvanise activists to find creative ways to voice their opposition that also resonate with the public.

But even in the face of this exploration of power, it is recognised that some authorities are seemingly impervious to protests of this nature. On November 2002, the New York Times ran

an article with the lead: “Flooded with Comments, Officials Plug Their Ears” (Seelye, 2002). The article explains how the US Department of the Interior decided to ignore over three hundred and sixty thousand e-mail messages against letting snowmobiles into Yellowstone Park because they were not 'original' comments. With regards to targeting of corporations and in light of civil society's apparent inability to influence governments, Respondent10 states “I think, one thing we noticed was that we were able to move corporate targets much more easily than we were able to move state targets, legislative targets with online activism in particular because of brand vulnerability.” The respondent argues that Greenpeace's victory against Coca-Cola during the Sydney Olympics games (discusses in section 5.5.2) “was an extraordinarily fast win and I think it made a lot of people in the organisation wake up and pay attention to web activism in those days.”

In a statement during an interview with Alliance magazine the International Executive Director of Greenpeace (Naidoo, 2010), in what can be seen as a call to push the borders of legality states, “How to do advocacy is one of the things that civil society needs to address. The conventional methods of lobbying and letter writing and appealing and going to meetings need to be enhanced. Al Gore has recently called for civil disobedience to advance the climate change agenda. I think that's part of what civil society needs to do.”

Online activism mobilises collective action by producing and disseminating symbols, imagery, rhetoric and sounds. In other words it mobilises emotions within a cultural context. Symbols, rhetoric and imagery appeal especially powerfully to people's moral sensibilities (Yang, 2009, p. 64). Greenpeace has always made use of imagery, photographs and high-profile campaigns to draw attention to their causes. As Respondent3 argues social media is the perfect tool to ensure that messages are tailored for different audiences. At the most fundamental level social media allows people to write, talk, and discuss in their own language, which was exploited during the Unfriend Coal campaign with Greenpeace claiming a world record of eighty thousand comments in the space of twenty-four hours, in eleven languages (Greenpeace, 2012b).

The ability of authorities to control information has decreased over time, attributed to the commercialisation of the media, the effects of globalisation, the sophistication of technology and the increased awareness of the public. For example the Greenpeace Kit Kat campaign (discussed in section 2.5.6) owes much of its success to the heavy-handedness of Nestle who requested to have the video removed from YouTube (Dunlevy, 2010); it is the subsequent publicity around this request that ensured that the video was seen by far more people than it would otherwise have. In June 2009 an Iranian woman was killed during protest in Teheran and the subsequent video, broadcast via YouTube (YouTube, 2009) became an instant symbol of the

anti-government movement. Governments and corporates are increasingly unable to restrict the access and free flow of information and instances of abuse of power are instantly transmitted to a progressively online global audience.

5.5.7 Web 2.0 Campaigning as a Self-organising System

Fuchs (2010) argues that self organisation is a process where a system reproduces itself with the help of its own logic and componenets i.e. self-organising systems are their own reason and cause - they produce themselves (*causa sui*). In a self-organising system new order emerges from the old and is due to the interactions of the systems elements i.e. a system is more than the sum of its parts. The Network Effect, discussed in section 2.3.2.2(d), is closely related to the concept of a self organising system.

This study contends that campaigning on the Web and social media-led campaigning in particular, exhibits behaviour that is akin to a self-organising system. The history of the social networking site MySpace (founded in 2003 and with more than one hundred million users in 2006 was one of the most accessed websites on the Internet) is illustrative of the principles of a self-organising system (Fuchs, 2010) and by extension is illustrative of the self-organisaination of Web 2.0 itself ³⁴.

In this section, the principles of self-organising systems are presented using using MySpace as an example. Campaign examples are then presented that illustrate the self-organising behaviours of social-media-led camapigning:

- MySpace is a system (P) made up of human beings who make use of Internet technologies for interacting. Social media-led campaigns are human-based systems in which supporters (and detractors) interact using Internet-based services.
- The system is complex (P) and there are millions of actors and interactions of which nobody is fully aware or in control. Online campaigning also involves large numbers of supporters with even larger numbers of interactions between these supporters, none of which are controlled. Neither is there an understanding of all the interactions that are occuring in real-time.
- MySpace is dynamic (P) and it is permanently reproduced by human actions and communications. It is also only a system as long as it is actively used by humans who act and interact in it in order to produce social relations. With its growth, MySpace extends itself in space with users from physically different parts of the globe emerge and form viral

³⁴ The letter P will be used within brackets to illustrate a self-organising systems' principle

communities (P). Online campaigning is also dependent on human actions and exists only as long as campaigns are still active. At the end of a campaign, irrespective of the outcome, human actions cease. Online campaigns have a global reach with global participants, for example, the Unfriend Coal campaign garnered eighty thousand comments in eleven languages

- MySpace is an interest-based community - people look for others who share their interests, or they maintain contacts with people they already know and that share their interests. MySpace is open to the emergence of new actors and relationships and also for the dissolving of existing nodes and links. Specific online campaigns also only resonate with particular interest-based groups, that is, not all campaigns will appeal to all people. Online campaigns are also able to accommodate new actors and relationships, witness the spread of the Kony 2010 video which was viewed by almost one hundred million people in a matter of days (see section 1.1).
- Information is produced in MySpace (P). Social media-led campaigns encourage supporters to create and disseminate information. During both the Green My Apple and the Forest Law campaigns, supporters were - and in a break with tradition - encouraged to modify information from the campaign websites and forward this information to friends and acquaintances (Respondent14, 2011; Respondent16, 2011).
- There is a recursive feedback process between MySpace actions i.e. human cognition, communication and cooperation, and MySpace structures i.e. digital information stored on servers and transmitted through the Internet (P). The collaborative nature of social media ensures that there is an existing mechanism for feedback between the campaign and the organisation, for example, the posting of a blog comment or the uploading of content.

5.6 CONCLUSION

The adopting of emerging technologies and innovation, and the planning and management thereof, is almost always a complex and complicated exercise, with new sets of knowledge competencies having to merge with the organisations existing capabilities (Mintzberg, 1978; Srivastava & Finger, 2006). In the case of civil society, add to this mix the emergence of new flexible and adaptable online CSOs all vying for the same set of supporters, and you have a situation that makes it incumbent for organisations to re-evaluate the very core of their values.

The objective of this analysis was to determine the transformation on CSOs structure, culture and operations, implicit in the adoption of social media. And in particular how the adoption of

Web 2.0 affects multi-dimensional interactions that both enable and constrain online advocacy, civil society organisations, and campaigning.

Social media has become a key ingredient of Greenpeace's campaigning strategy and has been embraced at both a strategic and operational level. The emergence of an emerging collaborative communications paradigm has necessitated a level of organisational introspection illustrated in the organisations strategic planning process. For Greenpeace this adoption of social media has necessitated structural changes to the organisations, with a dedicated digital media unit being formed to research the implications and effects of social media adoption across the organisation, which is currently far from well understood. For example while many researchers point to the polarisation of the discourse in an online community, with people gravitating towards others who hold similar points of view, this research suggests that online communities have the ability to attract a diverse group of individuals and organisations, individual agendas and goals notwithstanding. Even arguments about the weakness of online ties have been addressed by firstly civil society's recognition of this argument, and secondly fundamental steps to counteract this i.e. adoption of specific strategies like the ladder of engagement.

At an operational level, long-standing traditional methods of organising and campaigning are being challenged and questioned. Social media give supporters a medium to express themselves and they expect that organisations be receptive to their message. This has meant placing supporters at the center of campaigns, something that is at odds with Greenpeace's long-standing tradition of being the vanguard of the environmental justice movement. So too has the emergence of online virtual communities placed a new challenge for the organisation: how to harness the power of these communities, many of which have a short life-span, and are focused on a particular issue, and then disband just as rapidly. Social media also gives organisations an ability to creatively challenge the issues of state and corporate power, market forces, and cultural norms, which again necessitate a level of introspection at an organisational level. Finally despite all theoretical deliberations Greenpeace needs to determine whether there is any contradiction between the street and cyberspace.

This chapter has presented the results of a series of in-depth interviews with the senior management team of the environmental justice organisations Greenpeace. The next chapter concludes the study

CHAPTER SIX: CONCLUSION

A Summary of the Research

At Greenpeace, we've managed to put some judo moves on some mighty corporations by leveraging their own advertising budgets against them. Whether it's spoofing VW's most expensive superbowl ad of all time, spreading the word about a spoof of the American Petroleum Institute's support for the Keystone XL tar sands pipeline, creating a Kit-Kat ad that illustrates the rainforest destruction inherent in palm-oil production, or putting up a look-alike Apple.com website to push for better e-waste policies, we've rigorously exercised our right to free speech in freely speaking out against corporate abuse of the environment, and won many a campaign victory doing so

Kumi Naidoo, International Executive Director, Greenpeace (2011)

6.1 INTRODUCTION

This chapter concludes the thesis and discusses the research objectives in light of the data collected, describes the limitations of the study and proposes potential areas for future research. There were a total of six chapters in this thesis (including this chapter). Chapter one introduced the study and broadly described the approach to the research. Chapter two presented the literature review, which presented the underlying concepts of the research including the public sphere, civil society, civil society organisations and advocacy. It also placed the Internet and the World Wide Web in historical context, described the architecture and the technologies that underpin Web 2.0, and expanded on the services that makes Web 2.0 innovative and a prime candidate for research. The dialectic relationship between social media and advocacy campaigning was explored and social media-led campaigns identified and described. The research methodology was presented in chapter three where more detail on the pluralistic nature of the data collection methods were introduced and described. This chapter also described the data collection protocols and the actual process of collecting the primary data. Chapters four and five presented the quantitative and qualitative analysis respectively, augmented with insight from the literature review. This chapter concludes the thesis and discusses the research objectives in light of the data collected, describes the limitations of the study and proposes potential areas for future research.

6.2 REVISITING THE RESEARCH

This study sought to better understand the relationship between two concepts, that of a new emerging socially connected and collaborative Internet, and civil society-led advocacy campaigning. In particular the thesis explored the diffusion and deployment of Web 2.0 technologies in civil society organisations and focused on how these organisations are

strategically adopting and deploying social media for transnational advocacy. The reciprocal impact of this technology adoption on civil society roles, structure and orientation was also explored.

This study is based on quantitative and qualitative data gathered from a survey of one hundred and twenty-two South African civil society organisations; fifteen interviews with the senior management team of environmental justice group Greenpeace; three interviews with Greenpeace campaign managers; a targeted survey of four Greenpeace offices; and also the narrative from the social media space. This multi-faceted approach, employing both quantitative and qualitative research methods, allowed the research to gain both a broad perspective, and also an in-depth level of understanding in order to answer a particular set of research questions.

The first objective of the study, the determination of the extent of Web 2.0 appropriation in civil society organisations, was met through the analysis of survey data collected from South African civil society organisations. The study provided deep insight into the social media adoption by CSOs especially when compared to existing research. The theoretical frameworks that supported this analysis are the diffusion of innovations framework as proposed by Rogers (2003) and civil society frameworks that focused on the strategic use of emerging networked technologies (Surman & Reilly, 2003). The second objective of the study, an analysis of the implications of social media adoption on CSOs, was met through a series of face-to-face interviews with the senior management teams of the global environmental justice group, Greenpeace. Specifically the study interrogated the transformation to CSOs at both the inter-organisational and intra-organisational levels. An understanding of whether Web 2.0 adoption enables or constrains online advocacy was also sought. The frameworks used included Adaptive Structuration Theory (AST), which provided a model that describes the interplay between advanced information technologies (AIT), social structures, and human interaction (DeSanctis & Poole, 1994), and a civil society-based framework that explored the multi-dimensional aspects of civil society interactions (Yang, 2009).

In the South African context what emerged was that of a sector that has a low-level of knowledge of social media services and an accompanying low level of adoption. This is partly explained by factors at a national level including macro-economic policies, and a low level of Internet penetration and ICT readiness. A deeper analysis revealed that the relationship between civil society organisations and social media adoption is complex with the implications of this adoption not yet being fully understood.

Using Greenpeace as a case study revealed that while social media-led activism is increasingly being seen as strategic, there is a level of organisational introspection that is required to precisely determine how traditional CSOs can exploit social media while maintaining their core values and traditions. Social media is not a panacea for the issues that face activists and activism in an increasingly connected world, but rather is seen as complementing traditional advocacy with its ability to coordinate, synchronise and document campaigns.

6.3 SOME CONTRIBUTIONS TO THE BODY OF KNOWLEDGE

6.3.1 Social Media Adoption in Civil Society Organisations

The growth of civil society (aided by an increase in resources, technology and money) is considered to be as significant a social development as the rise of the nation state (Salamon *et al.*, 2003). In particular the pervasiveness, interactive nature, and low entry barrier of social media has stimulated citizen activism, which in turn has made it easier for advocacy organisations to channel public sentiment into effective policy change. This research provides one of the first observed studies of the complexities of social media adoption in civil society organisations; and a first with respect to social media adoption in South African civil society.

6.3.2 Social Media and Transnational Advocacy

This study offers an in-depth analysis of how social media is deployed for transnational advocacy by examining three particularly successful social media-led campaigns. This study shows that the adoption and use of social media in CSOs is a complex phenomenon and therefore adds to the understanding of social media-led campaigning. It furthermore interrogates the strategic intent of one high profile and prominent CSO, which contributes greatly to the understanding of the rationale for adoption.

6.3.3 Emergent Behaviours on the Web

Since its inception the World Wide Web has introduced fundamental changes in the way people and organisations communicate and collaborate. These new interactive modes of communication evolve continuously as a result of the rapid development of technologies and increases in innovations. The dialectic relationship between the Web and society means that the Web both influences and is influenced by society. Understanding the Web from the micro-level of individual protocols to the macro-level of emergent behaviours such as blogging is important because as the Web develops it will become increasingly more useful. This study has contributed to the understanding of how the changes brought on by the Web affects the discourse that takes place in the technology-based public sphere.

6.3.4 Social Media Adoption and South African Civil Society

This study, part of which was specific to South Africa civil society organisations, validated and verified an existing database of civil society organisations. This ‘clean’ data can in turn be further exploited to describe emergent civil society behaviours and social media adoption patterns.

6.3.5 Social Media Adoption and the Diffusion Framework

This study has employed the diffusion of innovations to understand social media adoption in CSOs, which inevitably further develops and deepens the original diffusion frameworks. While the adoption of social media does not exhibit the same characteristics of traditional diffusion frameworks, the study does provide some explanation for this. In particular, it proposes that social media cannot be seen as comparable to other technological innovations but rather must be seen as an ‘aggregation of similar innovations.’ The study also offers alternate visualisations for the adopter categories that traditional diffusion theory identifies, which provides a richer understanding of these adoption categories.

6.3.6 The Multidimensional Aspects of Civil Society Interactions

Research into Internet adoption largely assumes a ‘how’ and ‘why’ approaches. This study attempts to broaden the discourse by examining the multidimensional aspects of CSO interactions. In particular it provides an understanding of the dimensions of state power, culture, market forces, transnationalism and the mutual constitution of online activism and civil society.

6.3.7 A Model for the Strategic Use of Networked Technologies

The framework for the strategic use of networked technologies identifies variables that naturally lend themselves to the generation of a model. This research has developed such a model, which has been statistically validated and subsequently modified.

6.3.8 Examples of Social Media-led Advocacy

Much of the research into Internet-based advocacy in CSOs uses the same examples as the basis for examination, which limits and reinforces the dominant (technologically deterministic) viewpoint in the literature. This study is not intrinsically focused on the Internet but rather on Web 2.0, which is described as an evolutionary step in the development of the Internet. As such the examples analysed are original.

6.3.9 Greenpeace as a Case Study

Greenpeace has been described as one of the leading global environmental justice organisations and also a leading proponent in the use of mass media for its advocacy campaigning. This is one of the first in-depth studies on the organisations' use of social media. As such, this study is a contribution not only towards the civil society sector at large but also towards the environmental climate justice movement.

6.3.10 A Multi-faceted Approach to Research

This research blended both quantitative and qualitative research methods in an attempt to firstly: gain a broad perspective and overview of usage, whilst at the same describing the actual services being deployed; and secondly to use the global environmental organisation Greenpeace as a case study and in so doing probe for a deeper understanding of the strategic intent and implications of social media adoption and use in CSOs. The results of the surveys and insights gained from the interviews complement each other.

The multi-faceted approach, which allowed for both a broad and an in-depth analysis of the research questions, necessitated that a wide range of questions be posed in the survey and interview protocols, with different questions targeting various different aspects of the research. The broad details of social media adoption were answered by the surveys and the details surrounding the strategic intent of social media adoption were answered by the interviews.

6.3.11 The Study of Informatics

One of the consequences of the development of emerging technologies has been the need to study their design and their effectiveness with regards to applications in institutional and social contexts. This interdisciplinary study is known as social informatics. There is a further discipline called community informatics, which uses technology to enhance the effectiveness of community-based social and economic development programmes. Aside from the more popularly used advocacy and civic networks, technologies used for these purposes might include programmes that allow for electronic voting, self-help programmes, and applications that allow for virtual-health support and cultural development (Pitkin, 2001). This study has catalogued the use of social media in a developmental context and importantly has interrogated the adoption of social media in a specific sector of society. It has established the link between social media adoption in civil society and adoption within the population in a country.

6.4 APPLICABILITY OF THE RESEARCH

6.4.1 An Emphasis on Civil Society that Promotes Globally Acceptable Norms

There are many unintended and even negative consequences of Internet adoption and it is objectively possible to judge whether civil society is advancing globally acceptable norms or if it is being appropriated for repression, abuse of fundamental human rights, or for religious and other extremists views. The majority of the narrative around civil society is grounded in a 'socially-positive' civil society that acts on behalf of citizens and against oppressive states and unethical companies. But a 'counter civil society' does exist, and they create their own debates and agendas in counter-public spheres.

This research has made the assumption that all CSOs that have participated in the research are a force for good. It is entirely probable that there are many lessons that can be learnt from 'counter civil society' but this was not the point of departure for this research and while such examples were identified in the literature (section 2.5.7.2), no empirical data was collected from them.

6.4.2 South African Civil Society Post Democracy

At the time of this study South Africa has been democratic for just eighteen years. Prior to that it had a turbulent and often violent history leaving a society scarred by major social inequalities. It is indisputable that eighteen years is not nearly long enough to 'normalise' a country and certainly the past inequalities are mirrored in all aspects of South African society including the civil society sector. The data collected on South African civil society made no distinction of the type of organisation within the broader sector. For example, the effects of historical social inequality are reflected on organisational structure, culture and operations. Even the distinction between urban and rural civil society organisations is significant because the issues associated with the digital divide and the right to access are more significant in rural areas.

6.5 SUGGESTIONS FOR FUTURE RESEARCH

This section expands on the issues that emerged from this study many of which are candidates for further research.

6.5.1 Social Media Adoption in Civil Society Organisations

The adoption and use of social media in South African CSOs is not clear-cut, and an obvious and necessary area of research would be to determine why certain social media services have been embraced more willingly than others. The patterns of adoption need to be analysed to

determine any underlying significance or relationships. It is also necessary to look more closely at how CSOs build their advocacy capabilities by appropriating social media.

The study has alluded strongly to a link between the rate of adoption of social media in a country and the country's financial position, for example, the Gross Domestic Product. Adoption rates also seem to be linked to a country's readiness to adopt ICTs. It may be instructive to examine this link more closely.

One of the purposes of social media adoption by civil society is to expand the public spaces for citizens to voice opinions. Research into how CSOs, through their use of social media, provide alternate discourses and agendas would be instructive. This may be particularly relevant in a South African context given the friendly relationship that exists between civil society and government; and also because of the social pact that exists between government, business and organised labour.

The study finds that civil society adopts social media differently than predicted by the diffusion framework. These differences stem in part from how social media services are constituted and defined, and also from the structure of South African civil society itself. South Africa's recent past has ensured that current day South Africa is an abnormal and grossly unequal society, inequalities that are mirrored in the civil society sector. There is a need for a deeper analysis into South African civil society sectors and their relationship with technology. Researching the dynamics of specific sectors within the broader civil society will provide deeper insight into the appropriation of technology by these organisations.

There has been an almost exponential increase in the number of citizens-led protest around the world, all seemingly aided to a large degree by the use of social media, so much so that Time magazine declared 2011 as the Year of the Protestor (Time, 2011). This study has briefly alluded to the distinction between civil society and their use of institutionalised advocacy for the most part, and popular protest led by social movement and mobs who's *modus operandi* is more instinctive, immediate and often violent (section 2.2.4). With the increasing importance of civil society and social movements in socio-political life, aided by an increase in technological resources available, the possible points of convergence and divergence that exist between these two social groupings demand greater critical investigation.

Furthermore, based on the wave of socio-political changes taking place globally, in response to the deep divisions that exist in society, and aided in part by emerging collaborative media technologies, this study finds it incumbent that future research be undertaken into the role of these technologies in civil society.

The evaluation of advocacy and its associated effect on policy and legislation is notoriously difficult to evaluate. If advocacy is intended to effect changes to policy or indeed enact new policy then the effectiveness of advocacy campaigns should be a simple matter of evaluating changes to policy brought about by advocacy campaigns. However it is obviously not as simple as that and even more so in the case of social-media led advocacy. Any form of technology-led or technology-enabled advocacy sits side-by-side with tradition offline actions and it is far from easy to evaluate the effect that social media has had on a campaign. It would therefore seem an obvious area of research to empirically describe the effect of social media on advocacy campaigns and possibly establish a framework to measure this effectiveness.

Complexity theory, which is the study of dynamic living systems, can be applied to socio-political field where the reductionist approach is often taken especially with regards to policy development and implementation. Recognising that the issues faced by civil society and multidimensional and often interconnected it would be important to determine the effect of social media is generalising learning's gained from involvement in context-specific campaigns and actions.

6.5.2 The Structural Reorganisation of Civil Society Organisations

An obvious and important area of future research would be a deeper understanding of the structural changes brought about by the adoption of social media. Specifically, does the interactive nature of social media clash with traditional civil society mentalities and are CSOs flexible enough to accommodate a dialogue that supporters increasingly demand. To what extent are CSOs moving toward the new type of online CSOs, if at all, or even to what extent are new methods of online advocacy being adopted.

The adoption of social media influences the way organisations perceive themselves, and importantly the way they operate and campaign. Future research can examine how the adoption of technology, and social media in particular affects: organisational structures; strategy and tactics; and roles and responsibilities. Additionally it would be instructive to understand how CSOs are attempting to formalise these changes.

The old adage of 'think global, act local' is being turned on its head and increasingly the call is for 'think local, act global' which of course is possible with a medium that has no regard for geographical or spatial boundaries. Increasingly social issues have a global perspective. Think climate change and the fight against apartheid, both of which has (or had) a global exposure and worldwide network of supporting organisations, activists and citizens. It is important to understand the role of emerging technologies in fostering these transnational actions.

6.5.3 Transnational Advocacy and Online Virtual Communities

More research is required in the formation and lifespan of online communities. Importantly the issue of strong and weak ties and the extent to which online groups gravitate towards communities that reinforce their points of view thereby further polarising the socio-political debate needs to be ascertained. Furthermore to what extent do race and other demographics play a part, if any, in online communities?

Social movements and social actions are increasingly influenced by happenings in distant places with the revolution in communications transforming the world into the much-touted 'global village' which makes diffusion studies ideally suited to understanding mobilisation in a globalised world which would be an obvious area for research.

The growth in transnational advocacy organisations and campaigns, fuelled by an increase in resources necessitate involvement of people and organisations in structurally unequal positions. There is a very real possibility that tensions may surface around these inequalities further exacerbating the power dynamic that may already exist around the digital divide and issues of access. It is important to understand how the adoption of social media in transnational campaigning impact upon these inherent tensions.

6.5.4 Theoretical Frameworks

The alternate visualisations of the adoption patterns embraced by this research (the concepts of spatial medians and geometric centers in particular) may be subject to deeper scrutiny and analysis. It must also be compared against the traditional adoption pattern visualisations and possible attempt to synthesise the two to create a deeper understanding.

This study developed a model for the strategic use of technology based on criteria that were identified from the literature and tested empirically (reproduced in Figure 85). This model lends itself to testing within other developing environments or countries.

A deeper analysis of the independent variable and a broader understanding of the dependent variables may also improve the model. It may also be useful to test specific constructs in a more focused questionnaire, as would a wide-scale survey to determine how CSOs strategically and politically use social media.

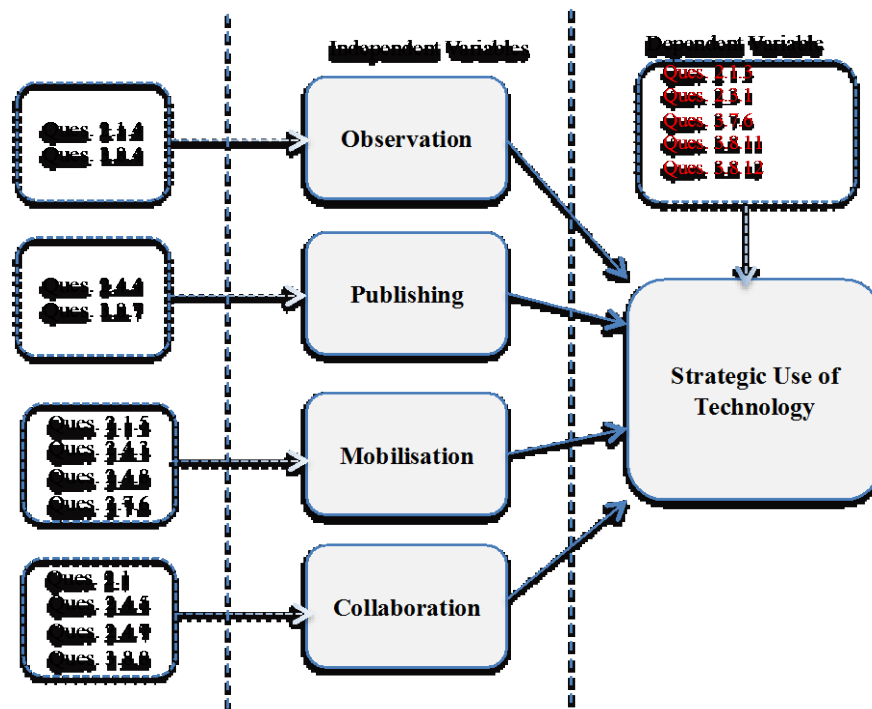


Figure 85: Strategic Use of Technology

The finally and important area is in the area of cellular phones which has the potential to be the single most transformative tool developed. Cellular phones represent a comprehensive area of research but in the context of this study, the impact of cellular phones on the adoption of social media and its effectiveness as a tool for advocacy must be investigated.

6.6 CONCLUSION

Social networks have always existed, and have always used the media of the day to spread their message. Nearly five hundred years ago during the Reformation, Martin Luther exploited the Gutenberg printing press and using the new media of the day – pamphlets, ballads and woodcuts – promoted the message of religious reform. Social media and information technology-enabled participatory approaches have the potential to create new public spaces, which offer the arena where citizens can engage in dialogue, express views on a wide range of issues and shape public policy. The promise of Web 2.0 seems to be its ability to mobilise globally, directly and quickly. The question going forward seems to be on how quick the normalisation of social media in advocacy campaigning will occur.

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APPENDIX A: PROPOSAL ACCEPTANCE LETTER



Approval of Proposal by the Higher Degrees & Research Committee

1 April 2010

Student Name: Kirubangaran J Pillay

Student No: 8320205

Name of School: IS&T

Proposed Qualification: PhD

Title: Do web 2.0 Social Media impact transnational social advocacy? A study of South African Civil Society and Greenpeace.

Dear Mr. Pillay

This letter confirms that your proposal was approved by the Higher Degrees Panel on the 1 April 2010.

The committee made the following comments:

- A well written proposal
- A topic well worth researching but it may prove difficult to measure the impact as it is very fluid.
- The committee recommends that the student emphasizes the linkages between social media technology and advocacy, rather than their impacts/outcomes/effectiveness in terms of 'bringing down dictators' etc, which is very difficult to prove.
- Sent a time frame for the research to prevent it from becoming 'never-ending' in terms of world events.
- Name to be noted – Patrick Bond, Department of Civil Society UKZN.

The decision will be placed on the agenda of the next Higher Degrees & Research Committee meeting to be held on 12 April 2010. This will also be recorded at the Faculty Board meeting to be held on 11 May 2010.

A copy of this letter and the minutes will be placed in your file.

Yours sincerely

Christel Haddon
Post Graduate Administrator
Faculty of Management Studies

Faculty of Management Studies, Westville Campus
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Founding Campuses: Edgewood Howard College Medical School Pietermaritzburg Westville

APPENDIX B: GREENPEACE GATEKEEPERS LETTER



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t +31 20 718 2000 f +31 20 514 8151
k.v.k. reg. 41200415 stichting greenpeace council
www.greenpeace.org

Amsterdam, 01 July 2010

Dear Kiru Pillay,

I hope you are well.

After reviewing your PhD proposal (Do Web 2.0 Social Media impact transnational social advocacy? A case study of Greenpeace) and after the discussions we had in Amsterdam in May 2010, I am pleased to say that Greenpeace International will facilitate the introductions and access to Greenpeace personnel you require to interview, both at the International Office and the national / regional offices.

The International Office will send an introductory email to the designated offices, and then leave it to you to liaise directly with these offices to coordinate suitable times to conduct these interviews.

To summarise the Greenpeace interviews will target the following people:

- International Executive Director and International Programme Director
- Programme Directors
- Communication Directors
- Organisation Directors

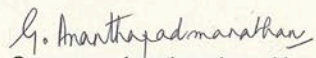
and will

- Gather data relating to the use of emerging technologies
- Evaluate the attitudes, perceptions, drivers and barriers of emerging technologies
- Investigate the strategic use of emerging technologies
- Investigate the impact of the digital divide on trans-national advocacy initiatives
- Establish the effect of any structural or role changes, if any, due to the adoption of emerging technologies

We understand that the results of the interviews will be published as part of your PhD and in peer reviewed articles in academic journals, which forms part of the output of the PhD. Outputs from the PhD will also be available to Greenpeace.

We look forward to working with you.

Regards,


Guruswamy Ananthapadmanabhan
Programme Director
Greenpeace International

APPENDIX C: SURVEY PROTOCOL

UNIVERSITY OF KWAZULU-NATAL

School of Information Systems and Technology

SURVEY

WEB 2.0 SOCIAL MEDIA AND TRANSNATIONAL ADVOCACY: A STUDY OF SOUTH AFRICAN CIVIL SOCIETY AND GREENPEACE

Researcher: Kiru Pillay +27 (0) 82 602 7261
Supervisor: Prof MS Maharaj +27 (0) 31 260 8023
Research Office: Ms P Ximba +27 (0) 31-2603587

Dear Respondent

REQUEST TO PARTICIPATE IN A VOLUNTARY, CONFIDENTIAL RESEARCH PROJECT

I, Kiru Pillay, am a PhD student at the School of Information Systems and Technology, of the University of KwaZulu-Natal with a research topic entitled 'The Impact of Web 2.0 social media on transnational advocacy in civil society.' This study focuses on how civil society organisations deploy Web 2.0 technologies for transnational advocacy initiatives, the context of this technology use, and the effect of this appropriation in achieving organisational goals.

You have been selected to participate in this voluntary, anonymous survey. Your participation and permission to use your responses for official research purposes only, would be greatly appreciated. Your personal identity will be treated with the utmost confidentiality throughout the survey and will at no stage appear in print.

Through your participation I hope to gain a perspective on the impact of Web 2.0 technologies in civil society within the South African context. The data gathered will help in the analysis of the effectiveness of these technologies and assist in the understanding of the strategic intent in deploying these social media services; and will add value to civil society with regards to their advocacy objectives.

If you are willing to participate, please sign the accompanying declaration of consent that gives me permission to use your responses, and thereafter please complete the accompanying questionnaire. It should take approximately twenty minutes to complete. If you have any questions or concerns about participating in this study, you may contact me or my supervisor at the numbers listed above.

CONSENT

I _____ (full names of participant) hereby confirm that I understand the contents of this document and the nature of the research project, and I consent to participating in the research project. I understand that I am at liberty to withdraw from the project at any time, should I so desire.

SIGNATURE OF PARTICIPANT

DATE

This page is to be retained by researcher.

For the purpose of this study the following concepts have been defined:

Advocacy: The process by which individuals and organisations attempt to influence public policy decisions. Advocacy, at its core, is an action-oriented process. It plays an important role in determining social justice, political, and civil liberties, and in giving voice to citizens and historically marginalised groups; at its best, advocacy expresses the power of an individual, constituency, or organisation to shape public agendas and change public policies.

Web 2.0: The Web 2.0 concept has come to be understood as a group of technologies that allows people to not only consume but also create content on the Web. This is encapsulated in the services which are essentially defining new modes of user interaction e.g. blogs, wikis, podcasts, RSS feeds etc.

Information and Communication Technologies (ICT): ICTs include telecommunications technologies, such as telephony, cable, satellite and radio, as well as digital technologies, such as computers, information networks and software.

About the organisation and respondent

1.1 Organisation name

--

1.2 Position in organisation

--

The above information is required for statistical and audit purposes only.

1.3 Choose the option that best describes the nature of your organisation. (Select ONE option only)

Advocacy orientated	
Think-tank (research based activities)	
Development orientated	
Mobilisation based activities	
Religious affiliation	
Network of many groups	
Not for profit, community-based organisation	
Training based	
Other, please state	

1.4 What are the core issues your organisation focuses on? (Tick all that apply)

Gender issues	
Children and youth	
Labour (trade unions)	
Civil society empowerment	
Justice and peace	
Poverty and development	
Environmental justice	
Other, please state	

1.5 Organisation Profile

1.5.1 In what year was your organisation established?

--

1.5.2 Using the table below, indicate the number of salaried (full-time and part-time) staff members in the organisation.

<10	11-20	21-50	51-100	>100

1.5.3 Using the table below, indicate your organisation’s current financial position (in ZAR)?

	Up to 100,000	100,001 - 300,000	300,001 - 600,000	600,001 - 1M	> 1M
Annual Operating Budget					

About the use ICT’s in your organisation.

1.5.4 Using the table below indicate your organisations use of computers and the Internet

	<3 years ago	3-5 years ago	6-10 years ago	>10 years ago
When did your organisation begin using computers?				
When did your organisation begin using the Internet?				

In the following two questions, ICT refers to traditional computer systems and excludes Web and related technologies.

1.5.5 In the table below two statements are presented. Please select the extent to which you agree or disagree with the statements (1= strongly disagree, 5 = strongly agree).

	1	2	3	4	5
The use of ICT has had a significant positive influence on my organisation’s relationships with other organisations					
The organisation’s mission and goals have benefited from the use of ICT					

1.5.6 Using the grid please indicate the extent to which ICT has been integrated into the daily operations of your organisation (1 = Not integrated at all, 5 = fully integrated).

Fully integrated implies an organisational dependence on ICT.

1	2	3	4	5

2. Evaluation of the use of Web 2.0 services

2.1 In the table below various statements are presented. Please select the extent to which you disagree or agree with the statements (1= strongly disagree, 5 = strongly agree).

	1	2	3	4	5
The use of Web 2.0 social media has assisted the performance of the internal management of the organisation					
The use of Web 2.0 social media has had a significant positive influence on the organisation's relationships with other organisations					
The use of Web 2.0 social media has positively influenced the organisation's aims, missions and goals					
The use of Web 2.0 social media has helped the organisation to gain wider perspective towards issues and concerns					
The use of Web 2.0 social media has increased dialogue with supporters					

2.2 Where would you place your organisation with respect to exchanging information using Web 2.0 social media? (Select ONE option only).

We provide and contribute information more than we access information	
It is a balance between providing and accessing information	
We access information more than we provide and contribute information	

2.3 Where would you place your organisation with respect to engaging with Web 2.0 social media? (Select ONE option only).

We have engaged Web 2.0 in almost all aspects of our work	
We have used Web 2.0 in some important aspects of our work	
We have used Web 2.0 only in few aspects of our work	
We are not engaged with Web 2.0 at any level	

2.4 In what way has your organisation benefited from its use of Web 2.0 social media? Rate only those aspects that are relevant (1 = no benefit, 5 = great benefit)

	1	2	3	4	5
Cost saving in general					
More effective management of organisation					
Better publication/communication of ideas with the public					
Better communication of ideas with other organisation(s)					
Building wider network with other organisation(s)					
Fund-raising, including networking with donor(s)					
Collaborative project with other organisation(s)					
Campaign/Opinion building					

2.5 Who has responsibility for deploying Web 2.0 services in your organisation? (Select ONE option only).

It is an internal responsibility	
It is outsourced	
It is the responsibility of the funding organisation	

2.6 What difficulties has your organisation experienced in deploying Web 2.0 services? (Tick all that apply).

Lack of money	
Lack of skilled human resources	
Lack of infrastructure	
Internal policy, management	
Governmental policy	

2.7 In the table below various statements are presented. Please select the extent to which you agree or disagree with the statements (1= strongly disagree, 5 = strongly agree).

	1	2	3	4	5
Web 2.0 has had a positive impact in advancing Human rights					
Web 2.0 has had a positive impact in advancing Development initiatives					
Web 2.0 has had a positive impact in advancing Training and Educational initiatives					
Web 2.0 has had a positive impact in advancing Capacity Building					
Web 2.0 has had a positive impact in advancing Internal staff development					
Web 2.0 has had a positive impact in advancing Advocacy initiatives					

2.8 Choose the ONE statement that best describes your organisation's fundraising

The value of fundraising via traditional means is more significant than Web 2.0 fundraising	
The value of fundraising via Web 2.0 and via traditional means is similar	
The value of fundraising via Web 2.0 is more significant than traditional forms of fundraising	

3. **About the use of Web 2.0 services in your organisation**

3.1 Using the table below indicate the level of knowledge in your organisation regarding the use of the following Web 2.0 services (1 = Not knowledgeable at all, 5 = Very knowledgeable).

	1	2	3	4	5
Social Networks (e.g. Facebook, MySpace)					
Social bookmarking (e.g. del.icio.us, Social Marker)					
Podcasts (e.g. Juice, Podcaster, PodProducer)					
Photos / multimedia sharing (e.g. Flickr, YouTube)					
Blogs (The Huffington Post, TechCrunch)					
Microblogging (e.g. Twitter, Tumblr)					
Wiki's (Wikipedia)					
RSS feeds (FeedReader, Google Reader)					

Data mashups (Ushahidi)					
Messenger applications (e.g. MXit, Skype)					

3.2 When did your organisation begin using the following Web 2.0 services?

	Not sure	Not used	Approx .3 months ago	Approx .6 months ago	Approx .1 year or more ago
Social Networks (e.g. Facebook, MySpace)					
Social bookmarking (e.g. del.icio.us, Social					
Downloading of podcasts (e.g. Juice, iTunes)					
Publishing podcasts (e.g. Podcaster, PodProducer)					
Photos and Multimedia sharing (e.g. Flickr,					
Creating & maintaining own blogs (Blogger,					
Monitoring the blogosphere (Technorati)					
Microblogging (e.g. Twitter, Tumblr)					
Wiki's (Wikipedia)					
RSS feeds (FeedReader, Google Reader)					
Data mashups (Ushahidi)					
Messenger applications (e.g. MXit, Skype)					

3.3 Using the grid below indicate in which area each of the listed Web 2.0 services is used. If you are not sure on the usage of a service, leave the response blank.

	Not used	Marketing (promotion of the brand)	Fundraising	Market Research	Campaigning / Program Delivery
Social Networks (e.g. Facebook, MySpace)					
Social bookmarking (e.g. del.icio.us, Social Marker)					
Downloading of podcasts (e.g. Juice, iTunes)					
Publishing podcasts (e.g. Podcaster,					
Photos and Multimedia sharing (e.g. Flickr, YouTube)					
Creating & maintaining own blogs (Blogger, WordPress)					

Monitoring the blogosphere (Technorati)					
Microblogging (e.g. Twitter, Tumblr)					
Wiki's (Wikipedia)					
RSS feeds (FeedReader, Google Reader)					
Data mashups (Ushahidi)					
Messenger applications (e.g. Mxit, Skype)					

3.4 Indicate for how long your organisation has been using the following Web 2.0 services to publish information on the web.

	Not sure	Not used	Approx.3 months ago	Approx. 6 months ago	Approx. 1 year or more ago
Blogs					
Video (e.g. YouTube)					
Photographs (e.g. Flickr)					
Audio (podcasts)					
Data mashups (Ushahidi)					

3.5 How many members has your organisation attracted to its various social networking sites?

We do not maintain a social networking site	Up to 1000	1,001-2,000	2001-10,000	10,001-50,000	>50,000

3.6 What is the value of the fundraising attributed to social networks per annum (in ZAR)?

We do not fundraise via social networking sites	Up to 5,000	5,001 - 10,000	10,001 - 50,000	50,001 - 100,000	> 100,000

3.7 In the grid below indicate how important you think Web 2.0 services are to your organisation from an internal management perspective (1 = very unimportant, 5 = very important).

	1	2	3	4	5
Visibility / Identity (e.g. so that the organisation becomes more well-known)					
Financial reason (saving cost on communication, administration, back office)					
Managerial reason (runs the office and does activities more efficiently, etc.)					
Technological reason (want to adapt with new technology)					
Information intensity (to get more information available from other sources,					

Performance reason (achieve missions, targeted goals, etc.)					
Capacity building reason (to build expertise in ICT, etc.)					

3.8 In the grid below indicate how important you think Web 2.0 services are to your organisation in respect of responding to external pressures (1 = very unimportant, 5 = very important).

	1	2	3	4	5
Social reason (because other organisations also use ICT)					
Environmental (using PCs reduces paper wastage; online meeting reduces travel etc.)					
Cultural reason (because it is lifestyle of the society we are working with, etc.)					
Concern & Issue intensity (to gather relevant information & knowledge, etc.)					
Perspective reason (to get wider perspective, knowledge, sharing, etc.)					
Competitive intensity (to compete with other organisations)					
Intermediary reason (to disseminate information to other parties)					
Co-operation intensity (to co-operate, collaborate with other organisations)					
Networking intensity (to create, enable, empower network, etc.)					
Empowerment reason (to pioneer, to provide knowledge to beneficiaries etc.)					
Power-related reason (to accumulate bargaining power for advocacy, etc.)					
Influence intensity (to widen the influence on society, etc.)					

The following questions relate to the use of mobile devices?

3.9 Indicate your organisations strategic intent with respect to developing a mobile version of your organisations website and accompanying social media services?

No plans	Currently being undertaken	Next 6 months	Between 6 months and 1 year	Between 1 and 2 years	Longer than 2 years

3.10 Using the grid below indicate the usage of each listed mobile phone service on a scale of 1 to 5 (1 = low usage, 5 = high usage).

	1	2	3	4	5
Standard use (e.g. Voice calls, texting)					
Advanced use (e.g. Personal diary, emails, connecting to the Web, access to social networks and microblogging sites)					

APPENDIX D: INTERVIEW PROTOCOL

UNIVERSITY OF KWAZULU-NATAL

School of Information Systems and Technology

Interview Schedule – Interviewer Version

**WEB 2.0 SOCIAL MEDIA AND TRANSNATIONAL ADVOCACY: A STUDY OF SOUTH
AFRICAN CIVIL SOCIETY AND GREENPEACE**

Researcher: Kiru Pillay +27 (0) 82 602 7261
Supervisor: Prof MS Maharaj +27 (0) 31 260 8023
Research Office: Ms P Ximba +27 (0) 31 260 3587

Dear Respondent

REQUEST TO PARTICIPATE IN A VOLUNTARY, CONFIDENTIAL RESEARCH PROJECT

I, Kiru Pillay, am a PhD student at the School of Information Systems and Technology, of the University of KwaZulu-Natal. You are invited to participate in a research project entitled “The Impact of Web 2.0 social media on transnational advocacy in civil society”. This study focuses on how civil society organisations deploy Web 2.0 technologies for transnational advocacy initiatives, the context of this technology use, and the effect of this appropriation in achieving organisational goals.

Through your participation I hope to gain a perspective on the impact of Web 2.0 technologies in civil society. The data gathered will help in the analysis of the effectiveness of these technologies and assist in the understanding of the strategic intent in deploying these social media services. The findings of this study will add value to civil society and social movements with regards to their advocacy objectives. The result of the survey is intended to contribute to placing the deployment of emerging technologies in context.

This phase of the study involves semi-structured interviews of key South African civil society leaders which will give in-depth insight in what is termed a ‘deep dive’ analysis. You have been selected as a respondent to participate in this phase of the study. Your participation and permission to use your responses for official research purposes only, is greatly appreciated. Your personal identity will be treated with the utmost confidentiality throughout the survey and will at no stage appear in print.

INTERVIEW QUESTIONS

The interview will commence with a general discussion around the organisation's aim and objectives, and its relationship with ICT and technology. The discussion will set the stage for the more structured part of the interview, and will give the researcher an opportunity to gain an understanding of respondent's level of knowledge. The course of this initial discussion will set the scene for how the remainder of the interview continues and will point to which specific questions are relevant to each respondent.

Specific discussion points will revolve around the strategic use of technology, and Web 2.0 social media in particular. It will probe for specific examples and will seek a deep insight into the strategic role of Web 2.0 social media in advocacy organisations. Points of clarity will be made with regards to specific concepts e.g. the degree to which the capacity of civil organisations is strengthened or to undertake new advocacy and the concept of the digital divide.

The questions that will guide the subsequent phase of the interview are detailed below.

INTRODUCTION

Basic details relating to the organisation:

- a) Interviewee Details (name and Function)
- b) Vision and Mission
- c) Aims and Goals
- d) History and recent developments

Nature of the organisation

Probing Question:

- a) What are the main concerns and issues of your organisation
- b) Are you doing more advocacy?
- c) How are your organisational aims changing over time?
- d) How do you think the public views your organisation?
- e) What do you think you can do to influence these views positively?
- f) Please elaborate more on how your organisation's identity is built upon? What about visibility (i.e. how others see your organisation)?

About the use of Web 2.0 social media

1.1 What role does technology in general and Web 2.0 in particular, play in advancing organisational objectives?

Probing Question:

- a) When did your organisation begin using computers and the Internet?
- b) What Web 2.0 technologies is your organisation using?
- c) Can you give examples of particular campaigns where Web 2.0 has been deployed?
- d) Number of advocacy initiatives that utilise Web 2.0 emerging technologies (as opposed to previously)?
- e) What is the main objective for using Web 2.0?
- f) Has these objectives been met?
- g) What do you see as the main role for Web 2.0 (e.g. aid coordination)
- h) What role do traditional media play?
- i) How is Web 2.0 integrated with traditional advocacy?
- j) From what you have experienced, what activities or within which areas do you think Web 2.0 social media can be effectively used?
- k) How important is it for organisational management (communication with staff)?
- l) What are the influences of it on the development of organisation's issues and/or concerns? Do you see any changes (get expanded, widened)? Do you have specific example(s) to share?
- m) How far do you find it helps your organisation communicating ideas to people/society and to other organisations of your networks and, thus, contributing to social change? In what way? Could you give a specific example?
- n) What have been the barriers to the use of Web 2.0?
- o) Advocacy work is often unique. How do you use Web 2.0 technologies to accumulate knowledge to enable initiatives that are replicated?

Stages of Adoption

2.1 Is there a clear 'Initiation' phase that can be identified?

Probing Question:

- a) Is there a stage of awareness building? i.e. actively searching for comprehension of the technology and putting the needs of using it within the context of organisational principles and values?
- b) Is there a stage of attitude formation i.e. putting innovation into a problem, fine-tuning and exploiting the innovation within the context of the organisation?

2.2 Is there a clear 'Implementation' phase that can be identified?

Probing Question:

- a) Decision to adopt and start using the technology through trial and practice, or familiarisation?
- b) Any reconfiguration of the technology and of its use and / or restructuring of the organisation?

2.3 Is there a clear 'Adaptation' phase that can be identified?

Probing Question:

- a) Capacity and ability to arrange and rearrange setting of the technology to support achievements of the organisations mission and goals?
- b) Reinvention of innovation to accommodate organisations needs as well as restructuring the

- organisation to fit the innovation?
- c) Familiarisation through trial and practice at an organisational level?
 - d) Role of change management strategy?
 - e) Is the focus of your information infrastructure strategy not the technology artefacts (social media) but rather information technology as a system in the organisation?

2.4 Is there a clear 'Appropriation' that can be identified?

Probing Question:

- a) Technology used strategically i.e. advancing the achievement of organisations objectives?
- b) Incorporation of innovation into organisations regular activities?
- c) Has the Web 2.0 strategy been incorporated into the organisations strategy?

About the Strategic use of Web 2.0 social media

2.5 Do you have a campaigning strategy for deploying Web 2.0?

Probing Question:

- a) Do you research how campaign objectives will be reached?
 - Where and how are decisions made and who influences them?
 - Identifying strategies and tactics to apply pressure needed?
 - Identifying specific targets?
 - Setting goals relating to strategies, tactics and goals?
 - Are supporters allowed to influence a campaign (as opposed to simply supporting a campaign)?
 - Segmentation, Coordinated actions, Learning
- b) How important is it for your organisation activities? Does it help the achievement/realisation of your organisation's vision, mission/aims/goals? Why? In what way? Could you give a specific example?

2.6 Can you discuss (evaluate & estimate) to what extent Web 2.0 has influenced policy outcomes?

Discussion

The policy outcome is the degree to which policy objectives are achieved. That is, specific changes in the policies, practices, programs or behaviour of major institutions that affect the public, such as government, international financial bodies and corporations. Changes in this dimension arise from influencing decision-making structures and are fundamental to ensuring that public policies and practices improve people's lives.

Probing Question:

- a) Has it increased Public Participation? How do you measure this?
- b) How does it help your organisation formulate a viable policy position on issues?

- 2.7 Can you discuss (evaluate & estimate) to what extent has the capacity of your organisation to undertake new advocacy been strengthened by the use of Web 2.0 technologies.

Discussion Points

The civil society outcome is the degree to which the capacity of civil organisations is strengthened to continue the work, or to undertake new advocacy. They are more able to engage in advocacy, participate in public decision-making and follow up on a campaign in the long run, including monitoring the implementation and enforcement of reforms and holding public and private institutions accountable. Another important aspect of strengthening civil society involves increasing ‘social capital’ – the relations of trust and reciprocity that underpin the cooperation and collaboration necessary for advocacy and for working collectively.

Probing Question

- a) To what extent are you now able to enact campaigns that were impossible or unrealistic before the introduction of social media technology
- b) Are they able to reach people or exchange information in ways thought not possible without these tools
- c) What in your opinion has been the major benefit of Web 2.0 in your organisations advocacy initiative?
- d) How do you measure the effectiveness of Web 2.0 campaigns?

Discussion Points

The democratic outcome is the extent to which the work has opened up channels for civil society organisations to be involved in decisions in the future, to ‘create footholds that give a leg up to those that follow’. This might be by providing mechanisms for the participation of disenfranchised sectors in policy dialogue, increasing the political legitimacy of civil society organisations, and improving the attitudes and behaviours of government officials and elites towards civil society and grassroots groups. It includes broadening overall tolerance and respect for human rights and increasing the accountability and transparency of public institutions.

- e) Can you discuss (evaluate & estimate) to what extent Web 2.0 has provided mechanisms for disenfranchised sectors to be involved in policy dialogue?

About the future use of Web 2.0 social media

- 2.8 In terms of your organisation’s contribution to social transformation, what do you expect to see in the future (5-10 years) with regards to the use of Web 2.0 social media?

Probing Question:

- a) How far do you believe it will happen that your organisation's management performance will improve with the current use and development of Web 2.0?
- b) How far do you believe your organisation's network will expand with the current use and development of Web 2.0?
- c) How far do you think that your organisation in general will be better in achieving its mission and goals and thus contribute to the social transformation with the current use and development of Web 2.0?
- d) What negative impact might you see from the use of Web 2.0 in the future? What future impediments have you seen and how could they be dealt with?

3 Organisational Implication of Web 2.0 appropriation

3.1 What transformation does the adoption of Web 2.0 bring to your organisation at both the inter-organisational and intra-organisational levels?

Probing Question:

- a) What are the structural implications of Web 2.0 use in organisations?
- b) How has the use of emerging technologies altered the role of civil society organisations?
- c) How does civil society modify its way of operating in light of use of technology?
- d) Has this made it harder to raise significant funds or elicit action from volunteers?

3.2 Multidimensional dynamics

Discussion Point: **Interactions with the State**

Mobilisation more likely to emerge under more open political conditions while others say that the closing of opportunities may result in mobilisation

Power shapes contention i.e. state power channels online activism. Issues that are more politically tolerable and more resonant with the public are more likely to enter the public sphere and become contentious events.

As state power attempts to control the internet, activists respond creatively to state control; people are not 'captive audiences' but 'skilled actors' who operate 'near the boundary of authorised channels'.

While power constrains contention, it also responds and adapts to it Both the forms and practices of state power undergo change in the interaction

- a) How has Web 2.0 given CSOs the ability to creatively respond to state control?
- b) As state power attempts to control the internet, activists respond creatively to state control; people are not 'captive audiences' but 'skilled actors' who operate 'near the boundary of authorised channels'.

Discussion Point: **Cultures of contention**

Online activism mobilises collective action by producing and dissemination symbols, imagery, rhetoric and sounds; a process characterised by both innovation and appropriation of cultural conventions.

Online activism mobilises collective action through the mobilisation of emotions

The symbols, rhetoric, imagery and rituals of online contention appeal especially powerfully to people's moral sensibilities.

Style is an import element of political expression and collective action and may assume a variety of styles e.g. some epic and heroic and other quotidian and prosaic.

- c) Is there a need to change / modify campaigns to reflect specific cultural sensitivities
- d) How has Web 2.0 improved the ability of CSOs to exploit the mobilisation of emotions?
- e) To what extent has Web 2.0 improved CSOs ability to adapt its message to cater for cultural sensibilities?
- f) Online activism mobilises collective action by producing and dissemination symbols, imagery, rhetoric and sounds; a process characterised by both innovation and appropriation of cultural conventions

Discussion Point: **Trans-nationalisation**

Transnationalism, the crossing of borders, is most commonly seen in the flows of goods, money, cultural products, symbols and ideas.

One of the conditions for transnational activism involves the use of transnational strategies such as internet-based mobilisation (Yang, 2009, p.17)

With the cultural translation and transnational diffusion of repertoires, discourses and symbols, the cultures of contention similarly have taken on a transnational aspect e.g. the transnational circulation of blogs and flash-animation is a case in point.

Transnationalism is directly related to the changing power of the state; it does not mean a decline of the state, but raises new questions about how activists challenge and negotiate state power by seizing new political opportunities, resources, alliances, cultural framings and communication technologies.

- g) One of the conditions for transnational activism involves the use of transnational strategies such as internet-based mobilisation (Yang, 2009, p.17)
- h) Transnationalism is directly related to the changing power of the state; it does not mean a decline of the state, but raises new questions about how activists challenge and negotiate state power by seizing new political opportunities, resources, alliances, cultural framings and communication technologies.
- i) With the cultural translation and transnational diffusion of repertoires, discourses and symbols, the cultures of contention similarly have taken on a transnational aspect e.g. the transnational circulation of blogs and flash-animation is a case in point.

Discussion Point: **The mutual constitution of online activism and civil society**

Much of the discourse about civil society assumes that it acts on behalf of citizens against oppressive states. But other scholars have argued that the often touted connection between civil society and democracy is an empirical connection to be investigated, not a logical issue to be assumed

Civil society generates online contention, while contention activates civil society and boosts its development; there is a mutual trajectory of coevolution

How do existing civic society organisations respond to the internet and whether and how internet use affects organisational development and identities.

Forms and dynamics of online communities, specifically what kinds of communities emerge online and how they generate activism and what forms of activism are generated

- j) How do existing civic society organisations respond to the internet and whether and how internet use affects organisational development and identities.
- k) Has the form of individual participation changed? e.g. Joining a virtual group is the lowest-cost political activity e.g. the concept of 'clickactivism' or 'slacktivism'
- l) Has it changed the way individuals and organisations connect to each other to exchange / pool resources and information?
- m) Emergence of virtual social movements: What actually makes people join groups? How does the group find them? How do these actors develop identities and solidarities?
- n) Do you believe that social media foster 'strong' or 'weak' ties

Discussion Points

One of the main forms of coordination has been termed 'shared awareness' i.e. the ability of each member of a group to not only understand the situation at hand but also understand that everyone else does, too. Social media increase shared awareness by propagating messages through social networks.

- o) Do you think that the 'shared awareness' that social media fosters overrides the concerns of creating 'weak ties'

Discussion Point: The Business on online contention

- p) Has Web 2.0's ability to produce more information...driven CSOs closer to a business model e.g. branding etc.?
- q) Does business indirectly promote democratic participation?
- r) What are the dangers of manipulation by commercial interests

Digital Divide

3.3 How is the effectiveness of transnational initiatives affected by issues of the digital divide across developed and developing countries?

Probing Question:

- a) Contrast developed and developing countries. How do the geographical boundaries of the network change, along with the underlying idea of public space?
- b) Do the tensions inherent in transnational initiatives (and organisations) manifest in the use of

emerging technologies i.e. the effect of the digital divide

- c) How is ability of local / national offices to start campaigns using Web 2.0 affected in light of digital divide?
- d) How has social media assisted in the development of group identity where there is a lack of physical connectivity

APPENDIX E: LETTER FROM STEVE JOBS

A Greener Apple

Apple has been criticized by some environmental organizations for not being a leader in removing toxic chemicals from its new products, and for not aggressively or properly recycling its old products. Upon investigating Apple's current practices and progress towards these goals, I was surprised to learn that in many cases Apple is ahead of, or will soon be ahead of, most of its competitors in these areas. Whatever other improvements we need to make, it is certainly clear that we have failed to communicate the things that we are doing well.

It is generally not Apple's policy to trumpet our plans for the future; we tend to talk about the things we have just accomplished. Unfortunately this policy has left our customers, shareholders, employees and the industry in the dark about Apple's desires and plans to become greener. Our stakeholders deserve and expect more from us, and they're right to do so. They want us to be a leader in this area, just as we are in the other areas of our business. So today we're changing our policy.

The Future

Today is the first time we have openly discussed our plans to become a greener Apple. It will not be the last. We will be providing updates of our efforts and accomplishments at least annually, most likely around this time of the year. And we plan to bring other environmental issues to the table as well, such as the energy efficiency of the products in our industry. We are also beginning to explore the overall carbon "footprint" of our products, and may have some interesting data and issues to share later this year.

I hope you are as delighted as I was when I first learned how far along Apple actually is in removing toxic chemicals from its products and recycling its older products. We apologize for leaving you in the dark for this long. Apple is already a leader in innovation and engineering, and we are applying these same talents to become an environmental leader. Based on our tangible actions and results over time, hopefully our customers, employees, shareholders and professional colleagues will all feel proud of our ongoing efforts to become a greener Apple.

Steve Jobs

APPENDIX F: GREENPEACE LETTER TO MARC ZUCKERBERG

Dear Mr. Zuckerberg:

Climate scientists around the world tell us that global greenhouse gas emissions must peak by 2015 in order to stay within a critical temperature threshold to have a chance of avoiding runaway global warming. To do this, we must break our addiction to oil, coal, and other dirty fossil fuels and transition away from them as rapidly as possible. Given the tremendous growth of IT cloud computing companies like Facebook expected in this same period, your company has an increasingly essential role to play in helping to drive the deployment of renewable energy sources needed to avert the most devastating possible effects of our changing climate.

Facebook, which now connects over 500 million people, has a responsibility to exhibit good corporate citizenship toward the growing public it serves. No global business leader, particularly not one who reaches so many people daily, could deny that in this time it is both a threat to a company's reputation and financial health risk to ignore their company's environmental impacts.

Facebook appears to be on a path that will make breaking our addiction to dirty coal-fired electricity even more difficult. As you are aware, following Facebook's announcement to build a new data center in Prineville, OR, Greenpeace and over half a million Facebook users have expressed significant concerns with your decision to power this data center with dirty coal-fired electricity from PacificCorp, which runs an electricity mix that is disproportionately powered by coal, the largest source of global warming pollution.

Despite this controversy, Facebook's recent announcement that it will more than double the size of the Prineville facility, and thus double the demand for dirty coal energy in Oregon, is a disturbing sign that Facebook remains on the wrong path.

Other cloud-based companies face similar choices and challenges as you do in building data centers, yet many are making smarter and cleaner investments. Google, for instance, entered into a long-term agreement with a large wind power producer earlier this month. It has demonstrated that it is not only possible to prioritize the purchase of clean energy, but prudent as well.

Greenpeace regularly uses Facebook to engage its supporters and their friends to hold other corporations accountable for their environmental impact. Facebook's innovative and easy-to-use platform has enabled it to become an incredibly important tool for connecting people to engage

in driving social change. Facebook is uniquely positioned to be a truly visible and influential leader to drive the deployment of clean energy.

Greenpeace has spent the last six years focusing a significant portion of our corporate engagement within the IT industry. We have worked with a number of companies including Hewlett Packard, Toshiba, and Google on corporate and government policy issues. We have seen big progress ranging from curbing electronic waste to eliminating toxic chemicals from IT equipment. More recently we have been tackling energy and climate change issues. We see the potential for the sector to use the hallmark values of innovation and competitiveness that are pervasive in the IT world to become leaders in the fight against many of our greatest environmental challenges, including global warming.

Given that your corporate and public policies on the environment have not been articulated, we would welcome the opportunity to sit down with you and your team to hear what work Facebook has planned and to discuss the steps we feel would put Facebook in a leadership position on climate change within the IT sector. Key areas of leadership for Facebook should include:

1. Commit to a plan to phase out the use of dirty coal-fired electricity to power your data centers;
2. Use your purchasing power to choose locations that allow you to rely on only clean, renewable sources of electricity;
3. Advocate for strong climate and energy policy changes at the local, national and international level to ensure that as the IT industry's energy demand increases, so does the supply of renewable energy;
4. Disclosure your greenhouse gas emissions inventory (through mechanisms such as the carbon disclosure project);
5. Share this plan for environmental stewardship publicly on your website so your hundred of millions of users know that your company is a climate leader.

It is with the interest of your company, your millions of users, and our planet in mind that I urge you to exercise bold and immediate leadership in addressing climate change. I invite you to engage with me in dialogue regarding these points, as I am sure that with further discussion regarding your company's environmental goals and growth plans, we will be able to reach common ground. I look forward to your response.

Sincerely,

Kumi Naidoo, Executive Director, Greenpeace International

APPENDIX G: FACEBOOK STATEMENT

Facebook and Greenpeace collaboration on Clean and Renewable Energy, 15 December 2011

Facebook is committed to supporting the development of clean and renewable sources of energy, and our goal is to power all of our operations with clean and renewable energy. Building on our leadership in energy efficiency (through the Open Compute Project), we are working in partnership with Greenpeace and others to create a world that is highly efficient and powered by clean and renewable energy. This effort will include a range of activities:

By Facebook

- Adopting a siting policy that states a preference for access to clean and renewable energy supply
- Ongoing research into energy efficiency and the open sharing of that technology through the Open Compute

Project

- Ongoing research into clean energy solutions for our future data centers
- Engaging in a dialogue with our utility providers about increasing the supply of clean energy that power Facebook data centers

By Greenpeace

- Active support for the Open Compute Project, including encouraging companies to join the effort, use the technology, and share their efficiency technology
- Encouraging utility providers to offer ways for customers to get their utility data, including by joining the partnership with Opower, Facebook, and NRDC
- Recognize company leadership in advancing best practices in efficiency or sustainability technology through the open source sharing of design and technology advances.

Together

- Working together to develop and promote experiences on Facebook that help people and organizations connect with ways to save energy and engage their communities in clean energy issues.
- Co-hosting roundtables and discussions with experts on energy issues.
- Jointly engaging other large energy users and producers to address the energy choice they are facing and develop new clean energy rather than recommission coal plants or build new coal plants.

APPENDIX H: CARBON FOOTPRINT CALCULATION

Approximating carbon footprints is not an exact science. Estimating the carbon footprint for this research focused primarily on the international and local travel that was undertaken.

International Air Travel	Distance in KM's	CO₂ footprint in KG's
Johannesburg to Buenos Aires, Argentina	8051	1986
Johannesburg to Amsterdam, Netherlands	8989	2217
Total		4203
Local Travel by Car	Distance in KM's	CO₂ footprint in KG's
Durban to Johannesburg (*2)	3000	600
Grand Total		4802

In addition it was estimated that approximately 10,000 A4 pages were printed during this research. A carbon-offset program that included the planting of trees to ensure a carbon neutral footprint for the research was initiated and is in progress.

The following references were consulted:

- 1) Yarrow, J. (2008). *How to Reduce Your Carbon Footprint: 365 Practical Ways to Make A Difference*. London: Duncan Baird Publishers.
- 2) De Rothschild, D. (2007). *The Live Earth Global Warming Survival Handbook*. New York. Melcher Media
- 3) Clark, D. (2009). *The Rough Guide to Green Living*. London. Rough Guides Ltd.

Beyond there is only emptiness, coldness and darkness. The blue sky, which gives us breath and protects us from endless black and death, is but an infinitesimally thin film. How dangerous it is to threaten even the smallest part of this gossamer, this conservator of life

Vladimir Shatalov, Cosmonaut

APPENDIX I: OUTPUTS FROM THE THESIS

1. Van Niekerk, B., Pillay K. and Maharaj M.S. (2011). Analysing the role of ICTs in the Tunisian and Egyptian Unrest from an Information Warfare Perspective, *International Journal of Communication* 5(2011), 1406-1416.

In January 2011, the Tunisian government stepped down after weeks of protests; this was followed by unrest and protests in Egypt against the Egyptian government, leading also to the resignation of its president. Demonstrations in both countries were facilitated in some part by the online social media and related information and communications technologies that impacted the flow of information. The manner in which the information and communication technologies were employed suggests that the uprisings were a form of social information warfare. To provide an alternative understanding of the role of technology and information in the events that led to the resignations of the Tunisian and Egyptian presidents, these uprisings are analysed using the Information Warfare Lifecycle Model.

2. Pillay K. and Maharaj, M.S. (2010). An Overview of Web 2.0 Social Media as a Tool for Advocacy, *South African Computer Lecturers Association Conference*, 2010 5th – 7th June 2010, Pretoria, South Africa

This paper is an overview on how civil society organisations deploy Web 2.0 technologies for trans- national social advocacy. It describes the effectiveness of these technologies, and the reciprocal impact of the technology's appropriation on civil society organisations' roles, structure, and orientation is also investigated. The technologies targeted are those commonly described as Web 2.0 social media including social networking sites, blogs, vlogs, podcasts and wikis.

3. Pillay, K., van Niekerk, B., and Maharaj, M.S. (2010). Web 2.0 and its Implications for the Military, *Workshop on the Uses of ICT in Warfare and the Safeguarding of Peace*, Bela-Bela, South Africa, 11 October 2010

The mass media has been seen to influence perceptions and affect strategic decisions. However, the mass media is effectively a one-to-many communication channel. The rise of Web 2.0 technologies, particularly social networking, has resulted in the ability for many-to-many communications. The information and knowledge sharing capabilities provided by Web 2.0 allow social groups to co- ordinate their efforts to apply pressure on governments, corporations and the military, without being restricted by regional or national boundaries.

This paper discusses the use of Web 2.0 technologies for advocacy, and its implications for the military. The possible roles Web 2.0 technologies in disaster relief and rescue operations, gathering open source intelligence and in conducting influence operations are discussed. The security risks that Web 2.0 technologies pose to the military will be examined, and examples of previous incidents are discussed.

The following paper is related to the main study

4. Pillay K & Musana F. (2011). Social Media: Revolutionizing public health and climate change, Public Health Association of South Africa, Public Health Association of South Africa, Issue 2

Public Health and climate change in sub Saharan Africa are at a crossroads; one cannot progress without the other but we continue to be blinded by this fact at our peril. Today, there is no other solution other than tackling the growing urgency – of the public health climate change manifold crisis – by looking at more innovative solutions to enhance social discourse.

Table 42 below maps the research outputs to the relevant parts of the Literature Review.

	Output 1	Output 2	Output 3	Output 4
2.2 THE PUBLIC SPHERE, CIVIL SOCIETY AND ADVOCACY				
2.2.1 The Public Sphere		X		
2.2.2 Civil Society		X		
2.2.2.1 The Actors of Civil Society				
2.2.2.2 South African Civil Society				
2.2.2.3 A Globalising Civil Society				
2.2.3 Civil Society Organisations and Advocacy				
2.2.4 Summary: Bringing it All Together				
2.3 A BRIEF OVERVIEW OF THE INTERNET				
2.3.1 A Brief History of the Internet				
2.3.2 The Internet in South Africa				
2.4 THE EVOLUTION OF THE INTERNET: FROM WEB 1.0 TO WEB				
2.4.1 A Brief History of the Web		X	X	
2.4.2 A Definition Web 2.0		X	X	
2.4.3 A Non-Technical View of Web 2.0				
2.4.3.1 Individual Production and User Generated Content				
2.4.3.2 Rich Internet Applications				
2.4.3.3 Crowdsourcing: Harnessing the Power of Collectives				
2.4.3.4 The Network Effect				
2.4.3.5 Data on an Epic Scale				

	2.4.3.6	Architecture of Participation			
	2.4.3.7	Openness			
	2.4.3.8	A Many-to-many Mode of Communication			
	2.4.4	Some Technical Concepts of Web 2.0			
	2.4.5	Web 2.0 Architectural Patterns			
	2.4.6	The Evolution of the Web			
	2.4.7	A Summary of Web 2.0			
2.5		THE SERVICES AND TECHNOLOGIES OF WEB 2.0	X		
	2.5.1	Social Networking	X		
	2.5.2	Wiki's	X		
	2.5.3	Blogs and Blogging	X		
	2.5.4	Microblogging and Twitter	X		
	2.5.5	Social Bookmarking, Folksonomies & the Taxonomy of Web	X		
	2.5.6	Multimedia Sharing and Podcasting	X		
	2.5.7	Geographical Information Systems and Mashups	X		
	2.5.9	Mobile Telephony	X		
	2.5.9.1	Mobile Phone and Social Media	X		
	2.5.9.2	Access to Broadband	X		
	2.5.10	The Sociability' of Web 2.0 and Social Media?			
2.6		THE NETWORKED SOCIETY			
	2.6.1	A Knowledge-based Society and Economy			
	2.6.2	Technology-based Networks			
	2.6.3	The Networked Public Sphere			
	2.6.4	Civil Society: Networked Adopters of Technology			
	2.6.5	Virtual Communities			
2.7		CONTENTIOUS POLITICS ON THE NET	X		
	2.7.1	Technology-based Advocacy	X		
	2.7.3	Web 2.0 Based Advocacy		X	X
	2.7.3.1	Social Networking		X	X
	2.7.3.2	Wiki's		X	X
	2.7.3.3	Blogging for Advocacy		X	X
	2.7.3.4	Case Studies on Text Messaging		X	X
	2.7.3.5	Case Studies on Twitter		X	
	2.7.3.6	Social Media and the Environmental Movement		X	
	2.7.4	Contentious Politics on the Net: Bringing It All Together			
	2.7.5	Does Web 2.0 Carry an Implicit Social Message?			
	2.7.5.1	Arab Spring: The Protests in Egypt and Tunisia	X		
	2.7.5.2	The Other Side of Social Media Use			
	2.7.5.3	Internet Freedom			
	2.7.6	A Critique of Web 2.0 and Web2 .0 Advocacy			
2.8		THE IMPLICATIONS OF WEB 2.0 ON Civil society			
	2.8.1	Structural Re-configuration of CSOs	X		
	2.8.2	Re-orientating Civil Society			
	2.8.3	The Digital Divide			

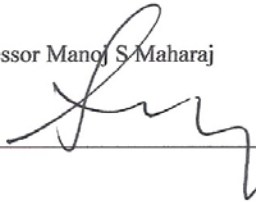
Table 42: Mapping of the Outputs

APPENDIX J: CO-AUTHOR DECLARATIONS


This serves to confirm that as lead author, Kiru Pillay was the significant contributor to the accredited articles and conference proceedings detailed below:

1. Pillay K. and Maharaj, M.S. (2010). An Overview of Web 2.0 Social Media as a Tool for Advocacy, South African Computer Lecturers Association Conference, 2010 5th – 7th June 2010, Pretoria, South Africa
2. Pillay, K., van Niekerk, B., and Maharaj, M.S. (2010). Web 2.0 and its Implications for the Military, *Workshop on the Uses of ICT in Warfare and the Safeguarding of Peace*, Bela-Bela, South Africa, 11 October 2010
3. Pillay K & Musana F. (2011). Social Media: revolutionizing public health and climate change, Public Health Association of South Africa, *Public Health Association of South Africa*, Issue 2


Professor Manoj S Maharaj


_____ 25/09/2012

Doctor Brett van Niekerk


_____ 25/09/2012

Fiona Musana


_____ 01/10/2012

APPENDIX K: ETHICAL CLEARANCE



10 August 2010

Mr K J Pillay
Postnet Suite 463
Private Bag X29
GALLO MANOR
2052

Dear Mr Pillay

PROTOCOL: Do Web 2.0 Social Media impact transnational social advocacy? A study of South African Civil Society and Greenpeace
ETHICAL APPROVAL NUMBER: HSS/0909/2010 D: Faculty of Management Studies

In response to your application dated 04 August 2010, Student Number: **8320205** the Humanities & Social Sciences Ethics Committee has considered the abovementioned application and the protocol has been given **FULL APPROVAL**.

PLEASE NOTE: Research data should be securely stored in the school/department for a period of 5 years.

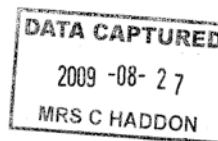
I take this opportunity of wishing you everything of the best with your study.

Yours faithfully

Professor Steve Collings (Chair)
HUMANITIES & SOCIAL SCIENCES ETHICS COMMITTEE

SC/sn

cc: Prof. M Maharaj
cc: Mrs C Haddon



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